2009 Annual Drinking Water Quality Reports
City of Springfield

The City of Springfield is pleased to present you the 2009 Annual Water Quality Report. This report is designed to inform you about the quality of water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. Although our water is purchased from Bay County Utility Services, the initial water source is surface water drawn from the Deer Point Reservoir. This reservoir was created in 1961 to provide a freshwater source for Bay County. The water is pumped several miles to the Bay County Water Treatment Plant. The Bay County Water Treatment Plant uses a conventional treatment process consisting of coagulation, flocculation, sedimentation, filtration, pH adjustment, disinfection, fluoridation, and corrosion control. The treatment process includes adding lime occasionally to provide additional alkalinity to the water so that it can react with ferric sulfate, a primary coagulating chemical, which is added to remove particles and color. Polymer is also added to assist in the coagulation process. Sodium Hypochlorite is added to maintain disinfection in the distribution system. The addition of zinc orthophosphate reduces the corrosiveness of the water. Fluoride, in the form of hydrofluosilicic acid, is added as a supplement to prevent tooth decay. Lime is also added at the end of the process to increase the pH. These processes are needed to meet the drinking water standards as set by the United States Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (FDEP).

Source Water Assessment

The Department of Environmental Protection performed a Source Water Assessment for the Bay County Water System in 2009. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of our surface water intakes. The surface water system is considered to be at high risk because of the many potential sources of contamination present in the assessment area. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp or they can be obtained by calling Bay County Utility Services at (850)872-4785.

Contact Information

We encourage our valued customers to be informed about their water utility. The City of Springfield holds regularly scheduled Commission meetings that are open to the public. The meetings are held at 6:30 p.m. on the first Monday of each month at City Hall located at 3529 E. 3rd St., Springfield, Florida. However, if you have any questions about this report or concerning your water utility, you may visit the Information Office at City Hall or contact Lori Fedor at (850)872-7570 ext. 101 or ldavis@springfield.fl.gov.

If you experience a water emergency in Springfield after 5 p.m., during the weekend, or on a holiday, please call (850)625-2791.

Additional Information

The City of Springfield routinely monitors for lead and copper levels, chlorine, Stage 2 DDBP, and bacteriological contaminants. The Bay County Water System monitors for all other contaminants in your drinking water according to Federal and State laws, rules, and regulations. Except where indicated otherwise, this report is based on the results of monitoring for the period of January 1 through 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. The EPA requires monitoring of over 80 drinking water contaminants. Those contaminants listed in the Water Quality Test Results table are the only ones detected in your drinking water.

Terms and Abbreviations

In the table below, you may find unfamiliar terms and abbreviations. To help you better understand these terms we've provided the following definitions:

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 requirements that a water system must follow.

Initial Distribution System Evaluation (IDSE): An important part of the Stage 2 Disinfection Byproducts Rule (DBPR). The IDSE is a one-time study conducted by water systems to identify distribution system locations with high concentrations of trihalomethanes (THMs) and haloacetic acids (HAAs). Water systems will use results from the IDSE, in conjunction with their Stage 1 DBPR compliance monitoring data, to select compliance monitoring locations for the Stage 2 DBPR.

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.

Nephelometric Turbidity Unit (NTU) - measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

"ND" means not detected and indicates that the substance was not found by laboratory analysis.

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.

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.

Picocurie per liter (pCi/L) - measure of the radioactivity in water.

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

2009 CONTAMINANTS TABLE

Microbiological Contaminants *Monitored by Bay County*

Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	The Highest Single Measurement	^The Lowest Monthly Percentage of Samples Meeting Regulatory Limits	MCLG	MCL	Likely Source of Contamination
Turbidity (NTU)	Jan – Dec 09	N	1.0	96.6%	N/A	TT	Soil runoff

Turbidity is a measure of the cloudiness of the water. *Bay County monitors* turbidity because it is a good indicator of the effectiveness of their filtration system. High turbidity can hinder the effectiveness of disinfectants. ^The Treatment Technique standard requires that 95% of the turbidity readings be at 0.3 NTU or less.

Radiological Contaminants *Monitored by Bay County*

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
Radium 226 + 228 or combined radium (pCi/L)	Apr-08	N	0.2	N/A	0	5	Erosion of natural deposits

Inorganic Contaminants *Monitored by Bay County*

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
Arsenic (ppb)	June-09	N	0.8	N/A	N/A	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	June-09	N	0.0057	N/A	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beryllium (ppb)	June-09	N	0.2	N/A	4	4	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Fluoride (ppm)	June-09	N	1.3	N/A	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)	June-09	N	1	N/A	N/A	100	Pollution from mining and refining operations. Natural occurrence in soil.
Sodium (ppm)	June-09	N	6	N/A	N/A	160	Salt water intrusion, leaching from soil
Thallium (ppb)	June-09	N	0.7	N/A	0.5	2	Leaching from ore-processing sites; discharge from electronics, glass and drug factories

Synthetic Organic Contaminants including Pesticides and Herbicides *Monitored by Bay County*

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
Dalapon (ppb)	Jan-Dec 09	N	0.74	ND – 1.7	200	200	Runoff from herbicide used on right of ways

Stage 1 Disinfectants and Disinfection By-Products (DDBP)

Monitored by Bay County and *City of Springfield*

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) *Monitored by Springfield*	April – Dec 2009	N	1.5	1.1 – 1.83	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes
Haloacetic Acids (Five) (HAA5) (ppb) *Monitored by Bay County*	Jan – Dec 2009	N	49.1	13.53 – 139	N/A	MCL = 60	Byproduct of drinking water disinfection
TTHM [Total trihalomethanes] (ppb) *Monitored by Bay County*	Jan – Dec 2009	N	59.6	17.7-158	N/A	MCL = 80	Byproduct of drinking water disinfection

***** Compliance with EPA Stage 1 Disinfectants and Disinfection Byproducts Rule requiring *City of Springfield* as a Consecutive Water System to monitor chlorine.

Stage 2 Disinfectants and Disinfection By-Products (DDBP)

Monitored by City of Springfield

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
* Haloacetic Acids (Five) (HAA5) (ppb) *Monitored by Springfield*	July – Dec 2009	**	**	9.3-86.2	N/A	MCL = 60 ug/L	Byproduct of drinking water disinfection
* TTHM [Total trihalomethanes] (ppb) *Monitored by Springfield*	July – Dec 2009	**	**	30.6-126.9	N/A	MCL = 80	Byproduct of drinking water disinfection

*****Compliance with EPA Stage 2 Disinfectants and Disinfection Byproducts Rule requiring *City of Springfield* as a Consecutive Water System to monitor Disinfection Byproducts ** To be determined after four quarters of sampling.

Contaminant and Unit of Measurement	Dates of sampling (mo/yr)	TT Violation Y/N	Lowest Running Annual Average, Computed Quarterly, of Monthly Removal Ratios	Range of Monthly Removal Ratios	MCLG	MCL	Likely Source of Contamination
Total organic carbon (ppm) *Monitored by Bay County*	Jan – Dec 2009	N	1.16	0.96 – 1.98	N/A	TT	Naturally present in the environment

Lead and Copper (Tap Water) *Monitored by City of Springfield*

Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	AL Exceeded Y/N	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Copper (tap water) (ppm)	Jun-Sep 09	N	0.15 mg/l	0 of 20	1.3 mg/l	1.3 mg/l	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Lead and Copper are collected from *City of Springfield* Distribution System.

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 Springfield 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.

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 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 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 by-products 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.

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) establishes 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 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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).