







# Seminole County Annual Drinking Water Quality Report 2016



Seminole County Environmental Services is pleased to present you with the 2016 Annual Drinking Water Quality Report. This report is designed to inform you about the quality of water and services that we deliver to you every day. The water quality results on these reports shows the commitment and teamwork of our certified water operators. 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 proud to share this report, which is based on water quality testing through December 2016; 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 Chief Compliance Operator Water Operations

**Preparedness Tip:** Register your cell phone for Seminole County's Reverse 9-11 Notification System



"Nearly one-half of American homes use only mobile phones and have dropped landlines, according to <u>a recent report</u> by the Centers for Disease Control. If you replaced your old landline with a cellular phone, Seminole County wants you to "get the call" in an emergency by making sure you have registered your cellphone to receive alerts during an emergency such as "Boil Water Notices" and "Severe Weather Conditions". Please visit and complete your registration at: <u>https://seminolecountyfl.onthealert.com/Terms/Index/?ReturnUrl=%2f</u>



# Map of Water Service Areas



### Drinking Water Quality Report-Apple Valley Service Area 2016

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.



Back to

Service Area Map

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#### Source Water Assessment Plan

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In 2016, the Department of Environmental Protection performed a Source Water Assessment on the City of Altamonte Springs, 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 <u>www.dep.state.fl.us/swapp</u>.

#### 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.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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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 <a href="http://www.epa.gov/safewater/lead">http://www.epa.gov/safewater/lead</a>.



#### Terms and Abbreviations

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

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**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

### WATER QUALITY RESULTS

#### Apple Valley Consecutive Water System - PWS ID# 3590039

	Inorganic Contaminants											
Results in the Level Detected column for radioactive contaminants, inorganic contaminants, synthetic organic contaminants including pesticides and herbicides, and volatile organic contaminants are the highest average at any of the sampling points or the highest detected level at any sampling point, depending on the sampling frequency.												
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination					
Arsenic (ppb) City of Altamonte Springs	03/14	N	0.5	ND - 0.5	0	10	Erosion of natural deposits: run off from orchards; run off from glass and electronics production waste					
Barium (ppm) City of Altamonte Springs	03/14	N	0.0071	0.0070 - 0.0071	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits					
Beryllium (ppb) City of Altamonte Springs	03/14	N	0.2	ND - 0.2	4	4	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries					
Fluoride (ppm) City of Altamonte Springs	03/14	N	0.74	0.67 - 0.74	4	4	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at optimum level of 0.7 ppm					
Lead (point of entry) (ppb) City of Altamonte Springs	03/14	N	0.35	0.22 - 0.35	NA	15	Residue from man-made pollution such as auto emissions and paint; lead pipe, casing, and solder					
Nickel (ppb) City of Altamonte Springs	03/14	N	0.89	0.78 - 0.89	NA	100	Pollution from mining and refining operations; Natural occurrence in soil					
Selenium (ppb) City of Altamonte Springs	03/14	N	2.37	1.21 - 2.37	50	50	Discharge from petroleum and metal refineries, erosion of natural deposits; discharge from mines					
Sodium (ppm) City of Altamonte Springs	03/14	N	12	9.0 - 12.0	N/A	160	Salt water intrusion, leaching from soil					
Thallium (ppb) City of Altamonte Springs	03/14	N	0.42	ND - 0.42	0.5	2	Leaching from ore-processing sites, discharge from electronics, glass and drug factories					
			Synthetic Organic	Contaminants inclu	uding Pestici	des and Herb	ecides					
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					
Dalapon (ppb) City of Altamonte Springs	03/14	N	1.2	ND - 1.2	200	200	Runoff from herbecide used on rights of way					
Di(2-ethylhexyl)phthalate (ppb) City of Altamonte Springs	03/14	N	0.44	ND - 0.44	0	6	Discharge from rubber and chemical factories					
				Disinfostants /Disi	<u> </u>							

#### Stage 2 Disinfectants/Disinfection By-Products

For Bromate and Chlorine, the level detected is the highest running annual average (RAA), computed quarerly, of monthly averages of all samples collected. The Range of Results is the range of results of all the individual samples collected during the past year. \* For Haloacetic Acids (HAA5) or Total Trihalomethanes (TTHM), the level detected is the highest detected level at any sampling point. Range of Results is the range of individual sample results (lowest to highest)

\*\*\* For Haloacetic Acids (HAA5) or Total Trihalomethanes (TTHM), the level detected is the highest focusional running annual average (LRAA). Range of Results is the range of individual samples results (lowest to

	highest for all monitoring locations.									
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			
<b>Chlorine (ppm)</b> Seminole County City of Altamonte Springs	01/16 - 12/16 2016	N N	1.0375 * 1.0	0.49 - 1.37 0.4 - 2.2	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes			
Haloacetic Acids (five) (HAA5) (ppb) Seminole County City of Altamonte Springs	07/2016 2016	N N	25.78 ** 33.400 ***	22.17 - 25.78 8.7 - 38.6	NA	MCL = 60	By-product of drinking water disinfection			
Total Trihalomethanes (TTHM) (ppb) Seminole County City of Altamonte Springs	07/2016 2016	N N	54.73 ** 60.600 ***	46.07 - 54.73 13.5 - 62.0	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) Seminole County	07/15	N	0.18	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives			
Lead (tap water) (ppb) Seminole County	07/15	N	0.61	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits			

### Drinking Water Quality Report-Black Hammock Service Area 2016

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, 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 2016, 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

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(A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, (B) industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and (C) residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial (D) processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. (E)

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.

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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 at <a href="http://www.epa.gov/safewater/lead">http://www.epa.gov/safewater/lead</a>.



Leaks can account for, on average, 10,000 gallons of water wasted in the home every year, which is enough to fill a backyard swimming pool!



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# Black Hammock Service Area water quality results

	Bla	ick Hamm	ock Consec	cutive Water	System	(PWS ID	0# 3594186)
				Inorganic Contam	inants		
Results in the Level Detected							and herbicides, and volatile organic contaminants are the highest the sampling frequency.
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) City of Oviedo	03/14	N	0.013	0.013	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm) City of Oviedo	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 when at optimum level of 0.7 ppm
Sodium (ppm) City of Oviedo	03/14	N	38.0	38	NA	160	Salt water intrusion, leaching from soil
Nitrate (as Nitrogen) (ppm) City of Oviedo	05/16	N	0.15	0.15	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
			Stage 1 D	Disinfectant/Disinfe	ction By-Pro	duct	
For bromate, chloramines, or o	chlorine, the level d	etected is the high		erage (RAA), computed q lual samples collected c			all samples collected. The range of results is the range of results of
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) Seminole County City of Oviedo	01/16 - 12/16 01/16 - 12/16	N N	1.066 (annual ave.) 2.12 ( Average)	0.60 - 1.89 1.03 - 3.0	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes
			Stage 2 Di	sinfectants/Disinfe	ction By-Pro	ducts	
			e level detected is the	all monitoring location	s. ning annual avei		Its is the range of individual sample results (lowest to highest) for e of Results is the range of individaul samples results (lowest to
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) Seminole County City of Oviedo	08/11/16 05/18/16	N N	11.27 * 5.57	10.61 - 11.27 3.19 - 5.57	NA	MCL = 60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb) Seminole County City of Oviedo	08/11/16 05/18 /16	N N	16.49 * 17.54	16.14 - 16.49 17.25 - 17.54	NA	MCL = 80	By-product of drinking water disinfection
			Ŀ	ead and Copper (Ta	p 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) Seminole County	09/15	N	0.37	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb) Seminole County	09/15	N	3	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits



### Drinking Water Quality Report-Chase Groves Consecutive Service Area 2016



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.



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#### Source Water Assessment Plan

In 2016, the Department of Environmental Protection performed a Source Water Assessment on City of Sanford, 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 <a href="http://www.dep.state.fl.us/swapp">www.dep.state.fl.us/swapp</a>.

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### FIX THAT LEAKY FAUCET OR TOILET!

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WATERING RESTRICTION SCHEDULE EVEN HOUSE #'S THURSDAY AND SUNDAY ODD HOUSE #'S WEDNESDAY AND SATURDAY NON-RESIDENTIAL TUESDAY AND FRIDAY RECLAIM CUSTOMERS TWO DAYS PER WEEK

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# Annual Drinking Water Quality Report-2016

# Chase Groves Service Area

### WATER QUALITY RESULTS

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	U	nase Gro	ves Consec	utive Water	, ,	- PV/5 IL	J# 3594214
Results in the level Detector	l column for radioa	ective contaminants	inorganic contamina	Radioactive Conta		uding pesticides	and herbicides, and volatile organic contaminants are the highest
	avera						in the sampling frequency.
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 or combined radium (pCi/L) City of Sanford	02/16-12/16	N	0.969	0 - 0.969	0	5	Erosion of natural deposits
				Inorganic Contan	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
Barium (ppm) City of Sanford	06/14-10/14	N	0.017	0.010 - 0.017	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm) City of Sanford	06/14-10/14	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 level of 0.7 ppm
Nitrate (as Nitrogen) (ppm) City of Sanford	04/16	N	0.21	0.17 - 0.21	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm) City of Sanford	06/14-10/14	N	26	20.7 - 26.0	N/A	160	Salt water intrusion, leaching from soil
			Stage 1 D	isinfectants/Disinfe	ection By-Pro	ducts	
For bromate, chloramines, or c	hlorine, the level o	detected is the high		verage (RAA), computed d dual samples collected			all samples collected. The range of results is the range of results of
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
Bromate (ppb) City of Sanford	01/16-12/16	N	9.55	0 - 42.0	MCLG = 0	MCL = 10	By-product of drinking water disinfection
Chlorine (ppm) Seminole County City of Sanford	01/16 - 12/16 01/16 - 12/16	N N	1.1608 1.2	0.35 - 2.19 0.5 - 2.3	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes
			Stage 2 D	isinfectants/Disinfe	ection By-Pro	ducts	
			all he level detected is th	I monitoring locations.	ning annual ave		ults is the range of individual sample results (lowest to highest) for ge of Results is the range of individaul samples results (lowest to
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) Seminole County City of Sanford	01/16 - 12/16 02/17 - 11/16	N N	21.8075 ** 16.60 **	8.37 - 25.82 4.36 - 23.77	NA	MCL = 60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb) Seminole County City of Sanford	01/16 - 12/16 02/17 - 11/16	N N	77.5850 ** 64.33 **	43.96 - 76.28 20.93 - 62.70	NA	MCL = 80	By-product of drinking water disinfection
			L	ead and Copper (T	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) Seminole County	08/2014	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) Seminole County	08/2014	N	1.30	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits

# Drinking Water Quality Report-Druid Hills Consecutive Service Area 2016

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 Druid Hills 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, 2016. Data obtained before January 1, 2016, 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 2016, 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 <u>www.dep.state.fl.us/swapp</u>.

### 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.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.









Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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 <a href="http://www.epa.gov/safewater/lead">http://www.epa.gov/safewater/lead</a>.



### FIX THAT LEAKY FAUCET OR TOILET!

Leaks can account for, on average, 10,000 gallons of water wasted in the home every year, which is enough to fill a backyard swimming pool!



WATERING RESTRICTION SCHEDULE EVEN HOUSE #'S THURSDAY AND SUNDAY ODD HOUSE #'S WEDNESDAY AND SATURDAY NON-RESIDENTIAL TUESDAY AND FRIDAY RECLAIM CUSTOMERS TWO DAYS PER WEEK

#### Terms and Abbreviations

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.

SEMINOLE COUNTY FIORIDA'S NATURAL CHOICE

# Druid Hills Service Area

### WATER QUALITY RESULTS

	Druid Hills Water System - PWS ID# 3590111											
	Radioactive Contaminants											
Results in the Level Detected							sticides and herbicides, and volatile organic contaminants are the nding on the sampling frequency.					
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 or combined radium (pCi/L)	07/15	N	0.9	0.9	0.9	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					
Antimony (ppb)	07/15	N	0.24	0.24	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder					
Arsenic (ppb)	07/15	N	0.39	0.39	N/A	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes					
Barium (ppm)	07/15	N	0.0048	0.0048	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits					
Fluoride (ppm)	07/15	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 level of 0.7 ppm					
Nitrate (as Nitrogen) (ppm)	01/16	N	0.051	0.051	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits					
Nitrite (as Nitrogen) (ppm)	01/16	N	0.053	0.053	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits					
Nickel (ppb)	07/15	N	2.9	2.9	N/A	100	Pollution from mining and refining operations; Natural occurrence in soil					
Selenium (ppb)	07/15	N	2.9	2.9	50	50	Discharge from petroleum and metal refineries, erosion of natural deposits; discharge from mines					
Sodium (ppm)	07/15	N	15	15	N/A	160	Salt water intrusion, leaching from soil					
			Stage 2	2 Disinfectants/Disi	infection By-	Products						
** For Haloacetic Acids (HAA5) o	r Total Trihalome A5) or Total Trihal	thanes (TTHM), Iomethanes (TT	the level detected i HM), the level detec	the individual sample is the highest detected highest) for all moni	s collected duri level at any sam toring locations tional running a	ng the past year. pling point. Rang nnual average (L	amples collected. The Range of Results is the range of results of all ge of Results is the range of individual sample results (lowest to RAA). Range of Results is the range of individaul samples results					
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)	01/16-12/16	N	1.0708 (annual average)	0.62 - 1.58	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes					
Haloacetic Acids (five) (HAA5) (ppb)	07/16	N	28.99 ***	26.97 - 34.41	N/A	MCL = 60	By-product of drinking water disinfection					
TTHM [Total trihalomethanes] (ppb)	07/16	N	59.00 ***	51.57 - 63.79	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)	07/2015	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)	07/2015	N	0.61	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits					



### Drinking Water Quality Report-Lake Brantley Consecutive Service Area 2016

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.





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#### Source Water Assessment Plan

In 2016, the Department of Environmental Protection performed a Source Water Assessment on Utilities Inc. of Florida, 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 <u>www.dep.state.fl.us/swapp</u>.

#### 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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(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.

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(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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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 <a href="http://www.epa.gov/safewater/lead">http://www.epa.gov/safewater/lead</a>.



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SEMINO

WATERING RESTRICTION SCHEDULE EVEN HOUSE #'S THURSDAY AND SUNDAY ODD HOUSE #'S WEDNESDAY AND SATURDAY NON-RESIDENTIAL TUESDAY AND FRIDAY RECLAIM CUSTOMERS TWO DAYS PER WEEK

#### Terms and Abbreviations

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

	L	ake Brant	tley Consec	utive Water	System	- PWS IE	0# 3590685
				Radioactive Conta	minants		
Results in the Level Detected							and herbicides, and volatile organic contaminants are the highest n the sampling frequency.
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) Utilities Inc Sanlando	03/14	N	2	1.1 - 2.0	0	15	Erosion of natural deposits
Radium 226 + 228 or combined radium (pCi/L) Utilities Inc Sanlando	03/14	N	3.2	0.8 - 3.2	0	5	Erosion of natural deposits
				Inorganic Contar	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
Barium (ppm) Utilities Inc Sanlando	03/14	N	0.0391	0.0056 - 0.0391	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm) Utilities Inc Sanlando	03/14	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 level of 0.7 ppm
Sodium (ppm) Utilities Inc Sanlando	03/14	N	14.9	8.82 - 14.9	N/A	160	Salt water intrusion, leaching from soil
			Stage 2 [	Disinfectants/Disinf	ection By-Pro	oducts	
* For Dromoto and Chievin d							
** For Haloacetic Acids (HAA5) c	or Total Trihalome 5) or Total Trihalo Date of	thanes (TTHM), the	individu level detected is the l for all n he level detected is th	al samples collected du highest detected level a nonitoring locations. he highest) locational ru highest for all monitorin	ring the past yea t any sampling p nning annual av	ar. Doint. Range of Re Verage (LRAA). Ran	collected. The Range of Results is the range of results of all the sults is the range of individual sample results (lowest to highest) age of Results is the range of individaul samples results (lowest to
** For Haloacetic Acids (HAA5) c	or Total Trihalome 5) or Total Trihalo	thanes (TTHM), the methanes (TTHM), t	individu level detected is the l for all m the level detected is th	al samples collected du highest detected level a nonitoring locations. ne highest) locational ru	ring the past yea t any sampling p nning annual av ng locations.	ar. point. Range of Re	sults is the range of individual sample results (lowest to highest)
** For Haloacetic Acids (HAA5) c *** For Haloacetic Acids (HAA5 Contaminant and Unit of	or Total Trihalome 5) or Total Trihalo Date of Sampling	thanes (TTHM), the methanes (TTHM), t MCL Violation	individu level detected is the l for all n he level detected is th	al samples collected du highest detected level a nonitoring locations. he highest) locational ru highest for all monitorin	ring the past yea t any sampling p nning annual av ng locations. MCLG or	ar. Doint. Range of Re Verage (LRAA). Ran	sults is the range of individual sample results (lowest to highest) age of Results is the range of individaul samples results (lowest to
** For Haloacetic Acids (HAA5) o *** For Haloacetic Acids (HAA5 Contaminant and Unit of Measurement Chlorine (ppm) Seminole County	5) or Total Trihalome 5) or Total Trihalo Date of Sampling (mo/yr) 01/16 - 12/16	thanes (TTHM), the methanes (TTHM), t MCL Violation Y/N	individu level detected is the for all n the level detected is th Level Detected 1.6016	al samples collected du highest detected level a ionitoring locations. he highest locational ru highest for all monitorin Range of Results 0.30 - 2.66	ring the past yea t any sampling p nning annual av g locations. MCLG or MRDLG	ar. voint. Range of Re verage (LRAA). Ran MCL or MRDL	sults is the range of individual sample results (lowest to highest) age of Results is the range of individaul samples results (lowest to Likely Source of Contamination
<ul> <li>** For Haloacetic Acids (HAA5) of</li> <li>*** For Haloacetic Acids (HAA3)</li> <li>Contaminant and Unit of Measurement</li> <li>Chlorine (ppm) Seminole County Utilities Inc - Sanlando</li> <li>Haloacetic Acids (five) (HAA5) (ppb) Seminole County</li> </ul>	or Total Trihalome 5) or Total Trihalo Date of Sampling (mo/yr) 01/16 - 12/16 01/16 - 12/16 07/2016	thanes (TTHM), the methanes (TTHM), t MCL Violation Y/N N N N	individu level detected is for all m the level detected is th Level Detected 1.6016 2.1	al samples collected du highest detected level a nonitoring locations. he highest) locational ru highest for all monitorin Range of Results 0.30 - 2.66 0.6 - 3.5 144.03	ring the past yea t any sampling p nning annual av ng locations. MCLG or MRDLG MRDLG = 4	ar. Joint. Range of Re werage (LRAA). Ran MCL or MRDL MRDL = 4.0	sults is the range of individual sample results (lowest to highest) age of Results is the range of individaul samples results (lowest to Likely Source of Contamination Water additive used to control microbes
<ul> <li>** For Haloacetic Acids (HAA5) of *** For Haloacetic Acids (HAA5)</li> <li>Contaminant and Unit of Measurement</li> <li>Chlorine (ppm) Seminole County Utilities Inc - Sanlando</li> <li>Haloacetic Acids (five) (HAA5) (ppb) Seminole County Utilities Inc - Sanlando</li> <li>Total Trihalomethanes (TTHM) (ppb) Seminole County</li> </ul>	or Total Trihalome 5) or Total Trihalo Date of Sampling (mo/yr) 01/16 - 12/16 01/16 - 12/16 07/2016 07/2016	thanes (TTHM), the methanes (TTHM), t MCL Violation Y/N N N N N N	individu level detected is tr for all m the level detected is tr Level Detected 1.6016 2.1 14.03 ** 45.9 *** 23.56 ** 47.8 ***	al samples collected du highest detected level a nonitoring locations. he highest) locational ru highest for all monitorin Range of Results 0.30 - 2.66 0.6 - 3.5 14.03 13.3 - 35.3 23.56	ring the past year any sampling p nning annual av glocations. MRDLG or MRDLG = 4 N/A N/A	ar. Inint. Range of Re erage (LRAA). Ran MCL or MRDL MRDL = 4.0 MCL = 60	sults is the range of individual sample results (lowest to highest) age of Results is the range of individaul samples results (lowest to Likely Source of Contamination Water additive used to control microbes By-product of drinking water disinfection
<ul> <li>** For Haloacetic Acids (HAA5) of *** For Haloacetic Acids (HAA5)</li> <li>Contaminant and Unit of Measurement</li> <li>Chlorine (ppm) Seminole County Utilities Inc - Sanlando</li> <li>Haloacetic Acids (five) (HAA5) (ppb) Seminole County Utilities Inc - Sanlando</li> <li>Total Trihalomethanes (TTHM) (ppb) Seminole County</li> </ul>	or Total Trihalome 5) or Total Trihalo Date of Sampling (mo/yr) 01/16 - 12/16 01/16 - 12/16 07/2016 07/2016	thanes (TTHM), the methanes (TTHM), t MCL Violation Y/N N N N N N	individu level detected is tr for all m the level detected is tr Level Detected 1.6016 2.1 14.03 ** 45.9 *** 23.56 ** 47.8 ***	al samples collected du highest detected level a nonitoring locations. he highest) locational ru highest for all monitorin Range of Results 0.30 - 2.66 0.6 - 3.5 14.03 13.3 - 35.3 23.56 14.8 - 41.8	ring the past year any sampling p nning annual av glocations. MRDLG or MRDLG = 4 N/A N/A	ar. Inint. Range of Re erage (LRAA). Ran MCL or MRDL MRDL = 4.0 MCL = 60	sults is the range of individual sample results (lowest to highest) age of Results is the range of individaul samples results (lowest to Likely Source of Contamination Water additive used to control microbes By-product of drinking water disinfection
<ul> <li>** For Haloacetic Acids (HAA5) of</li> <li>*** For Haloacetic Acids (HAA5)</li> <li>Contaminant and Unit of Measurement</li> <li>Chlorine (ppm)</li> <li>Seminole County</li> <li>Utilities Inc - Sanlando</li> <li>Haloacetic Acids (five)</li> <li>(HAA5) (ppb)</li> <li>Seminole County</li> <li>Utilities Inc - Sanlando</li> <li>Total Trihalomethanes</li> <li>(TTHM) (ppb)</li> <li>Seminole County</li> <li>Utilities Inc - Sanlando</li> </ul>	or Total Trihalome 5) or Total Trihalo Date of Sampling (mo/yr) 01/16 - 12/16 01/16 - 12/16 07/2016 02/16 - 11/16 07/2016 02/16 - 11/16 Date of Sampling	thanes (TTHM), the methanes (TTHM), t MCL Violation Y/N N N N N N N N AL Violation	individu level detected is the for all m the level detected is th Level Detected 1.6016 2.1 14.03 ** 45.9 *** 23.56 ** 47.8 ***	al samples collected du highest detected level a honitoring locations. he highest) locational ru highest for all monitorin Range of Results 0.30 - 2.66 0.6 - 3.5 14.03 13.3 - 35.3 23.56 14.8 - 41.8 Lead and Copper (T Number of sampling sites	ring the past yea t any sampling p nning annual av glocations. MCLG or MRDLG = 4 N/A N/A ap Water)	ar. Inint. Range of Re erage (LRAA). Ran MCL or MRDL MRDL = 4.0 MCL = 60 MCL = 80	sults is the range of individual sample results (lowest to highest) age of Results is the range of individual samples results (lowest to Likely Source of Contamination Water additive used to control microbes By-product of drinking water disinfection By-product of drinking water disinfection

### Drinking Water Quality Report-Meredith Manor Service Area 2016

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, 2016. Data obtained before January 1, 2016, 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 2016, the Department of Environmental Protection performed a Source Water Assessment on Utilities Inc of Florida, 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 <u>www.dep.state.fl.us/swapp</u>.

#### 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.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.









Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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 <a href="http://www.epa.gov/safewater/lead">http://www.epa.gov/safewater/lead</a>.



### FIX THAT LEAKY FAUCET OR TOILET!

Leaks can account for, on average, 10,000 gallons of water wasted in the home every year, which is enough to fill a backyard swimming pool!



WATERING RESTRICTION SCHEDULE EVEN HOUSE #'S THURSDAY AND SUNDAY ODD HOUSE #'S WEDNESDAY AND SATURDAY NON-RESIDENTIAL TUESDAY AND FRIDAY RECLAIM CUSTOMERS TWO DAYS PER WEEK

#### Terms and Abbreviations

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

	М	eredith M	anor Conse	cutive Water	<sup>-</sup> System	ı - PWS I	D# 3590823
				Radioactive Conta	minants		
Results in the Level Detected							and herbicides, and volatile organic contaminants are the highest n the sampling frequency.
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) Utilities Inc Sanlando	03/14	N	2	1.1 - 2.0	0	15	Erosion of natural deposits
Radium 226 + 228 or combined radium (pCi/L) Utilities Inc Sanlando	03/14	N	3.2	0.8 - 3.2	0	5	Erosion of natural deposits
				Inorganic Contan	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
Barium (ppm) Utilities Inc Sanlando	03/14	N	0.0391	0.0056 - 0.0391	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm) Utilities Inc Sanlando	03/14	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 level of 0.7 ppm
Sodium (ppm) Utilities Inc Sanlando	03/14	N	14.9	8.82 - 14.9	N/A	160	Salt water intrusion, leaching from soil
			Stage 2 [	Disinfectants/Disinf	ection By-Pro	oducts	
			individu	al samples collected du	ring the past yea	ar.	collected. The Range of Results is the range of results of all the
			for all m he level detected is th	nonitoring locations.	nning annual av		sults is the range of individual sample results (lowest to highest) nge of Results is the range of individaul samples results (lowest to
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
<b>Chlorine (ppm)</b> Seminole County Utilities Inc - Sanlando	01/16 - 12/16 01/16 - 12/16	N N	1.9858 2.1	0.80 - 2.96 0.6 - 3.5	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes
Haloacetic Acids (five) (HAA5) (ppb) Seminole County Utilities Inc - Sanlando	07/2016 02/16 - 11/16	N N	24.05 ** 45.9 ***	24.05 13.3 - 35.3	N/A	MCL = 60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb) Seminole County Utilities Inc - Sanlando	07/2016 02/16 - 11/16	N N	39.53 ** 47.8 ***	39.53 14.8 - 41.8	N/A	MCL = 80	By-product of drinking water disinfection
				Lead and Copper (T	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) Seminole County	08/15	N	0.19	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	08/15	N	0.61	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits



### Drinking Water Quality Report Northeast Service Area 2016



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. The water is treated with ozone, filtered with granular activated carbon and is 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, 2016. Data obtained before January 1, 2016, 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 2016, 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 is one (1) potential source of contamination identified for this system with low susceptibility level. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at <a href="http://www.dep.state.fl.us/swapp">www.dep.state.fl.us/swapp</a>.

#### 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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(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.
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Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-

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 <a href="http://www.epa.gov/safewater/lead">http://www.epa.gov/safewater/lead</a>.



### FIX THAT LEAKY FAUCET OR TOILET!

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Terms and Abbreviations

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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**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.



# Northeast Service Area

### WATER QUALITY RESULTS

	Northeast Water System - PWS ID# 3590473											
	Radioactive Contaminants											
Results in the Level Detected o	Results in the Level Detected column for radioactive contaminants, inorganic contaminants, synthetic organic contaminants including pesticides and herbicides, and volatile organic contaminants are the highest average at any of the sampling points or the highest detected level at any sampling point, depending on the sampling frequency.											
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination					
Radium 226 (pCi/L)	02/14	N	0.804	0.804	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)	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)	08/16	N	0.48	0.48	4	4	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at optimum level of 0.7 ppm					
Nitrate (as Nitrogen) (ppm)	01/16	N	0.28	0.25 - 0.28	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits					
Nitrite (as Nitrogen) (ppm)	01/16	N	0.053	0.053	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 1	Disinfectants/Disin	fection By-Pr	oducts						
For bromate, chloramines, or ch	For bromate, chloramines, or chlorine, the level detected is the highest running annual average (RAA), computed quarterly, of monthly averages of all samples collected. The range of results is the range of results of all individual samples collected during the past year.											
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					
Bromate (ppb)	01/16-12/16	N	0.22 (annual average)	0 - 2.60	MCLG = 0	MCL = 10	By-product of drinking water disinfection					
Chlorine (ppm)	01/16-12/16	N	1.355 (annual average)	0.40 - 1.87	MRDLG=4	MRDL=4	Water additive used to control microbes					
			Stage 2	Disinfectants/Disin	fection By-Pr	oducts						
* For Haloacetic Acids (HAA5) or	Total Trihalomet	hanes (TTHM), the	e level detected is th	e highest detected level for all monitoring l		g point. Range of	Results is the range of individual sample results (lowest to highest)					
** For Haloacetic Acids (HAA5)	or Total Trihalom	ethanes (TTHM), 1	the level detected is		unning annual a	verage (LRAA). Ra	nge of Results is the range of individaul samples results (lowest to					
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)	11/2016	N	22.37 *	17.20 - 22.37	NA	MCL = 60	By-product of drinking water disinfection					
TTHM [Total Trihalomethanes] (ppb)	11/2016	N	41.04 *	27.71 - 41.04	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)	07/2016	N	0.76	2	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives					
Lead (tap water) (ppb)	07/2016	N	2.40	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits					

# Drinking Water Quality Report-Northwest Service Area 2016

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. The water is treated with ion exchange, and ozone. It 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, 2016. Data obtained before January 1, 2016, 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 2016, 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 nine (9) potential sources of contamination identified for this system with seven (7) low and two (2) 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 storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

(C) *Pesticides and herbicides,* which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

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

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

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.









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.



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WATERING RESTRICTION SCHEDULE EVEN HOUSE #'S THURSDAY AND SUNDAY ODD HOUSE #'S WEDNESDAY AND SATURDAY **NON-RESIDENTIAL TUESDAY AND FRIDAY RECLAIM CUSTOMERS TWO DAYS PER WEEK** 

#### Terms and Abbreviations

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 (\mug/I):** 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 - PWS ID# 3594107

Inorganic Contaminants											
Results in the Level Detected	Results in the Level Detected column for radioactive contaminants, inorganic contaminants, synthetic organic contaminants including pesticides and herbicides, and volatile organic contaminants are the highest average at any of the sampling points or the highest detected level at any sampling point, depending on the sampling frequency.										
Contaminant and Unit of Measurement	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	o	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes				
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 level of 0.7 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)	01/16	N	0.051	0.051	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits				
Nitrite (as Nitrogen) (ppm)	01/16	N	0.053	0.053	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits				
Selenium (ppb)	02/14	N	0.5	0.5	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 Dis	sinfectants/Disin	fection By-l	Products					
For bromate, chloramines, or	chlorine, the level	detected is the hi		ual average (RAA), com ndividual samples col			y averages of all samples collected. The range of results is the rang r.				
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)	01/16-12/16	N	1.41	0.70 - 2.25	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes				
Bromate (ppb)	01/16-12/16	N	4.925	0 - 12.00	MCLG = 0	MCL = 10	By-product of drinking water disinfection				
			Stage 2 Dis	sinfectants/Disin	fection By-I	Products					
				ighest) for all monito	ring locations		t. Range of Results is the range of individual sample results (lowes)				
** For Haloacetic Acids (HAAS	o) or Total Trihalon	nethanes (TTHM), t		s the highest location to highest) for all mo			: (LRAA). Range of Results is the range of individaul samples results				
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)	01/16-12/16	N	18.0325 **	5.65 - 16.65	N/A	MCL = 60	By-product of drinking water disinfection				
TTHM [Total trihalomethanes] (ppb)	01/16-12/16	N	71.3000**	25.19 - 79.38	N/A	MCL = 80	By-product of drinking water disinfection				
			Le	ad and Copper (T	ap Water )						
Contonio and Units of	Date of		00th Demonstil	Number of							

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)	08/2014	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)	08/2014	N	1.40	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits

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27



### Drinking Water Quality Report Southeast Service Area 2016



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, 2016. Data obtained before January 1, 2016, 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 2016, 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 <a href="https://www.dep.state.fl.us/swapp">www.dep.state.fl.us/swapp</a>.

#### EPA Would Like You to Know

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(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.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-

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 <a href="http://www.epa.gov/safewater/lead">http://www.epa.gov/safewater/lead</a>.



### FIX THAT LEAKY FAUCET OR TOILET!

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ODD HOUSE #'S WEDNESDAY AND SATURDAY

**NON-RESIDENTIAL TUESDAY AND FRIDAY** 

**RECLAIM CUSTOMERS** 

**TWO DAYS PER WEEK** 

SEMINO

#### **Terms and Abbreviations**

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

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### Southeast Service Area

### WATER QUALITY RESULTS

#### Southeast Water System - PWS ID# 3590571 Microbial Contaminants Date of MCL **Highest Monthly Percentage** Contaminant and Unit of MCIG Sampling Violation мсі Likely Source of Contamination /Number Measurement (mo/yr) Y/N For systems collecting at least 40 samples Total Coliform Bacteria per month: presence 02/11/16 0 Ν 1.4 % Naturally present in the environment (positive samples until March of coliform bacteria in . 31. 2016) >5% of monthly samples. **Inorganic Contaminants** tesults in the Level Detected column for radioactive contaminants, inorganic contaminants, synthetic organic contaminants including pesticides and herbicides, and volatile organic contaminants are the highest are the highest detected level at any sampling point, depending on the sampling frequency. Date of MCL Contaminant and Unit of Level Violation MCLG MCL Sampling **Range of Results** Likely Source of Contamination Measurement Detected (mo/yr) Y/N Erosion of natural deposits; runoff from orchards; runoff Arsenic (ppb) 02/14 Ν 0.5 0.5 0 10 from glass and electronics production wastes Discharge of drilling wastes; discharge from metal Barium (ppm) 02/14 Ν 0.0097 0.0066 - 0.0097 2 2 refineries: erosion of natural deposits Erosion of natural deposits; discharge from fertilizer and Fluoride (ppm) 08/16 Ν 0.49 aluminum factories. Water additive which promotes strong 0.49 4 4 teeth when at optimum level of 0.7 ppm Runoff from fertilizer use; leaching from septic tanks, Nitrate (as Nitrogen) (ppm) 01/16 N 0.28 0.051 - 0.28 10 10 sewage; erosion of natural deposits Runoff from fertilizer use; leaching from septic tanks, Nitrite (as Nitrogen) (ppm) 01/16 Ν 0.053 0.053 1 1 sewage; erosion of natural deposits Discharge from petroleum and metal refineries: erosion of Selenium (ppb) 02/14 Ν 0.5 0.50 50 50 natural deposits; discharge from mines 02/14 11.3 - 12.3 Sodium (ppm) Ν 12.3 NA 160 Salt water intrusion, leaching from soil Stage 1 Disinfectants/Disinfection By-Products For bromate, chloramines, or chlorine, the level detected is the highest running annual average (RAA), computed quarterly, of monthly averages of all samples collected. The range of results is the range of results of all individual samples collected during the past year. Date of MCL Contaminant and Unit of MCLG or Level Sampling Violation Range of Results MCL or MRDL Likely Source of Contamination MRDLG Measurement Detected (mo/yr) Y/N Chlorine (ppm) 01/16-12/16 1.33 0.23 - 2.50 MRDLG = 4 MRDL = 4.0 Water additive used to control microbes Ν Bromate (ppb) 01/16-12/16 Ν 0.39 0 - 4.70 MCLG = 0 MCL = 10 By-product of drinking water disinfection Stage 2 Disinfectants/Disinfection By-Products For Haloacetic Acids (HAA5) or Total Trihalomethanes (TTHM), the level detected is the highest detected level at any sampling point. Range of Results is the range of individual sample results (lowest to highest) for all monitoring locations. to highest) for all monitoring locations. \*\* For Haloacetic Acids (HAAS) or Total Trihalomethanes (TTHM), the level detected is the highest locational running annual average (LRAA). Range of Results is the range of individaul samples results (lowest to highest) for all monitoring locations. Date of MCL Contaminant and Unit of Level MCLG or Sampling Violation Range of Results MCL or MRDI Likely Source of Contamination Measurement Detected MRDIG Y/N (mo/yr) Haloacetic Acids (five) 29.8700 \*\* MCL = 60 01/16-12/16 Ν 20.10 - 31.80 NA By-product of drinking water disinfection (HAA5) (ppb) TTHM [Total 68.2675 \*\* 48.84 - 68.19 MCL = 80 01/16-12/16 Ν NA By-product of drinking water disinfection trihalomethanes] (ppb) Lead and Copper (Tap Water ) Date of AL 90th Number of Contaminant and Unit of Sampling Violation Percentile sampling sites MCLG AL Likely Source of Contamination Measurement exceeding the AL (mo/yr) Y/N Result Corrosion of household plumbing systems; erosion of Copper (tap water) (ppm) 08/2014 Ν 0.78 0 1.3 1.3 natural deposits; leaching from wood preservatives Corrosion of household plumbing systems, erosion of Lead (tap water) (ppb) 08/2014 1.40 15 N 0 0 natural deposits

# Drinking Water Quality Report-Southwest Service Area 2016

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 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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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, 2016. Data obtained before January 1, 2016, and presented in this report are from the most recent testing done in accordance with the laws, rules and regulations.

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### FIX THAT LEAKY FAUCET OR TOILET!

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WATERING RESTRICTION SCHEDULE EVEN HOUSE #'S THURSDAY AND SUNDAY ODD HOUSE #'S WEDNESDAY AND SATURDAY NON-RESIDENTIAL TUESDAY AND FRIDAY RECLAIM CUSTOMERS TWO DAYS PER WEEK

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# Southwest Service Area

### WATER QUALITY RESULTS

### Southwest Water System - PWS ID# 3590785

#### **Inorganic Contaminants**

Results in the Level Detected column for radioactive contaminants, inorganic contaminants, synthetic organic contaminants including pesticides and herbicides, and volatile organic contaminants are the highest average at any of the sampling points or the highest detected level at any sampling point, depending on the sampling frequency.

Contaminant and Unit of Measurement	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	Erosion of natural deposits, run off from glass and electronics producion wastes
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 level of 0.7 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)	01/16	N	0.051	0.051	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (as Nitrogen) (ppm)	01/16	N	0.053	0.053	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/Disinfection By-Products

\* For Bromate and Chlorine, the level detected is the highest running annual average (RAA), computed quarerly, of monthly averages of all samples collected. The Range of Results is range of results of all the individual samples collected during the past year. \*\* For Haloacetic Acids (HAA5) or Total Trihalomethanes (TTHM), the level detected is the highest detected level at any sampling point. Range of Results is the range of individual sample results (lowest to highest) for all monitoring locations. \*\*\* For Haloacetic Acids (HAA5) or Total Trihalomethanes (TTHM), the level detected is the highest locational running annual average (LRAA). Range of Results is the range of individual samples results (lowest to highest for all monitoring locations.

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)	01/16-12/16	N	1.487 *	0.58 - 2.40	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes
Haloacetic Acids (five) (HAA5) (ppb)	01/16-12/16	N	13.60 **	10.95 - 13.60	N/A	MCL = 60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] (ppb)	01/2016	N	31.13 **	23.85 - 31.13	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)	08/2014	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)	08/2014	N	5.30	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits				



# Drinking Water Quality Report-Sun Shadows Consecutive Service Area 2016



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.



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www.seminolecountyfl.com

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SEMINO

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# Sunshadows Service Area

### WATER QUALITY RESULTS

#### Sun Shadows Consecutive Water System - PWS ID# 3594216

			Radioactive Con	taminante		· · · · · · · · · · · · · · · · · · ·						
column for radio	active contamin	ants, inorganic contami			ncluding pesticid	es and herbicides, and volatile organic contaminants are the highest						
avera	ge at any of the											
Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination						
05/14	N	2.5	1.0 - 2.5	0	15	Erosion of natural deposits						
05/14	N	2.5	0.6 - 2.5	0	5	Erosion of natural deposits						
Inorganic Contaminants												
Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination						
05/14	N	0.017	0.009 - 0.017	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits						
05/14	N	0.38	ND - 0.38	5	5	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries, runoff from waste batteries and paints						
05/14	N	0.6	ND - 0.6	100	100	Discharge from steel and pulp mills; erosion of natural deposits						
05/14	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 level of 0.7 ppm						
05/14	N	1.7	1.2 - 1.7	NA	100	Pollution from mining and refining operations. Natural occurrence in soil						
01/16	N	0.32	ND - 0.32	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits						
01/16	N	0.26	ND - 0.26	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits						
05/14	N	13	12.0 - 13.0	N/A	160	Salt water intrusion, leaching from soil						
City of Casselberry Stage 2 Disinfectants/Disinfection By-Products												
r Total Trihalome 5) or Total Trihalc	thanes (TTHM), omethanes (TTH		individual samples co e highest detected leve all monitoring locations s the highest locational	ollected during t l at any samplin running annual	ne past year. g point. Range of	Results is the range of individual sample results (lowest to highest)						
Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination						
01/16 - 12/16 01/16 - 12/16	N	1.509										
	N	1.7	0.95 - 2.00 0.2 - 2.6	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes						
08/2016 02/16 - 11/16	N N N	1.7 24.39 ** 31.93 ***		MRDLG = 4	MRDL = 4.0 MCL = 60	Water additive used to control microbes By-product of drinking water disinfection						
	N	24.39 **	0.2 - 2.6 23.83 - 24.39									
02/16 - 11/16 08/2016	N N	24.39 ** 31.93 *** 68.00 **	0.2 - 2.6 23.83 - 24.39 10.98 - 38.11 57.80 - 68.00	NA	MCL = 60	By-product of drinking water disinfection						
02/16 - 11/16 08/2016	N N	24.39 ** 31.93 *** 68.00 **	0.2 - 2.6 23.83 - 24.39 10.98 - 38.11 57.80 - 68.00 36.63 - 70.93	NA	MCL = 60	By-product of drinking water disinfection						
02/16 - 11/16 08/2016 02/16 - 11/16 Date of Sampling	N N N AL Violation	24.39 ** 31.93 *** 68.00 ** 61.81 *** 90th Percentile	0.2 - 2.6 23.83 - 24.39 10.98 - 38.11 57.80 - 68.00 36.63 - 70.93 Lead and Copper Number of sampling sites	NA NA (Tap Water)	MCL = 60 MCL = 80	By-product of drinking water disinfection By-product of drinking water disinfection						
	Date of Sampling (mo/yr) 05/14	average at any of the       Date of Sampling (mo/yr)     MCL Violation Y/N       05/14     N       05/14     N       Date of Sampling (mo/yr)     MCL Violation Y/N       05/14     N       01/16     N       05/14     N       01/16     N       01/16     N       05/14     N       05/14     N       05/14     N       01/16     N       01/16     N       05/14     N	average at any of the sampling points or the Sampling Violation (mo/yr)     MCL Violation     Level Detected       05/14     N     2.5       05/14     N     2.5       05/14     N     2.5       Date of Sampling (mo/yr)     MCL Violation Y/N     Level Detected       05/14     N     0.017       05/14     N     0.017       05/14     N     0.017       05/14     N     0.015       05/14     N     0.15       05/14     N     0.15       05/14     N     0.32       01/16     N     0.26       05/14     N     13       Stage 2     Stage 2       tevel detected is the highest running annual average (R rTotal Trihalomethanes (TTHM), the level detected is th for sompling (mo/yr)     MCL Violation Y/N     Level Detected	average at any of the sampling points or the highest detected level         Date of Sampling (mo/yr)       MCL Violation Y/N       Level Detected       Range of Results         05/14       N       2.5       1.0 - 2.5         05/14       N       2.5       0.6 - 2.5         05/14       N       2.5       0.6 - 2.5         05/14       N       2.5       0.6 - 2.5         Inorganic Cont         Date of Sampling (mo/yr)       MCL Violation Y/N       Level Detected       Range of Results         05/14       N       0.017       0.009 - 0.017         05/14       N       0.38       ND - 0.38         05/14       N       0.15       0.10 - 0.15         05/14       N       0.15       0.10 - 0.15         05/14       N       0.32       ND - 0.32         01/16       N       0.26       ND - 0.26         05/14       N       13       12.0 - 13.0         Stage 2 Disinfectants/Disi         Colspan= 2 Disinfectants/Disi         MCL         01/16       N       13       12.0 - 13.0         Stage 2 Disinfectants/Disi         Colspan= 2 Disinfec	average at any of the sampling points or the highest detected level at any sampling         Date of (mo/yr)       WCL N       Level Detected       Range of Results       MCLG         05/14       N       2.5       1.0 - 2.5       0         05/14       N       2.5       0.6 - 2.5       0         05/14       N       2.5       0.6 - 2.5       0         Date of Sampling Violation (mo/yr)       MCL Violation Y/N       Level Detected       Range of Results       MCLG         05/14       N       0.017       0.009 - 0.017       2       0         05/14       N       0.017       0.009 - 0.017       2         05/14       N       0.038       ND - 0.38       5         05/14       N       0.15       0.10 - 0.15       4         05/14       N       0.15       0.10 - 0.15       4         05/14       N       0.32       ND - 0.32       10         01/16       N       0.26       ND - 0.26       1         01/16       N       13       12.0 - 13.0       N/A         05/14       N       13       12.0 - 13.0       N/A         01/16       N       0.26       ND - 0.26       1 <td>Sampling (mo/yr)Violation Y/NLevel Detected Range of ResultsMCLGMCL05/14N2.51.0 - 2.501505/14N2.50.6 - 2.50505/14N2.50.6 - 2.505Date of Sampling (mo/yr)MCL Violation Y/NLevel Detected Range of ResultsMCLGMCLG05/14N0.0170.009 - 0.0172205/14N0.0170.009 - 0.0172205/14N0.016ND - 0.385505/14N0.66ND - 0.6610010005/14N0.150.10 - 0.154405/14N0.171.2 - 1.7NA10005/14N0.32ND - 0.32101001/16N0.266ND - 0.261101/16N1312.0 - 13.0N/A160Stage 2 Disinfectants/Disinfection By-ProductsLevel detected is the highest number annual average (RAA), computed quareery of monthy averages of all sampling point. Range of for all monitoring locations.MCLG or MCL of MCL or MRDLMCLG or MRDLMCLG or MRDLMCLG or MRDLMCLG or MRDLMCLG or MRDLMCLG or MRDLMCLG or MRDLMCL or MRDL</td>	Sampling (mo/yr)Violation Y/NLevel Detected Range of ResultsMCLGMCL05/14N2.51.0 - 2.501505/14N2.50.6 - 2.50505/14N2.50.6 - 2.505Date of Sampling (mo/yr)MCL Violation Y/NLevel Detected Range of ResultsMCLGMCLG05/14N0.0170.009 - 0.0172205/14N0.0170.009 - 0.0172205/14N0.016ND - 0.385505/14N0.66ND - 0.6610010005/14N0.150.10 - 0.154405/14N0.171.2 - 1.7NA10005/14N0.32ND - 0.32101001/16N0.266ND - 0.261101/16N1312.0 - 13.0N/A160Stage 2 Disinfectants/Disinfection By-ProductsLevel detected is the highest number annual average (RAA), computed quareery of monthy averages of all sampling point. Range of for all monitoring locations.MCLG or MCL of MCL or MRDLMCLG or MRDLMCLG or MRDLMCLG or MRDLMCLG or MRDLMCLG or MRDLMCLG or MRDLMCLG or MRDLMCL or MRDL						