







# Seminole County Annual Drinking Water Quality Report 2014

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Seminole County Environmental Services is pleased to present you with the 2014 Annual Drinking Water Quality Report. This report is designed to inform you about the quality water and services that 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 am proud to share this report which is based on water quality testing through December 2014; you will find that we supply water that meets or exceeds all federal and state water quality regulations.

Our Water Quality Report format has been changed and our now being offered electronically to all our customers. This report is divided into a service area map and 11 individual drinking water service area water quality reports. To determine your drinking water service area, please utilize the attached service area map and find the vicinity of your address; use the color-coded legend to determine your service area and go directly to that part of the report. Or, feel free to peruse the water quality data for all drinking water service areas served by Seminole County. If you would like a printed copy of this report mailed to your address, please contact Environmental Services Customer Service office at 407-665-2110, to request your copy.

Sincerely,

by willias

Elisa Williams & Nicholas Clark Regulatory Compliance Water Operations Seminole County Environmental Services



## Map of Water Service Areas





### Drinking Water Quality Report-Apple Valley Service Area 2014



We are pleased to present you 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. The drinking water for the Apple Valley Service Area is obtained from ground water wells and is chlorinated for disinfection purposes. If you have any questions about this report or concerning your water utility, please contact Seminole County Environmental Services at 407-665-2110.

Seminole County Environmental Services Department 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. Data obtained before January 1, 2014, and presented in this report are from the most recent testing done in accordance with the laws, rules and regulations.

#### Source Water Assessment Plan

In 2014 the Department of Environmental Protection 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 wells. There are two (2) potential sources of contamination identified for this system with moderate susceptibility levels. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at **www.dep.state.fl.us/swapp.** 

#### EPA Would Like You to Know

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.

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).

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. Seminole County Environmental Services 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**.



#### Terms and Abbreviations for Next Page:

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

**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. "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.



### Apple Valley Service Area

Apple Valley Water System										
				Radioactive Con	taminants					
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination			
Radium 226+228 (pCi/L)	06/09	N	0.3	0-0.3	0	5	Erosion of natural deposits			
				Inorganic Conta	aminants					
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination			
Antimony (ppb)	01/12	N	0.1	0.1	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder			
Arsenic (ppb)	01/12	N	0.41	0.41	N/A	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes			
Barium (ppm)	01/12	N	0.0079	0.0079	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits			
Fluoride (ppm)	01/12	N	0.2	0.2	4	4	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			
Lead (point of entry) (ppb)	01/12	N	0.36	0.36	NA	15	Residue from man-made pollution such as auto emissions and paint; lead pipe, casing, and solder			
Nickel (ppb)	01/12	N	0.61	0.61	NA	100	Pollution from mining and refining operations; Natural occurrence in soil			
Nitrate (as Nitrogen) (ppm)	01/14	N	0.029	0.029	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits			
Nitrite (as Nitrogen) (ppm)	01/14	N	0.0054	0.0054	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits			
Selenium (ppb)	01/12	N	1.10	1.1	50	50	Erosion of natural deposits; discharge from mines			
Sodium (ppm)	01/12	N	14	14	N/A	160	Salt water intrusion, leaching from soil			
Thallium (ppb)	01/12	N	0.031	0.031	0.5	2	Discharge from electronics, glass and drug factories			
			Stag	e 1 Disinfectant/Disir	nfection By-Pro	oduct				
Contaminant and Unit of Measurement	Date 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)	2014	N	0.63 (annual average)	0.2-2.18	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes			
Haloacetic Acids (five) (HAA5) (ppb)	2014	N	30.73 (annual average)	26.71-34.75	NA	MCL = 60	By-product of drinking water disinfection			
TTHM [Total trihalomethanes] (ppb)	2014	N	71.37 (annual average)	70.61-72.13	NA	MCL = 80	By-product of drinking water disinfection			
				Lead and Copper (	Tap Water)					
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	AL Violation Y/N	90th Percentile Result	Number of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination			
Copper (tap water) (ppm)	07/12	N	0.17	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives			
Lead (tap water) (ppb)	07/12	N	2.9	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits			



### Drinking Water Quality Report-Black Hammock Service Area 2014



We are pleased to present you 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. The drinking water for the Black Hammock Consecutive Service Area is obtained from ground water wells and is chloraminated for disinfection purposes and then fluoridated for dental health purposes. If you have any questions about this report or concerning your water utility, please contact Seminole County Environmental Services at 407-665-2110.

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#### Source Water Assessment Plan

In 2014 the Department of Environmental Protection performed a Source Water Assessment on City of Oviedo, from whom we purchase your drinking water. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of their wells. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at **www.dep.state.fl.us/swapp.** 

#### EPA Would Like You to Know

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.

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- **(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.



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).

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. Seminole County Environmental Services 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.** 



#### Terms and Abbreviations for Next Page:

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

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## Black Hammock Service Area

		WA	TER G	UALIT	YRE	SUL	TS				
			Black	Hammock W	/ater Sys	stem					
			N	licrobiological Cor	ntaminants						
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Highest Monthly Percentage / Number	MCLG	M	CL	Likely Source of Contamination				
Total Coliform Bacteria	01/14	N	1	0	For system at least 40 s month: pr coliform ba of monthl	s collecting samples per esence of cteria in 5% y samples	Naturally present in the environment				
				Radioactive Conta	minants						
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination				
Radium combined (pCi/L)	02/08	N	1.1	0.9 - 1.1	0	5	Erosion of natural deposits				
Inorganic Contaminants											
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination				
Barium (ppm)	03/14	N	0.013	0.013	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits				
Fluoride (ppm)	03/14	N	0.13	0.13	4	4	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth between 0.7 and 1.3 ppm				
Sodium (ppm)	03/14	N	38.0	38	NA	160	Salt water intrusion, leaching from soil				
			Stage 2	2 Disinfectant/Disinfe	ection By-Prod	uct					
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination				
Chloramines (ppm)	2014	N	1.24(average)	0.61-2.88	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes				
Haloacetic Acids (five) (HAA5) (ppb)	7/1/14	N	7.79	7.16-7.16	NA	MCL = 60	By-product of drinking water disinfection				
TTHM [Total trihalomethanes] (ppb)	7/1/14	N	20.63	20.17-20.17	NA	MCL = 80	By-product of drinking water disinfection				
				Lead and Copper (Ta	ap Water)						
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	AL Violation Y/N	90th Percentile Result	Number of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination				
Copper (tap water) (ppm)	08/12	N	0.3	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives				
Lead (tap water) (ppb)	08/12	N	1.4	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits				



### Drinking Water Quality Report-Chase Groves Consecutive Service Area 2014



We are pleased to present you 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. The drinking water for the Chase Groves Consecutive Service Area is obtained from ground water wells and is chlorinated for disinfection purposes and then fluoridated for dental health purposes. If you have any questions about this report or concerning your water utility, please contact Seminole County Environmental Services at 407-665-2110.

Seminole County Environmental Services Department 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. Data obtained before January 1, 2014, and presented in this report are from the most recent testing done in accordance with the laws, rules and regulations.

#### Source Water Assessment Plan

Seminole County Environmental Services Department 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. Data obtained before January 1, 2014, and presented in this report are from the most recent testing done in accordance with the laws, rules and regulation at **www.dep.state.fl.us/swapp.** 

#### EPA Would Like You to Know

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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.

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).

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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. Seminole County Environmental Services 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**.



#### Terms and Abbreviations for Next Page:

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

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### Chase Groves Service Area

Chase Gloves Water System										
				Radioactive Contai	minants					
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination			
Alpha Emitters (pCi/L)	2014	N	2.67	0-2.67	15	15	Erosion of natural deposits			
Radium 226 + 228 or combined radium (pCi/L)	2014	N	1.12	0-1.12	5	5	Erosion of natural deposits			
				Inorganic Contam	ninants					
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination			
Arsenic (ppb)	02/14	N	0.75	0-0.75	10	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes			
Barium (ppm)	06/14	N	0.017	0.010-0.017	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits			
Chromium (ppb)	06/11	N	0.6	0-0.6	100	100	Discharge from steel and pulp mills; erosion of natural deposits			
Cyanide (ppb)	06/11	N	4.8	0-4.8	200	200	Discharge from steel and pulp mills; erosion of natural deposits			
Fluoride (ppm)	06/14	N	0.75	0.63-0.75	4	4	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			
Nitrate (as Nitrogen) (ppm)	06/14	N	0.25	0.092-0.25	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits			
Sodium (ppm)	06/14	N	26	20.7-26.0	N/A	160	Salt water intrusion, leaching from soil			
			Stage 3	2 Disinfectant/Disinfe	ction By-Produ	ict				
Chlorine (ppm)	2014	N	1.2	0.35-2.10	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes			
Haloacetic Acids (five) (HAA5) (ppb)	2014	N	21.67	18.58-21.67	NA	MCL = 60	By-product of drinking water disinfection			
TTHM [Total trihalomethanes] (ppb)	2014	Y	87.33	59.23-87.33	NA	MCL = 80	By-product of drinking water disinfection			
				Lead and Copper (Ta	ap Water)					
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	AL Violation Y/N	90th Percentile Result	Number of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination			
Copper (tap water) (ppm)	8/2014	N	0.12	1	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives			
Lead (tap water) (ppb)	8/2014	N	1.3000	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits			

### WATER QUALITY RESULTS

\*Our annual samples for TTHM's exceeded the MCL triggering quarterly monitoring. We have increased flushing in the distribution lines to decrease the water age of the system and have begun sampling quarterly. The results in the table are a combination of the annual sample as well as the quarterly samples that were pulled during 2014.



### Drinking Water Quality Report-Druid Hills Consecutive Service Area 2014



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#### Source Water Assessment Plan

In 2014 the Department of Environmental Protection 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 wells. There are no (0) potential sources of contamination identified for this system. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at **www.dep.state.fl.us/swapp.** 

#### EPA Would Like You to Know

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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).

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. Seminole County Environmental Services 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 **http://www.epa.gov/safewater/lead.** 



#### Terms and Abbreviations for Next Page:

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

**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. "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.



### Druid Hills Service Area

### WATER QUALITY RESULTS

Druid Hills Water System

				Radioactive Cor	ntaminants		
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Alpha emitters (pCi/L)	06/09	N	3.6	3.6	0	15	Erosion of natural deposits
Radium 226 + 228 or combined radium (pCi/L)	06/09	N	0.4	0-0.4	0	5	Erosion of natural deposits
				Inorganic Cont	aminants		
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Arsenic (ppb)	01/12	N	0.57	0.57	N/A	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	01/12	N	0.0047	0.0047	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	01/12	N	0.24	0.24	4	4	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
Nitrate (as Nitrogen) (ppm)	01/14	N	0.03	0.03	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (as Nitrogen) (ppm)	01/14	N	0.0054	0.0054	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nickel (ppb)	01/12	N	0.56	0.56	N/A	100	Pollution from mining and refining operations; Natural occurrence in soil
Selenium (ppb)	01/12	N	1.30	1.3	50	50	Erosion of natural deposits; discharge from mines
Sodium (ppm)	01/12	N	15	15	N/A	160	Salt water intrusion, leaching from soil
			Stag	ge 1 Disinfectant/Disi	nfection By-Pr	oduct	
Contaminant and Unit of Measurement	Date 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)	2014	N	1.19 (annual average)	0.28-3.48	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes
Haloacetic Acids (five) (HAA5) (ppb)	2014	N	24.55 (annual average)	24.17-24.92	N/A	MCL = 60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] (ppb)	2014	N	48.88 (annual average)	48.07-49.69	N/A	MCL = 80	By-product of drinking water disinfection
				Lead and Copper	(Tap Water)		
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	AL Violation Y/N	90th Percentile Result	Number of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination
Copper (tap water) (ppm)	07/12	N	0.26	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	07/12	N	1.7	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits



### Drinking Water Quality Report-Lake Brantley Consecutive Service Area 2014



We are pleased to present you 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. The drinking water for the Lake Brantley Consecutive Service Area is obtained from ground water wells and is chlorinated for disinfection purposes. If you have any questions about this report or concerning your water utility, please contact Seminole County Environmental Services at 407-665-2110.

Seminole County Environmental Services Department 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. Data obtained before January 1, 2014, and presented in this report are from the most recent testing done in accordance with the laws, rules and regulations.

#### Source Water Assessment Plan

In 2014 the Department of Environmental Protection performed a Source Water Assessment on Sanlando Utilities, from whom we purchase your drinking water. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of their wells. The assessment results are available on the FDEP Source Water Assessment and Protection Program website **www.dep.state.fl.us/swapp.** 

#### EPA Would Like You to Know

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.

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).

SEMINIC

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. Seminole County Environmental Services 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**.



#### Terms and Abbreviations for Next Page:

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

**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. "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.



### Lake Brantley Service Area

### WATER QUALITY RESULTS

Lake Brantley Water System

				Radioactive Conta	minants					
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination			
Alpha Emitters (pCi/L)	3/14	N	2	1.1-2.0	0	15	Erosion of natural deposits			
Inorganic Contaminants										
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination			
Barium (ppm)	3/14	N	0.0391	0.0056-0.0391	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits			
Chromium (ppb)	4/11	N	7.8	6.8-7.8	100	100	Discharge from steel and pulp mills; erosion of natural deposits			
Nickel (ppb)	4/11	N	2.8	1.5-2.8	N/A	100	Pollution from mining and refining operations; Natural occurrence in soil			
Fluoride (ppm)	3/14	N	0.201	0-0.201	4	4	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			
Sodium (ppm)	3/14	N	14.9	8.82-14.9	N/A	160	Salt water intrusion, leaching from soil			
			Stage	2 Disinfectant/Disinfe	ection By-Prod	uct				
Contaminant and Unit of Measurement	Date 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)	2014	N	1.62	0.65-2.60	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes			
Haloacetic Acids (five) (HAA5) (ppb)	7/2014	N	7.68	7.68	N/A	MCL = 60	By-product of drinking water disinfection			
TTHM [Total trihalomethanes] (ppb)	7/2014	N	17.43	17.43	N/A	MCL = 80	By-product of drinking water disinfection			
				Lead and Copper (Ta	ap Water)					
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	AL Violation Y/N	90th Percentile Result	Number of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination			
Copper (tap water) (ppm)	9/12	N	0.033	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives			
Lead (tap water) (ppb)	9/12	N	0.2	0	o	15	Corrosion of household plumbing systems, erosion of natural deposits			



### Drinking Water Quality Report-Meredith Manor Service Area 2014



We are pleased to present you 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. The drinking water for the Meredith Manor Service Area is obtained from ground water wells and is chlorinated for disinfection purposes. If you have any questions about this report or concerning your water utility, please contact Seminole County Environmental Services at 407-665-2110.

Seminole County Environmental Services Department 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. Data obtained before January 1, 2014, and presented in this report are from the most recent testing done in accordance with the laws, rules and regulations.

#### Source Water Assessment Plan

In 2014 the Department of Environmental Protection performed a Source Water Assessment on Sanlando Utilities, from whom we purchase your drinking water. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of their wells. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at **www.dep.state.fl.us/swapp.** 

#### EPA Would Like You to Know

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.



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).

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. Seminole County Environmental Services 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.** 



#### Terms and Abbreviations for Next Page:

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

**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. "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.



### Meredith Manor Service Area

### WATER QUALITY RESULTS

	Meredith Manor Water System										
				Microbiological	Contaminants						
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Highest Monthly Percentage / Number	MCLG	M	ICL	Likely Source of Contamination				
Total Coliform Bacteria	02/14	N	1	0	For systems	collecting at	Naturally present in the environment				
				Radioactive Co	ntaminants						
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination				
Alpha Emitters (pCi/L)	3/14	N	2	1.1-2.0	0	15	Erosion of natural deposits				
				Inorganic Cor	ntaminants						
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination				
Barium (ppm)	3/14	N	0.0391	0.0056-0.0391	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits				
Chromium (ppb)	4/11	N	7.8	6.8-7.8	100	100	Discharge from steel and pulp mills; erosion of natural deposits				
Nickel (ppb)	4/11	N	2.8	1.5-2.8	N/A	100	Pollution from mining and refining operations; Natural occurrence in soil				
Fluoride (ppm)	3/14	N	0.201	0-0.201	4	4	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				
Selenium (ppb)	4/11	N	3.2	2.2-3.2	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines				
Sodium (ppm)	3/14	N	14.9	8.82-14.9	N/A	160	Salt water intrusion, leaching from soil				
			Stag	ge 1 Disinfectant/Dis	sinfection By-F	Product					
Contaminant and Unit of Measurement	Date 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)	2014	N	1.72 (annual average)	0.52-3.67	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes				
Haloacetic Acids (five) (HAA5) (ppb)	8/13	N	22.1	20.1-25.9	NA	MCL = 60	By-product of drinking water disinfection				
TTHM [Total trihalomethanes] (ppb)	8/13	N	27.4	18.6-35.9	NA	MCL = 80	By-product of drinking water disinfection				
			Stag	ge 2 Disinfectant/Dis	sinfection By-F	Product					
Contaminant and Unit of Measurement	Date 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)	2014	N	1.93(annual average)	1.12-2.67	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes				
Haloacetic Acids (five) (HAA5) (ppb)	7/14	N	18.76	9.62-18.76	NA	MCL = 60	By-product of drinking water disinfection				
TTHM [Total trihalomethanes] (ppb)	7/14	N	39.58	20.87-39.58	NA	MCL = 80	By-product of drinking water disinfection				
				Lead and Coppe	r (Tap Water)						
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	AL Violation Y/N	90th Percentile Result	Number of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination				
Copper (tap water) (ppm)	08/12	N	0.68	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives				
Lead (tap water) (ppb)	08/12	N	12	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits				



### Drinking Water Quality Report-Northeast Service Area 2014



We are pleased to present you 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. The drinking water for the Northeast Service Area is obtained from ground water wells and is chlorinated for disinfection purposes and then fluoridated for dental health purposes. If you have any questions about this report or concerning your water utility, please contact Seminole County Environmental Services at 407-665-2110.

Seminole County Environmental Services Department 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. Data obtained before January 1, 2014, and presented in this report are from the most recent testing done in accordance with the laws, rules and regulations.

#### Source Water Assessment Plan

In 2014 the Department of Environmental Protection 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 wells. There are no (0) potential sources of contamination identified for this system. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at **www.dep.state.fl.us/swapp.** 

#### EPA Would Like You to Know

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 stormwate 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.
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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.

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).

SEMINO

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. Seminole County Environmental Services 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**.



#### Terms and Abbreviations for Next Page:

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

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

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### Northeast Service Area

### WATER QUALITY RESULTS

Northeast Water System										
				Radioactive Con	taminants					
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination			
Alpha emitters (pCi/L)	02/14	N	2.69	0-2.69	0	15	Erosion of natural deposits			
Radium 226 + 228 or combined radium (pCi/L)	02/14	N	1.45	0-1.45	0	5	Erosion of natural deposits			
		,		Inorganic Conta	iminants	,				
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination			
Arsenic (ppb)	02/14	N	0.5	0-0.50	0	10	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder			
Barium (ppm)	02/14	N	0.0092	0.0080-0.0092	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits			
Fluoride (ppm)	02/14	N	1.7	0.15-1.7	4	4	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			
Nitrate (as Nitrogen) (ppm)	01/14	N	0.029	0.029	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits			
Nitrite (as Nitrogen) (ppm)	01/14	N	0.0054	0.0054	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits			
Sodium (ppm)	02/14	N	16.1	14.7-16.1	N/A	160	Salt water intrusion, leaching from soil			
			Stage	e 1 Disinfectant/Disin	fection By-Pro	ducts				
Contaminant and Unit of Measurement	Date 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)	1/14-12/14	N	1.925 (annual average)	0.24-3.98	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes			
			Stage	e 2 Disinfectant/Disin	fection By-Pro	duct				
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination			
Haloacetic Acids (five) (HAA5) (ppb)	1/14-12/14	N	20.68	5.3-48.7	NA	MCL = 60	By-product of drinking water disinfection			
TTHM [Total Trihalomethanes] (ppb)	1/14-12/14	N	41.585	12.4-76.2	NA	MCL = 80	By-product of drinking water disinfection			
				Lead and Copper (	Tap Water)					
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	AL Violation Y/N	90th Percentile Result	Number of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination			
Copper (tap water) (ppm)	08/14	N	1	2	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives			
Lead (tap water) (ppb)	08/14	N	3.5	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits			



### Drinking Water Quality Report-Northwest Service Area 2014



We are pleased to present you 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. The drinking water for the Northwest Service Area is obtained from ground water wells and is chlorinated for disinfection purposes and then fluoridated for dental health purposes. If you have any questions about this report or concerning your water utility, please contact Seminole County Environmental Services at 407-665-2110.

Seminole County Environmental Services Department 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. Data obtained before January 1, 2014, and presented in this report are from the most recent testing done in accordance with the laws, rules and regulations.

#### Source Water Assessment Plan

In 2014 the Department of Environmental Protection 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 wells. There are four (4) potential sources of contamination identified for this system with low or moderate susceptibility levels. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at **www.dep.state.fl.us/swapp.** 

#### EPA Would Like You to Know

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.



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).

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. Seminole County Environmental Services 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**.



#### Terms and Abbreviations for Next Page:

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

**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. "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.



### Northwest Service Area WATER QUALITY RESULTS

Northwest Water System											
				Microbiologic	al Contamin	ants					
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Highest Monthly Percentage / Number	MCLG	M	CL	Likely Source of Contamination				
Total Coliform Bacteria	1/14-12-14	N	0	0	For system fewer than per month of coliform >1 sample	s collecting 40 samples : presence bacteria in per month	Naturally present in the environment				
				Radioactive	Contaminan	ıts					
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination				
Alpha emitters (pCi/L)	02/14	N	2.84	2.65-2.84	o	15	Erosion of natural deposits				
Radium 226 + 228 or combined radium (pCi/L)	02/14	N	1.61	1.396-1.61	0	5	Erosion of natural deposits				
				Inorganic C	Contaminant	s					
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination				
Arsenic (ppb)	02/14	N	0.5	0.5	0	10	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder				
Barium (ppm)	02/14	N	0.011	0.0078-0.011	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits				
Fluoride (ppm)	02/14	N	0.12	0.088-0.12	4	4	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				
Lead (point of entry) (ppb)	02/14	N	0.5	0.5	MCLG = 0	15	Residue from man-made pollution such as auto emissions and paint; lead pipe, casing, and solder				
Nickel (ppb)	02/14	N	2.5	2.5	N/A	100	Pollution from mining and refining operations. Natural occurrence in soil				
Nitrate (as Nitrogen) (ppm)	01/14	N	0.029	0.029	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits				
Nitrite (as Nitrogen) (ppm)	01/14	N	0.0054	0.0054	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits				
Selenium (ppb)	02/14	N	0.5	0.005	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines				
Sodium (ppm)	02/14	N	24.5	17.4-24.5	N/A	160	Salt water intrusion, leaching from soil				
			Stage 1	Disinfectant/	Disinfection	By-Products	;				
Contaminant and Unit of Measurement	Date 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)	1/14-12/14	N	1.53 (annual average)	0.35-3.10	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes				
Bromate (ppb)	6/14-12/14	N	0 (annual average)	0	MCLG = 0	MCL = 10	By-product of drinking water disinfection				
			Stage 2	Disinfectant/I	Disinfection	By-Products					
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination				
Haloacetic Acids (five) (HAA5) (ppb)	1/14-12/14	N	16.078	9.86-20.9	N/A	MCL = 60	By-product of drinking water disinfection				
TTHM [Total trihalomethanes] (ppb)	1/14-12/14	N	72.968	43.94-85.86	N/A	MCL = 80	By-product of drinking water disinfection				



### Northwest Service Area (cont'd)

	Lead and Copper (Tap Water)											
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	AL Violation Y/N	90th Percentile Result	Number of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination					
Copper (tap water) (ppm)	08/14	N	0.48	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives					
Lead (tap water) (ppb)	08/14	N	1.4	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits					

#### Stage 2 Disinfectant/Disinfection By-Product Extension Notice:

In 2013 the Environmental Protection Agency (EPA) extended the compliance date for the Stage 2 Disinfectants and Disinfection Byproducts Rule (DPBR) for the Seminole County Southeast service area from October 1, 2013, to April 1, 2015, due to on-going capital improvements at the Markham Regional Water Treatment Facility. We are currently conducting quarterly monitoring at the required Stage 2 DBP locations and reporting our results as a system-wide running annual average (RAA) instead of a location specific running annual average (RAA), as required by the Stage 2 DPBR. Once the extension period is over, we will continue to conduct quarterly monitoring at the required Stage 2 DBP locations and begin reporting our results as a location specific RAA.



### Drinking Water Quality Report-Southeast Service Area 2014



We are pleased to present you 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. The drinking water for the Southeast Service Area is obtained from ground water wells. The water is ozonated, filtered with granular activated carbon and chlorinated for disinfection purposes. We then fluoridate for dental health purposes. If you have any questions about this report or concerning your water utility, please contact Seminole County Environmental Services at 407-665-2110.

Seminole County Environmental Services Department 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. Data obtained before January 1, 2014, and presented in this report are from the most recent testing done in accordance with the laws, rules and regulations.

#### Source Water Assessment Plan

In 2014 the Department of Environmental Protection 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 wells. There are no (0) potential sources of contamination identified for this system. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at **www.dep.state.fl.us/swapp.** 

#### EPA Would Like You to Know

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.



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).

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. Seminole County Environmental Services 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**.



#### Terms and Abbreviations for Next Page:

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

**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. "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.



### Southeast Service Area

#### WATER QUALITY RESULTS

	Southeast Water System										
				Microbiological Co	ontaminants						
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Highest Monthly Percentage / Number	MCLG	N	ICL	Likely Source of Contamination				
Total Coliform Bacteria	2/14 & 7/14	N	1.40%	0	For systems collecting at least 40 samples per month: presence of coliform bacteria in >5% of monthly		Naturally present in the environment				
				Radioactive Cor	ntaminants						
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination				
Alpha emitters (pCi/L)	02/14	N	2.74	2.24-274	0	15	Erosion of natural deposits				
Radium 226 + 228 or combined radium (pCi/L)	02/14	N	1.575	1.221-1.575	0	5	Erosion of natural deposits				
				Inorganic Cont	aminants						
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination				
Arsenic (ppb)	02/14	N	0.5	0.00-0.5	0	10	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder				
Barium (ppm)	02/14	N	0.0097	0.0073-0.0097	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits				
Fluoride (ppm)	02/14	N	0.96	0.20-0.96	4	4	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				
Nitrate (as Nitrogen) (ppm)	01/14	N	0.069	0.029-0.069	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits				
Nitrite (as Nitrogen) (ppm)	01/14	N	0.036	0.0054-0.036	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits				
Selenium (ppb)	02/14	N	0.5	0.00-0.50	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines				
Sodium (ppm)	02/14	N	12.3	11.3-12.3	NA	160	Salt water intrusion, leaching from soil				
			Stage	e 1 Disinfectant/Disir	ifection By-Pro	ducts					
Contaminant and Unit of Measurement	Date 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)	1/14-12/14	N	1.51 (annual average)	0.21-3.04	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes				
Bromate (ppb)	1/14-12/14	N	0.86 (annual average)	0-6.10	MCLG = 0	MCL = 10	By-product of drinking water disinfection				
			Stag	e 2 Disinfectant/Disi	nfection By-Pro	oduct					
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination				
Haloacetic Acids (five) (HAA5) (ppb)	2014	N	32.47	19.20-45.66	NA	MCL = 60	By-product of drinking water disinfection				
TTHM [Total trihalomethanes] (ppb)	2014	N	60.762	39.69-76.91	NA	MCL = 80	By-product of drinking water disinfection				
				Lead and Copper	(Tap Water)						
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	AL Violation Y/N	90th Percentile Result	Number of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination				
Copper (tap water) (ppm)	08/14	N	0.78	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives				
Lead (tap water) (ppb)	08/14	N	1.4	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits				

#### Odor MCL Violation Notice:

Our Triennial sample for Odor exceeded the required MCL, triggering 3 consecutive days of monitoring/sampling. We collected all the samples and the contracted Lab ran the analysis. All sample results came back satisfactory.



### Drinking Water Quality Report-Southwest Service Area 2014



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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. The drinking water for the Southwest Service Area is obtained from ground water wells and is chlorinated for disinfection purposes and then fluoridated for dental health purposes. If you have any questions about this report or concerning your water utility, please contact Seminole County Environmental Services at 407-665-2110.

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#### Source Water Assessment Plan

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SEMINO

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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**.



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### Southwest Service Area

### WATER QUALITY RESULTS

Southwest Water System

Radioactive Contaminants									
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination		
Alpha emitters (pCi/L)	02/14	N	2.42	0-2.42	0	15	Erosion of natural deposits		
Radium 226 + 228 or combined radium (pCi/L)	02/14	N	1.403	1.403	0	5	Erosion of natural deposits		
				Inorganic Cor	ntaminant	S			
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination		
Arsenic (ppb)	02/14	N	0.5	0.5	0	10	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder		
Barium (ppm)	02/14	N	0.0056	0.0056	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits		
Fluoride (ppm)	02/14	N	0.18	0.18	4	4	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)	02/14	N	2.5	2.5	N/A	100	Pollution from mining and refining operations. Natural occurrence in soil		
Nitrate (as Nitrogen) (ppm)	01/14	N	0.029	0.029	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits		
Nitrite (as Nitrogen) (ppm)	01/14	N	0.0054	0.0054	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits		
Sodium (ppm)	02/14	N	13	13	N/A	160	Salt water intrusion, leaching from soil		
			Stage 2	Disinfectant/Dis	sinfection	By-Produc	ts		
Contaminant and Unit of Measurement	Date 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)	1/14-12/14	N	1.23 (annual average)	0.22-3.10	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes		
Haloacetic Acids (five) (HAA5) (ppb)	1/14-12/14	N	17.44	6.69-25.8	N/A	MCL = 60	By-product of drinking water disinfection		
TTHM [Total trihalomethanes] (ppb)	1/14-12/14	N	45.10	14.64-64.7	N/A	MCL = 80	By-product of drinking water disinfection		
				Lead and Coppe	er (Tap Wa	ter)			
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	AL Violation Y/N	90th Percentile Result	Number of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination		
Copper (tap water) (ppm)	08/14	N	0.42	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives		
Lead (tap water) (ppb)	08/14	N	1.9	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits		



### Drinking Water Quality Report-Sun Shadows Consecutive Service Area 2014



We are pleased to present you 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. The drinking water for the Sun Shadows Consecutive Service Area is obtained from ground water wells and is chlorinated for disinfection purposes. If you have any questions about this report or concerning your water utility, please contact Seminole County Environmental Services at 407-665-2110.

Seminole County Environmental Services Department 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. Data obtained before January 1, 2014, and presented in this report are from the most recent testing done in accordance with the laws, rules and regulations.

#### Source Water Assessment Plan

In 2014 the Department of Environmental Protection performed a Source Water Assessment on City of Casselberry, from whom we purchase your drinking water. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of their wells. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at **www.dep.state.fl.us/swapp.** 

#### EPA Would Like You to Know

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.



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).

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. Seminole County Environmental Services 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**.



#### Terms and Abbreviations for Next Page:

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

**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. "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.



### Sunshadows Service Area

#### WATER QUALITY RESULTS Sun em

Shadows	water	Syst

Radioactive Contaminants							
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Alpha Emitters (pCi/L)	5/14	N	2.5	1.0-2.5	o	15	Erosion of natural deposits
Radium 226 + 228 or combined radium (pCi/L)	5/14	N	2.5	0.6-2.5	0	5	Erosion of natural deposits
Inorganic Contaminants							
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Barium (ppm)	5/14	N	0.017	0.009-0.017	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Cyanide (ppb)	2/11	N	6.6	ND0-6.6	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride (ppm)	5/14	N	0.15	0.10-0.15	4	4	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)	5/14	N	1.7	1.2-1.7	NA	100	Pollution from mining and refining operations. Natural occurrence in soil
Nitrate (as Nitrogen) (ppm)	2/11	N	0.039	0.039-0.009	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	5/14	N	13	12-13	N/A	160	Salt water intrusion, leaching from soil
Stage 2 Disinfectant/Disinfection By-Product							
Contaminant and Unit of Measurement	Date 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)	2014	N	1.24 (average)	0.40-1.96	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes
Haloacetic Acids (five) (HAA5) (ppb)	2014	N	20.68	18.38-20.68	NA	MCL = 60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] (ppb)	2014	N	61.13	51.16-61.13	NA	MCL = 80	By-product of drinking water disinfection
Lead and Copper (Tap Water)							
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	AL Violation Y/N	90th Percentile Result	Number of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination
Copper (tap water) (ppm)	07/12	N	0.43	0	1.3	1.3	Corrosion of household plumbing systems; erosion of
Lead (tap water) (ppb)	07/12	N	1.3	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits