



# ***NORTH SPRINGS IMPROVEMENT DISTRICT*** ***2014*** ***ANNUAL CONSUMER REPORT***



**North Springs Improvement District** is pleased to present this year's Annual Water Quality Report. This report is designed to inform you about the quality 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. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.



## **Overview**

**In 2014** 1.5 billion gallons of water was distributed to the customers of North Springs Improvement District. The water source for the District is the Biscayne Aquifer an underground geological formation. The Biscayne Aquifer has been a reliable source of high quality water since the early 1920's. Water from the Aquifer is withdrawn and pumped to the water treatment plant by 9 raw water wells located within the District. It is then treated by lime softening that removes 75% of the calcium, the main hardness producing component in ground water. The water is then filtered, disinfected with chlorine and ammonia for bacteria removal. Fluoride is added as an aid in preventing tooth decay.

## **Source Water Assessment**

As part of the Federal Safe Drinking Water Act, the Florida Department of Environmental Protection (FDEP) performed a Source Water Assessment (SWA) on our system in 2014 and a search of the data sources indicate no potential sources of contamination near our wells. The SWA results for North Springs Improvement District are available on the FDEP Source Water Assessment and Protection Program Website at [www.dep.stste.fl.us/swapp](http://www.dep.stste.fl.us/swapp)



**The EPA requires North Springs Improvement District and all water suppliers in the United States, to provide a summary report on laboratory tests taken on it's drinking water throughout the year. The 2014 Water Quality Table includes the most important information about your water. It shows the results of thousands of laboratory tests conducted on N.S.I.D. water system and what they mean. Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply, we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. Thank you for understanding.**

## Terms & Abbreviations

### Key to Table

AL = Action Level

MCL= Maximum Contaminant Level

MCLG= Maximum Contaminant Level Goal

pCi/L= picocuries per Liter

ppm = Parts per million

ppb = Parts per billion

ug/L= Micrograms per Liter

N/D = Not detected

RAA = Running Annual Average

MRDL= Maximum residual disinfectant level

MRDLG= Maximum residual disinfectant level goal

LRAA= Locational Running Average: The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

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

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.

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

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.

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.  
Parts per million: 1 part by weight of analyte to 1 million parts by weight of the water sample.

Parts per billion or Micrograms per liter: 1 part by weight of analyte to 1 billion parts by weight to water sample.

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 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 (Environmental Protection Agency) prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) 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**

### Additional Health Information

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 viral and microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791). Water quality information for community water systems throughout the United States is available at [www.water.epa.gov](http://www.water.epa.gov)

**N.S.I.D.** routinely monitors for 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 our monitoring for the period of January 1 to December 31, 2014.

**Total Coliform:** 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.

### Microbiological Contaminants

Contaminant and unit of Measurement	Dates of Sampling (mo./yr.)	MCL Monthly Percentage	Highest Monthly Percentage	MCLG	MCL Contamination	Likely Source Of Contamination
Total Coliform Bacteria	Jan.14/Dec .14	NO	0.0%	0	>5.0%	Naturally present In the environment

### Disinfectants and Disinfection By-Products (Regulated at Distribution)

For chloramines, the level detected is the highest running annual average (RAA), computed quarterly, of monthly averages of a sample collected. The range of results is the range of results of all the individual samples collected during the past year. Range of results is the range of individual sample results (lowest to highest) for all monitoring locations.

Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results ug/L and ppm	MCLG or MRDLG	MCL	Likely Source of Contamination
Chloramines (ppm)	11/13-8/14	N	3.43 (ppm)	1.1 - 4.0	MRDLG = 4.0	4.0	Water additive used to control microbes
Haloacetic Acids (five) (HAA5) (ppb)	11/13, 2/14, 5/14, 8/14	N	13.64 (LRAA)	ND-22.65	N/A	60	By -product of drinking water disinfection
TTHM [Total trihalo-methanes] (ppb)	11/13, 2/14, 5/14, 8/14	N	18.44 (LRAA)	7.63-35.87	N/A	80	By-product of drinking water disinfection

Enough data is available to calculate running average (LRAA) for Haloacetic Acids or TTHM for the previous four quarters. For these contaminants the level detected is the highest locational RAA.

## Inorganic Contaminants

Contaminant	Date Tested	Units	MCL	MCLG	Analysis Result	Major Sources	Violations
Fluoride	2014	mg/L	4.0	4.0	0.50	Erosion of Natural Deposits discharge form fertilizer and aluminum factories . Water additive which promotes strong teeth at the optimum level of 0.7 ppm	NO
Sodium	2014	mg/L	160.0	N/A	38.5	Salt Water intrusion, leaching form soil	NO
Barium	2014	mg/L	2.0	2.0	0.00825	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits	NO
Nitrate (as Nitrogen)	2014	mg/L	10	10	0.33	Runoff from Fertilizer use; leaching from septic tanks, erosion of natural deposits	NO
Nitrite (as Nitrogen)	2014	mg/L	1	1	0.12	Runoff from Fertilizer use; leaching from septic tanks, erosion of natural deposits	NO
Chromium	2014	ug/L	100	100	.54	Discharge from steel and pulp mills; erosion of natural deposits	NO

## Lead and Copper (Tap Water)

Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	AL Violation Y/N	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL (action level)	Likely Source of Contamination
Copper (Tap water) mg/L	6/2012	No	0.0865	0	1.3	1.3	Corrosion of household plumbing Decay of natural and man made deposits
Lead (Tap water) ppb	6/2012	No	3.5	0	0	15	Corrosion of household plumbing Decay of natural and man made deposits

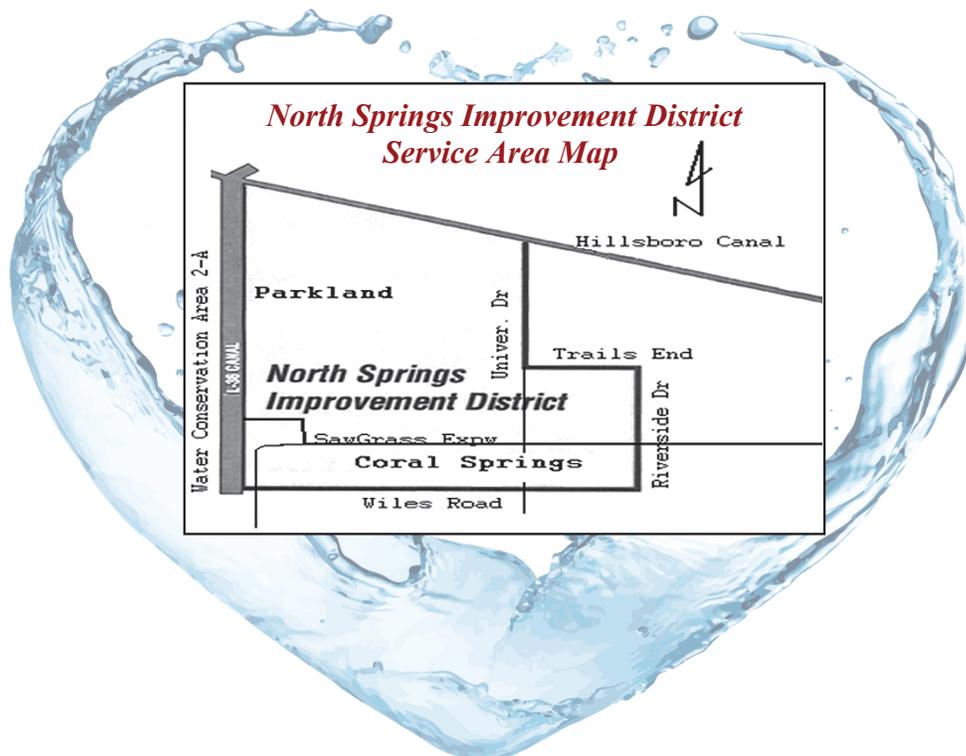
For lead and copper; 30 samples were collected randomly from the water distribution system. Results are reported as the 90th percentile value of the most recent round of sampling. Sampling for Lead and Copper is every 3 years. Next date of sampling is in 2015.

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. N.S.I.D. 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>.

## Unregulated Contaminant Monitoring Rule (UCMR 3)

Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	Average	Range of Results	Likely Source of Contamination
Chromium (total) (ppb)	01/14-12/14	0.44	0.67-1.0	Naturally occurring element; used in making steel and other alloys. Chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Molybdenum (ppb)	01/14-12/14	0.429	0.33-0.62	Naturally occurring element found in ores and present in plants, animals and bacteria; commonly used form molybdenum trioxide used as a chemical reagent
Strontium (ppb)	01/14-12/14	604	0.10-1340	Naturally occurring element; historically, commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions
Vanadium (ppb)	01/14-12/14	0.99	0.067-3.1	Naturally occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and catalyst
Chromium- Hexavalent (ppb)	01/14-12/14	0.385	0.14-0.61	See "Chromium (total)"
Chlorate (ppb)	01/14-12/14	445	184-717	Agricultural defoliant or desiccant; disinfection byproduct, used in production of chlorine dioxide

North Springs Improvement District has been monitoring for unregulated contaminants (UCs) as part of a study to help the U.S. Environmental Protection Agency (EPA) determine the occurrence in drinking water of UCs and whether or not these contaminants need to be regulated. EPA requires many public water systems to monitor for 28 contaminants including chromium-6. At present, no health standards (for example, maximum contaminant levels) have been established for UCs. However, we are required to publish the analytical results of our UC monitoring in our annual water quality report. If you would like more information on the EPA's Unregulated Contaminants Monitoring Rule, please call the Safe Drinking water Hotline at (800) 426-4791.





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*This report was prepared with Florida Rural Water Association and The Department of Environmental Protection template for Consumer Confidence Reports. If you have any questions about the quality of our water, you may contact the water treatment plant at (954) 752-0400, or E-mail [Rodc@nsidfl.gov](mailto:Rodc@nsidfl.gov) Visit us on the web at [www.nsidfl.gov](http://www.nsidfl.gov)*

