

ANNUAL
**WATER
QUALITY
REPORT**

WATER TESTING PERFORMED IN 2015



Presented By
City of Lynn Haven

Meeting the Challenge

Once again we are proud to present our annual drinking water report, covering all drinking water testing performed between January 1 and December 31, 2015. Over the years, we have dedicated ourselves to producing drinking water that meets all State and Federal standards. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all of our water users.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines

on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.



Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. We meet the second Tuesday of each month beginning at 4:00 pm and the fourth Tuesday of each month at 6:00 pm in the Chambers located at 108 East 9th St in Lynn Haven, Fl.

About Our Violation

The City of Lynn Haven Water System had an MCL violation for Total Coliform Bacteria on water purchased from the Bay County Water System in June 2015. Two samples tested positive, which is one more than allowed by rule. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. When coliforms are found in more samples than allowed, there is a warning of potential problems. State regulations require three samples to be tested following any positive distribution sample. The City of Lynn Haven promptly re-sampled as required by State law. All repeat samples tested negative for coliform bacteria. The City of Lynn Haven published a notice of this violation in the local newspaper, and a letter was mailed to residents who were affected. Due to this violation, the sampling plan for this system was reviewed to prevent any future sampling violations.

Substances That Could Be in Water

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:

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 U.S. EPA prescribes regulations that 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 that must provide the same protection for public health.

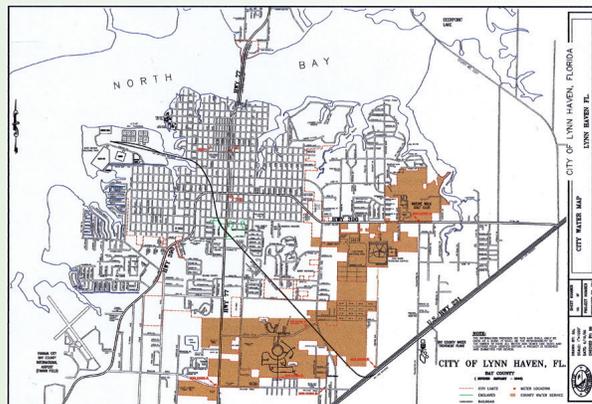
Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.

Where Does My Water Come From?

The City of Lynn Haven customers are fortunate because they enjoy an abundant water supply from two sources: groundwater from the Floridan Aquifer and surface water purchased from Bay County Utilities. The map of Lynn Haven shown here is color-coded to show the area served by the two water sources. The area of Lynn Haven that is served by Bay County Water is shaded; the area served by Lynn Haven's deep wells is the unshaded portion of the map.

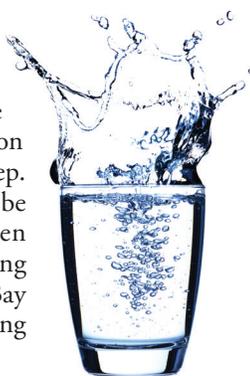
The City of Lynn Haven has 5 deep wells that serve the majority of Lynn Haven customers. The raw water from wells is aerated to remove excess hydrogen sulfide and stored in two central locations. The water is then chlorinated and pumped to the distribution system as needed to maintain satisfactory pressure throughout the system for daily use and fire protection.

The Bay County Water Treatment Plant draws from Deer Point Reservoir. Bay County has a surface water treatment plant that supplies the remainder of Lynn Haven customers. Bay County uses a conventional treatment process of coagulation, flocculation, sedimentation, filtration, pH adjustment, disinfection, fluoridation, and corrosion control. The treatment process includes adding lime to complete the reaction of coagulation and the addition of ferric sulfate to remove particles and color. Polymer is 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 (U.S EPA) and the Florida Department of Environmental Protection (FDEP).



Source Water Assessment

In 2015 the Florida Department of Environmental Protection (FDEP) 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 5 wells. For the City of Lynn Haven Water System, there are two potential sources of contamination identified with low to moderate susceptibility levels. Also in 2015, the FDEP performed a Source Water Assessment on The Bay County Water System. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of The Bay County surface water intakes. The surface water system is considered to be at high risk because of many potential sources of contamination present in the assessment area. The assessment results are available on the FDEP Source Water Assessment and Protection Program Web site at www.dep.state.fl.us/swapp or they can be obtained from Lynn Haven Utilities Department by calling (850) 265-0087 and/or from Bay County Utility Services by calling (850) 872-4785.



Lead in Home Plumbing

In the wake of the recent national events, The City of Lynn Haven Water System is aware of elevated concern about lead levels in drinking water. We want to reassure you that our most recent lead and copper testing has shown our levels to be well within Federal limits. 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. We are responsible for providing high-quality drinking water, but we 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 www.epa.gov/lead.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Brian King, Water Department Lead Operator, at (850) 265-0087.

Sampling Results

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The State allows us to monitor for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the samples were taken.

We participated in the 3rd stage of the EPA's Unregulated Contaminant Monitoring Rule (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality. Contact us for more information on this program.

PRIMARY REGULATED CONTAMINANTS

Microbiological Contaminants

City of Lynn Haven						
CONTAMINANT AND UNIT OF MEASUREMENT	MCL VIOLATION (YES/NO)	DATE OF SAMPLING (MO./YR.)	HIGHEST MONTHLY NUMBER	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
Total Coliform Bacteria ¹ (# positive samples)	Yes	Jan 15–Dec 15	2	0	Presence of coliform bacteria in 1 sample collected during a month	Naturally present in the environment

Bay County

CONTAMINANT AND UNIT OF MEASUREMENT	MCL VIOLATION (YES/NO)	DATE OF SAMPLING (MO./YR.)	THE HIGHEST SINGLE MEASUREMENT	THE LOWEST MONTHLY PERCENTAGE OF SAMPLES MEETING REGULATORY LIMITS	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
Turbidity ² (NTU)	No	Jan 15–Dec 15	0.41	99.5	NA	TT	Soil runoff

Radioactive Contaminants

City of Lynn Haven				Bay County						
CONTAMINANT AND UNIT OF MEASUREMENT	MCL VIOLATION (YES/NO)	DATE OF SAMPLING (MO./YR.)	LEVEL DETECTED	RANGE OF RESULTS	DATE OF SAMPLING (MO./YR.)	LEVEL DETECTED	RANGE OF RESULTS	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
Alpha Emitters (pCi/L)	No	Jul-11	2.4	ND–2.4	Jul-11	ND	NA	0	15	Erosion of natural deposits
Radium 226 + 228 [Combined Radium] (pCi/L)	No	Jul-11	0.8	ND–0.8	Apr-11	0.8	NA	0	5	Erosion of natural deposits

Inorganic Contaminants

Barium (ppm)	No	Apr-14	0.034	0.032–0.034	Apr-15	0.0068	NA	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium (ppb)	No	Apr-14	2.8	2.5–2.8	Apr-15	ND	NA	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride (ppm)	No	Apr-14	0.60	0.57–0.60	Apr-15	1.20	0.053–1.20	4	4.0	Erosion of natural deposits; discharge from fertilizer and aluminum factories; water additive that promotes strong teeth when at optimum level of 0.7
Nitrate [as Nitrogen] (ppm)	No	Mar-15	ND	NA	Apr-15	0.043	NA	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	No	Apr-14	44	37–44	Apr-15	5.20	NA	NA	160	Salt water intrusion; leaching from soil

Stage 1 and Stage 2 Disinfectant/Disinfection By-Product (D/DBP) Parameters

City of Lynn Haven							
CONTAMINANT AND UNIT OF MEASUREMENT	MCL OR MRDL VIOLATION (YES/NO)	DATE OF SAMPLING (MO./YR.)	LEVEL DETECTED	RANGE OF RESULTS	MCLG OR [MRDLG]	MCL OR [MRDL]	LIKELY SOURCE OF CONTAMINATION
Chlorine ¹ (ppm)	No	Jan 15–Dec 15	1.4	1.0–1.6	[4]	[4.0]	Water additive used to control microbes
Haloacetic Acids (five) [HAA5] ¹ (ppb)	No	Jan 15–Dec 15	48.9	7.3–74	NA	60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] ¹ (ppb)	No	Jan 15–Dec 15	56.025	25.3–70.55	NA	80	By-product of drinking water disinfection

		Bay County						
CONTAMINANT AND UNIT OF MEASUREMENT	TT VIOLATION (YES/NO)	DATE OF SAMPLING (MO/YR)	ANNUAL AVERAGE MONTHLY REMOVAL RATIO OR LOWEST ANNUAL AVERAGE MONTHLY REMOVAL RATIO	RANGE OF MONTHLY REMOVAL RATIOS	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION	
Total Organic Carbon ³ (ppm)	No	Jan 15–Dec 15	1.71	1.00–2.27	NA	TT	Naturally present in the environment	

Lead and Copper (Tap water samples were collected from sites throughout the community.)

		City of Lynn Haven			Bay County					
CONTAMINANT AND UNIT OF MEASUREMENT	AL EXCEEDANCE (YES/NO)	DATE OF SAMPLING (MO./YR.)	90TH PERCENTILE RESULT	NO. OF SAMPLING SITES EXCEEDING THE AL	DATE OF SAMPLING (MO./YR.)	90TH PERCENTILE RESULT	NO. OF SAMPLING SITES EXCEEDING THE AL	MCLG	AL (ACTION LEVEL)	LIKELY SOURCE OF CONTAMINATION
Copper [tap water] (ppm)	No	Jul-14	0.29	0	Aug-14	0.404	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead [tap water] (ppb)	No	Jul-14	2.7	1	Aug-14	0.7	0	0	15	Corrosion of household plumbing systems; erosion of natural deposits

UNREGULATED CONTAMINANT MONITORING RULE PART 3 (UCMR3) - CITY OF LYNN HAVEN¹

CONTAMINANT AND UNIT OF MEASUREMENT	DATE OF SAMPLING (MO./YR.)	LEVEL DETECTED	RANGE OF RESULTS	LIKELY SOURCE OF CONTAMINATION
Chlorate (ppb)	Feb 15- Nov 15	91.78	ND–302	Likely source of contamination not known at this time.
Chromium–Total Chromium (ppb)	Feb 15- Nov 15	0.072	ND–0.22	Likely source of contamination not known at this time.
Chromium–Hexavalent (ppb)	Feb 15- Nov 15	0.047	ND–0.40	Likely source of contamination not known at this time.
Cobalt (ppb)	Feb 15- Nov 15	0.2	ND–2.7	Likely source of contamination not known at this time.
Strontium (ppb)	Feb 15- Nov 15	2,774.23	52.9–6,500	Likely source of contamination not known at this time.
Vanadium (ppb)	Feb 15- Nov 15	0.0046	ND–0.074	Likely source of contamination not known at this time.

¹These samples were taken by the City of Lynn Haven, and are a combination of both Lynn Haven and Bay County service areas.

²Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system. High turbidity can hinder the effectiveness of disinfectants. The result in the lowest monthly percentage column of the contaminant table is the lowest monthly percentage of samples meeting the turbidity limits reported in the Monthly Operating Report. Turbidity is only required to be taken in the Bay County Service Area.

³The monthly TOC removal ratio is the ratio between the actual TOC removal and the TOC rule removal requirements. Total Organic Carbon is only to be taken in the Bay County Service Area.

Definitions

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

MCL (Maximum Contaminant Level): 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.

MCLG (Maximum Contaminant Level Goal): 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.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): 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.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

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