SEMINOLE COUNTY

Annual Drinking Water Quality Report

2021

SEMINOLE COUNTY
FLORIDA'S NATURAL CHOICE

Annual Drinking Water Quality Report-2021

Seminole County Environmental Services is pleased to present you with the 2021 Annual Drinking Water Quality Report. This report is designed to inform you about the quality water and services that we deliver to you every day. These results did not happen without the commitment and dedication of our team of licensed water operators whose goal is and always has been to provide to you 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 2021; you will find that we supply water that meets or exceeds all federal and state water quality regulations.

In an effort to reduce paper consumption and minimize the impact on our environment, we offer Our Water Quality Report 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 report's 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.

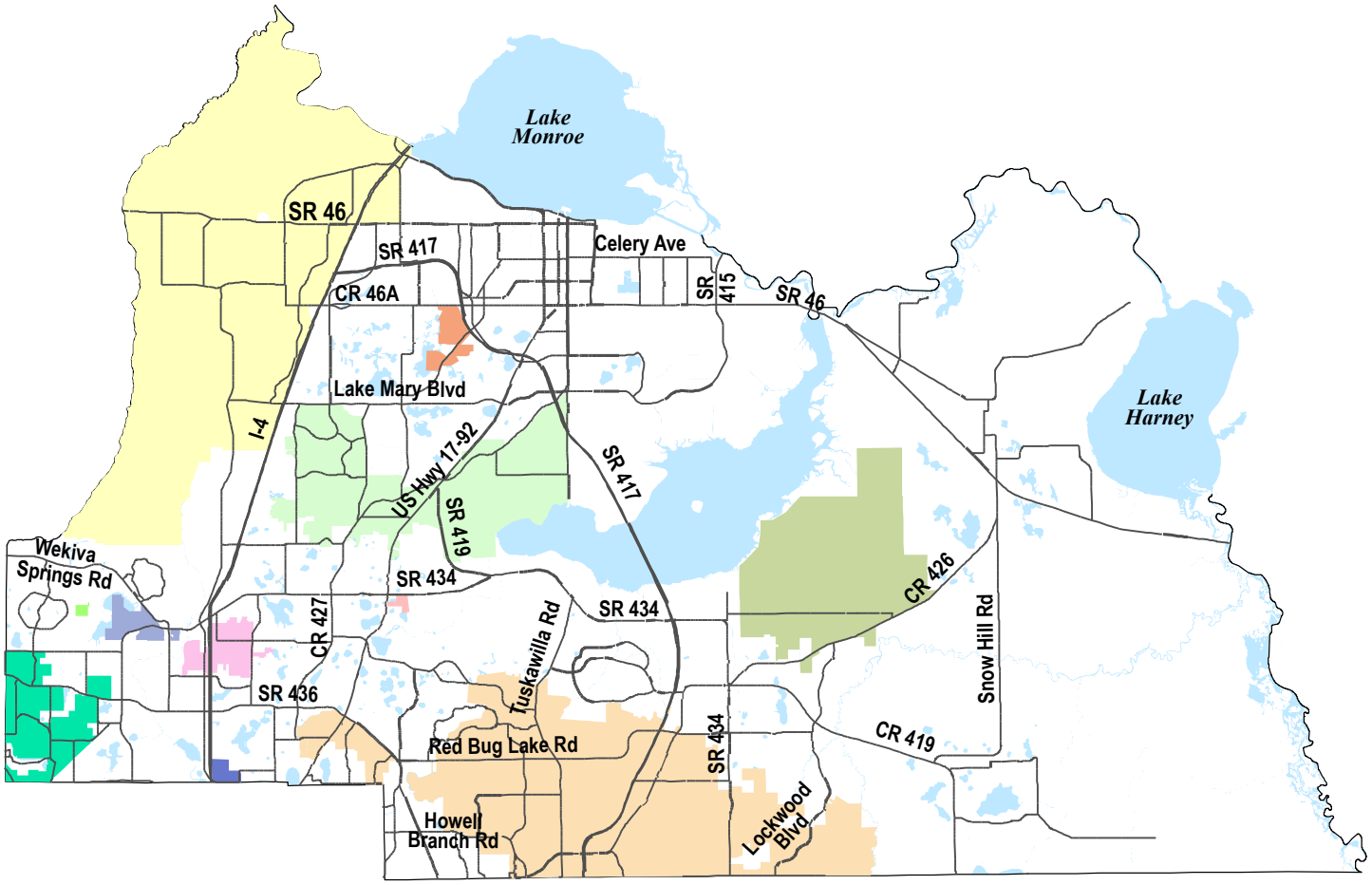
Seminole County residents are highly encouraged to register for emergency alerts through Alert Seminole by going to www.alertseminole.org. Residents can sign up to receive emergency alerts via text, email, or voice call about a variety of potential public safety and environmental hazards such as Boil Water Notices.

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,

Terrence McCue, Ph.D., P.E.
Director
Seminole County Environmental Services

Map of Water Service Areas



Drinking Water Quality Report-Apple Valley Service Area 2021

Back to Service Area Map

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 Floridan Aquifer is the water source for the Apple Valley Service Area (PWS #3590039) which is obtained from ground water wells, aerated to remove hydrogen sulfide, chlorinated for disinfection, fluoridated for dental purposes and orthophosphate is added for corrosion control. 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, 2021. Data obtained before January 1, 2021, 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 2021, the Department of Environmental Protection performed a Source Water Assessment on the City of Altamonte Springs, PWS #3590026, 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. There are five (5) potential sources of contamination identified for this system with low susceptibility levels. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp.

EPA Would Like You to Know

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

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

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

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

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

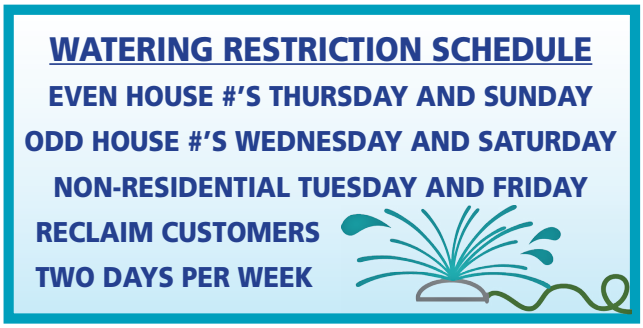
(E) *Radioactive contaminants,* which can be naturally occurring or be the result of oil and gas production and mining activities.

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

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.



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.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking 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
Barium (ppm) *City of Altamonte Springs*	03/20	N	0.0082	0.007 - 0.0082	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm) *City of Altamonte Springs*	03/20	N	0.64	0.56 - 0.64	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 Altamonte Springs*	5/21	N	0.017	0.007 - 0.017	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm) *City of Altamonte Springs*	03/20	N	10.7	7.71 - 10.7	N/A	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.

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) *Seminole County*	01/21-12/21	N	1.06	0.71 - 1.72	MRDLG=4	MRDL=4	Water additive used to control microbes

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.

** 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 individaul 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
Haloacetic Acids (five) (HAA5) (ppb) *Seminole County* *City of Altamonte Springs*	07/21 2021	N N	16.94 * 30.39 **	15.19 - 16.94 8.7 - 42.72	NA	MCL = 60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb) *Seminole County* *City of Altamonte Springs*	07/21 2021	N N	43.08* 58.12 **	34.38 - 43.08 25.3 - 64.0	NA	MCL = 80	By-product of drinking water disinfection

Lead and Copper (Tap Water)

Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
Copper (tap water) (ppm) *Seminole County*	06/21	N	0.17	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Drinking Water Quality Report-Black Hammock Service Area 2021

Back to Service Area Map

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 Floridan Aquifer is the water source for the Black Hammock Consecutive Service Area (PWS #3594186) which is obtained from ground water wells, Carbon Dioxide is used to adjust the pH, sent thru aeration towers to remove hydrogen sulfide, chloraminated for disinfection, 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, 2021. Data obtained before January 1, 2021, 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 2021, the Department of Environmental Protection performed a Source Water Assessment on City of Oviedo, PWS #3590970, 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. There are six (6) potential sources of contamination identified for this system with low to moderate susceptibility levels. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp.

EPA Would Like You to Know

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

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

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

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

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

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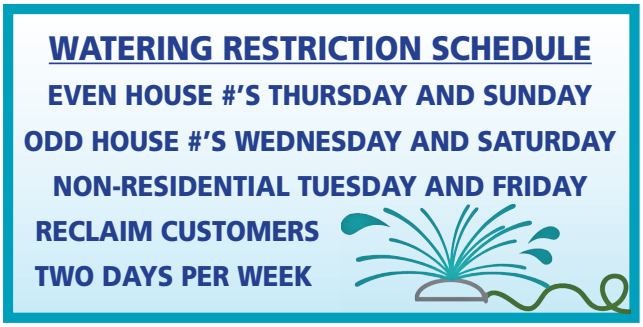
In order to ensure that tap water is safe to drink, the EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same 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 1-800-426-4791.

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

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Parts per million (ppm) or Milligrams per liter (mg/l): one part by weight of analyte to 1 million parts by weight of the water sample.

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

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

Black Hammock Service Area

WATER QUALITY RESULTS

Black Hammock Consecutive Water System (PWS ID# 3594186)

Radioactive 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
Alpha emitters (pCi/L) *City of Oviedo*	2/20	N	1.8	ND - 1.8	0	15	Erosion of natural deposits

Inorganic Contaminants

Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Arsenic (ppb) *City of Oviedo*	2/20	N	0.15	0.15	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm) *City of Oviedo*	2/20	N	0.011	0.011	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm) *City of Oviedo*	2/20	N	0.52	0.52	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*	2/20	N	34.0	34.0	NA	160	Salt water intrusion, leaching from soil

Stage 1 Disinfectant/Disinfection By-Product

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
Chloramines (ppm) *Seminole County*	01/21 - 12/21	N	2.40	1.22 - 2.40	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes
City of Oviedo	01/21- 12/21	N	2.32	0.6 - 3.4			

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.

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 (HAA5) (ppb) *Seminole County*	08/21	N	20.7	20.7	NA	MCL = 80	By-product of drinking water disinfection
City of Oviedo	05/21	N	7.5	7.2 - 7.5			
Total Trihalomethanes (TTHM) (ppb) *Seminole County*	08/21	N	20.59	20.59	NA	MCL = 80	By-product of drinking water disinfection
City of Oviedo	05/20	N	19.3	18.0 - 19.3			

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*	06/21	N	0.31	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb) *Seminole County*	06/21	N	5.6	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits

Drinking Water Quality Report-Chase Groves Consecutive Service Area 2021

Back to Service Area Map

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 Floridan Aquifer is the water source for the Chase Groves Consecutive Service Area (PWS #3594214) which is obtained from ground water wells and is chlorinated for disinfection purposes and then fluoridated for dental health purposes. Polyphosphate is added for corrosion control. 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, 2021. Data obtained before January 1, 2021, 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 2021, the Department of Environmental Protection performed a Source Water Assessment on City of Sanford, PSW #3590205, 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. There are eleven (11) potential sources of contamination identified for this system with low to moderate susceptibility levels. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp.

EPA Would Like You to Know

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

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

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

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

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

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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.

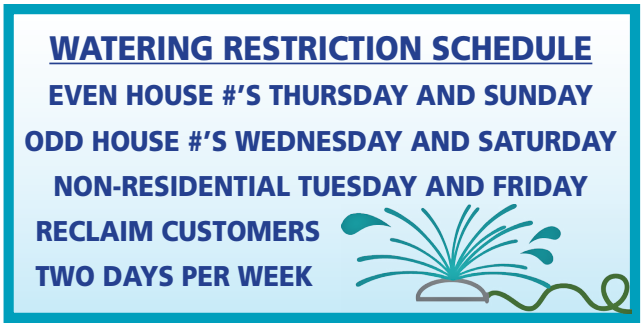
Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by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

Odor Exceedance Notice: In 2020, our system exceeded the MCL for odor. Secondary contaminants are considered to be aesthetic violations, and they are not considered to have major health effects.

E. coli Exceedance Notice: City of Sanford (City) routinely monitors for drinking water contaminants per federal and state regulations. On August 27, 2021, the City learned that the assessment sample for our Oregon #4 well, one of our 17 production wells, for the month of August detected a fecal indicator, E.coli. The Oregon #4 well was immediately taken offline and remained offline until follow-up sampling showed the well was absent for coliform bacteria. As required by Environmental Protection Agency's (EPA) Ground Water Rule, City staff collected additional samples from this well within 24 hours to determine the extent of the problem. This follow up sampling as well as samples collected from treated water in the distribution system showed absence of coliform bacteria. E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems

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

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Seminole County Environmental Services is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.



Terms and Abbreviations

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.

Terms and Abbreviations (Continued)

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.

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

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

Chase Groves Service Area

WATER QUALITY RESULTS

Chase Groves Consecutive Water System - PWS ID# 3594214

Radioactive 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
Radium 226 *City of Sanford*	06/21	N	0.978	ND - 1.33	0	5	Erosion of natural deposits
Alpha emitters (pCi/L) *City of Sanford*	4/20	N	3.79	ND - 3.79	0	15	Erosion of natural deposits

Inorganic Contaminants

Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Barium (ppm) *City of Sanford*	04/20	N	0.019	0.010 - 0.019	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm) *City of Sanford*	04/20	N	0.74	0.65 - 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
Nitrate (as Nitrogen) (ppm) *City of Sanford*	06/21	N	0.29	0.046 - 0.29	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm) *City of Sanford*	04/20	N	38.2	19.5 - 38.2	N/A	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.

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) *Seminole County* *City of Sanford*	01/21 - 12/21 01/21 - 12/21	N N	1.49 1.3	0.68 - 1.85 0.30 - 2.60	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes

Stage 2 Disinfectants/Disinfection By-Products

* 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 individaul 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
Haloacetic Acids (five) (HAA5) (ppb) *Seminole County* *City of Sanford*	01/21 - 12/21 02/21 - 11/21	N N	20.91* 21.48*	12.01 - 25.77 12.64 - 22.84	NA	MCL = 60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb) *Seminole County* *City of Sanford*	01/21 - 12/21 02/21 - 11/21	N N	71.07* 80.48*	37.04 - 86.41 38.50 - 83.54	NA	MCL = 80	By-product of drinking water disinfection

Secondary 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
Odor (threshold odor number) *City of Sanford*	04/20 - 6/20	Y	4	4	N/A	3	Naturally occuring organics

Microbiological 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
E. coli (at the ground water source) *City of Sanford*	08/21	N	Positive	*	0	0	Human or animal fecal waste

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*	06/20	N	0.021	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Drinking Water Quality Report-Druid Hills Consecutive Service Area 2021

Back to Service Area Map

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 Floridan Aquifer is the water source for the Druid Hills Service Area (PWS #3590111) which is obtained from ground water wells, aerated to remove hydrogen sulfide, chlorinated for disinfection, fluoridated for dental purposes and ortho-phosphate is added for corrosion control. 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, 2021. Data obtained before January 1, 2021, and presented in this report are from the most recent testing done in accordance with the laws, rules and and regulations.

Source Water Assessment Plans

In 2021, the Department of Environmental Protection performed a Source Water Assessment on the City of Altamonte Springs, PWS #3590026, 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. There are five (5) potential sources of contamination identified for this system with low susceptibility levels. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp.

EPA Would Like You to Know

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

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

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

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

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

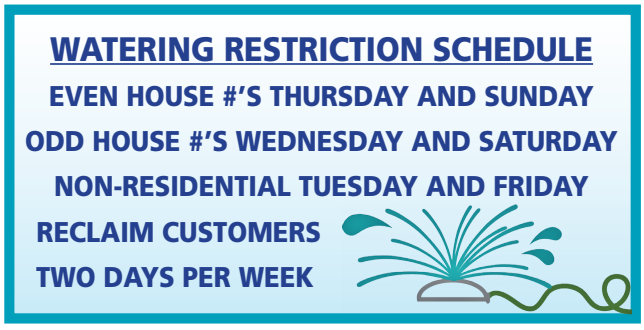
(E) *Radioactive contaminants,* which can be naturally occurring or be the result of oil and gas production and mining activities.

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

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.



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.

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

Druid Hills Service Area

WATER QUALITY RESULTS

Druid Hills Water System - PWS ID# 3590111

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
Barium (ppm) *City of Altamonte Springs*	03/20	N	0.0082	0.007 - 0.0082	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm) *City of Altamonte Springs*	03/20	N	0.64	0.56 - 0.64	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 Altamonte Springs*	5/21	N	0.017	0.007 - 0.017	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm) *City of Altamonte Springs*	03/20	N	10.7	7.71 - 10.7	N/A	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.

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) *Seminole County*	01/21-12/21	N	1.31	0.44 - 1.62	MRDLG=4	MRDL=4	Water additive used to control microbes

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.

** 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
Haloacetic Acids (five) *Seminole County* *City of Altamonte Springs*	07/21 2021	N N	22.91 * 30.39 **	15.01 - 22.91 8.7 - 42.72	NA	MCL = 60	By-product of drinking water disinfection
Total Trihalomethanes *Seminole County* *City of Altamonte Springs*	07/21 2021	N N	53.55 ** 58.12 **	32.94 - 53.55 25.3 - 64.0	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)	06/21	N	0.16	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Drinking Water Quality Report-Lake Brantley Consecutive Service Area 2021

Back to Service Area Map

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 Floridan Aquifer is the water source for the Lake Brantley Consecutive Service Area (PWS #3590685) which is obtained from ground water wells, aerated to remove hydrogen sulfide, chlorinated for disinfection, orthopolyphosphate is added for corrosion control. 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, 2021. Data obtained before January 1, 2021, 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 2021, the Department of Environmental Protection performed a Source Water Assessment of the Sanlando Utilities PWS #3591121, 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. There are six (6) potential sources of contamination ranging from low to 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.

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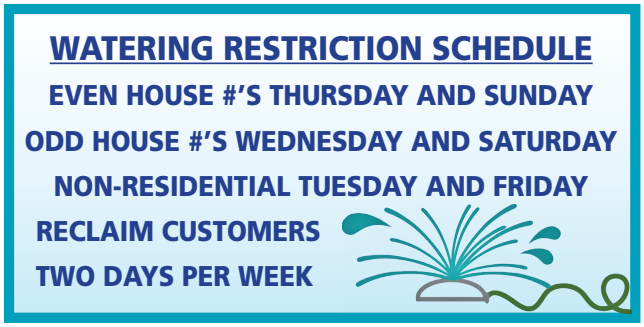

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Picocurie per liter (pCi/L): measure of the radioactivity in water.

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

Lake Brantley Service Area

WATER QUALITY RESULTS

Lake Brantley Consecutive Water System - PWS ID# 3590685

Radioactive 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
Radium 226 + 228 or combined radium (pCi/L) *Utilities Inc. - Sanlando*	02/17	N	2.3	0.7 - 2.3	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) *Utilities Inc. - Sanlando*	1/20 - 2/20	N	0.0144	0.007 - 0.0144	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm) *Utilities Inc. - Sanlando*	1/20 - 2/20	N	0.334	ND - 0.334	4	4	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at the optimum level of 0.7 ppm
Sodium (ppm) *Utilities Inc. - Sanlando*	1/20 - 2/20	N	15	8.56 - 15	N/A	160	Salt water intrusion, leaching from soil

Stage 1 Disinfectant/Disinfection By-Product

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
Chlorine (ppm) *Seminole County* *Utilities Inc - Sanlando*	01/21 - 12/21 01/21- 12/21	N N	1.83 2.00	0.38- 2.39 0.90 - 3.40	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes

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.

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* *Utilities Inc - Sanlando*	07/21 08/21	N N	11.21 29.96	11.21 17.36 - 29.96	N/A	MCL = 60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb) *Seminole County* *Utilities Inc - Sanland*	07/21 08/21	N N	14.12 55.81	14.12 53.92 - 55.81	N/A	N/A	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*	06/21	N	0.049	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

PFAS Testing

Sunshine Water Services continues efforts to conduct statewide drinking water testing for Per- and Polyfluoroalkyl Substances (PFAS). These man-made compounds are used in the manufacturing of products resistant to water, grease or stains including firefighting foams, cleaners, cosmetics, paints, adhesives and insecticides. PFAS can migrate into the soil, water, and air and is likely present in the blood of humans and animals all over the world. The Environmental Protection Agency (EPA) has established a health advisory level at 70 parts per trillion.

Contaminant	Date of Sampling (mo/yr)	Range of Detect	Average Level	EPA Advisory	Below HAL
PFOS	2021	3.9	NA	70	Yes
PFOA	2021	3.0	NA	70	Yes
Combined PFOS & PFOA	2021	6.9	NA	70	Yes

All results reported as Nanograms per Liter (ng/L)
Terms and Abbreviations:
***PFOS - Perfluorooctane Sulfonate**
***PFOA - Perfluorooctanoic Acid**
***Health Advisory Level (HAL) - To provide Americans, including the most sensitive populations, with a margin of protection from a lifetime of exposure to PFOA and PFOS from drinking water, the EPA established the Health Advisory Levels at 70 part per trillion (PPT)**
***Ng/L - Nanograms per Liter (ng/), which equals Parts per Trillion (ppt) - One part per trillion corresponds to one minute in 2,000,000 years, or a single penny in 10,000,000,000.**

For more information visit https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos.

Drinking Water Quality Report-Meredith Manor Service Area 2021

Back to Service Area Map

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

Parts per billion (ppb) or Micrograms per liter (µg/l): one part by weight of analyte to 1 billion parts by weight of the water sample.

Parts per million (ppm) or Milligrams per liter (mg/l): one part by weight of analyte to 1 million parts by weight of the water sample.

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

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

Meredith Manor Service Area

WATER QUALITY RESULTS

Meredith Manor Consecutive Water System - PWS ID# 3590823

Radioactive 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
Radium 226 + 228 or combined radium (pCi/L) *Utilities Inc. - Sanlando*	02/17	N	2.3	0.7 - 2.3	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) *Utilities Inc. - Sanlando*	1/20 - 2/20	N	0.0144	0.007 - 0.0144	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm) *Utilities Inc. - Sanlando*	1/20 - 2/20	N	0.334	ND - 0.334	4	4	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at the optimum level of 0.7 ppm
Sodium (ppm) *Utilities Inc. - Sanlando*	1/20 - 2/20	N	15	8.56 - 15	N/A	160	Salt water intrusion, leaching from soil

Stage 1 Disinfectant/Disinfection By-Product

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
Chlorine (ppm) *Seminole County* *Utilities Inc - Sanlando*	01/21 - 12/21 01/21- 12/21	N N	2.28 2.00	.81 - 3.19 0.90 - 3.40	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes

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.

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* *Utilities Inc - Sanlando*	07/21 08/21	N N	14.57 29.96	14.57 17.36 - 29.96	N/A	MCL = 60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb) *Seminole County* *Utilities Inc - Sanlando*	07/21 08/21	N N	26.2 55.81	26.2 53.92 - 55.81	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) *Seminole County*	06/21	N	0.082	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

PFA Testing

Utilities Inc. of Florida (our wholesale water provider) continues efforts to conduct statewide drinking water testing for Per- and Polyfluoroalkyl substances (PFAS). These man-made compounds are used in the manufacturing of products resistant to water, grease or stains including firefighting foams, cleaners, cosmetics, paints, adhesives and insecticides. PFAS can migrate into the soil, water and air and is likely present in the blood of humans and animals all over the world. The Environmental Protection Agency (EPA) has established a health advisory level of 70 parts per trillion (PPT)

Contaminant	Date of Sampling (mo/yr)	Range of Detect	Average Level	EPA Advisory	Below HAL
PFOS	2021	3.9	NA	70	Yes
PFOA	2021	3.0	NA	70	Yes
Combined PFOS & PFOA	2021	6.9	NA	70	Yes

All results reported as Nanograms per Liter (ng/L)

Terms and Abbreviations:

***PFOS - Perfluorooctane Sulfonate**

***PFOA - Perfluorooctanoic Acid**

***Health Advisory Level (HAL) - To provide Americans, including the most sensitive populations, with a margin of protection from a lifetime of exposure to PFOA and PFOS from drinking water, the EPA established the Health Advisory Levels at 70 part per trillion (PPT)**

***Ng/L - Nanograms per Liter (ng/L), which equals Parts per Trillion (ppt) - One part per trillion corresponds to one minute in 2,000,000 years, or a single penny in 10,000,000,000.**

For more information visit https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos.

Drinking Water Quality Report- Northeast Service Area 2021

Back to Service Area Map

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 Floridan Aquifer is the water source for the Northeast Service Area (PWS #3590473) which 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, 2021. Data obtained before January 1, 2021, 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 2021, 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 a low susceptibility level. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp.

EPA Would Like You to Know

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

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

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

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

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

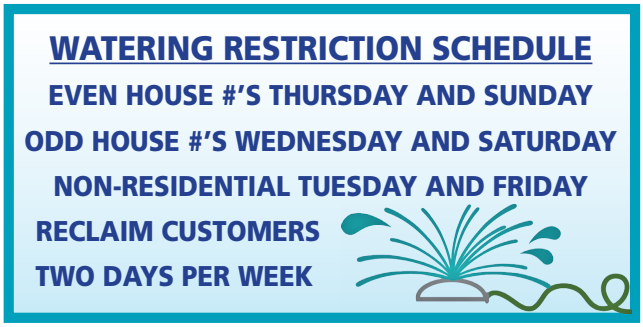
(E) *Radioactive contaminants,* which can be naturally occurring or be the result of oil and gas production and mining activities.

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

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.



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.

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

Northeast Service Area

WATER QUALITY RESULTS

Northeast Water System - PWS ID# 3590473

Water Quality Testing Results Table

Radioactive 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
Radium 226 + 228 or combined radium (pCi/L)	03/20	N	1.1	1.1	0	5	Erosion of natural deposits

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
Barium (ppm)	02/20	N	0.0059	0.0059	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	02/20	N	0.84	0.084	4	4	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at the optimum level of 0.7 ppm
Nitrate (as Nitrogen) (ppm)	01/21	N	0.1	0.1	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	02/20	N	6.9	6.9	N/A	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.

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)	01/21-12/21	N	1.22	0.36 - 2.04	MRDLG=4	MRDL=4	Water additive used to control microbes

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.

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 (HAA5) (ppb)	11/2021	N	18.37	15.20 - 18.37	NA	MCL = 60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	11/2021	N	29.12	22.50 - 29.12	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)	06/20 - 07/20	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)	06/20 - 07/20	N	3.5	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits

Drinking Water Quality Report-Northwest Service Area 2021

Back to Service Area Map

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 Floridan Aquifer is the water source for the Northwest Service Area (PWS #3594107) which 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, 2021. Data obtained before January 1, 2021, 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 2021,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 from low to moderate susceptibility levels. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp.

EPA Would Like You to Know

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include

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

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

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

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

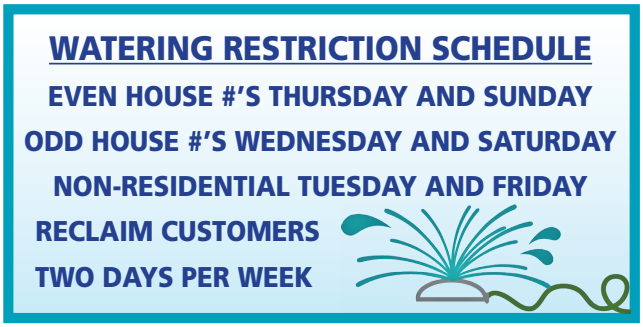
(E) *Radioactive contaminants,* which can be naturally occurring or be the result of oil and gas production and mining activities.

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

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.



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.

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Parts per million (ppm) or Milligrams per liter (mg/l): one part by weight of analyte to 1 million parts by weight of the water sample.

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

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

Northwest Service Area

WATER QUALITY RESULTS

Northwest Water System - PWS ID# 3594107

Water Quality Testing Results Table

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
Barium (ppm)	02/20	N	0.0092	0.0092	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	02/20	N	0.55	0.55	4	4	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at the optimum level of 0.7 ppm
Nitrate (as Nitrogen) (ppm)	01/21	N	0.023	0.023	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	02/20	N	26	26	N/A	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.

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)	01/21-12/21	N	1.41	0.48 -2.25	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes

Stage 2 Disinfectants/Disinfection By-Products

* 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
Haloacetic Acids (HAA5) (ppb)	01/21-12/21	N	25.585*	9.87 - 49.17	N/A	MCL = 60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	01/21-12/21	N	69.108*	21.43 - 78.80	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)	06/2020	N	0.38	1	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Drinking Water Quality Report- Southeast Service Area 2021

Back to Service Area Map

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 Floridan Aquifer is the water source for the Southeast Service Area (PWS #3590571) which is obtained from ground water wells. The water is ozonated, aerated, filtered with granular activated carbon, chlorinated for disinfection, the pH is adjusted for corrosion control, 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.

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Source Water Assessment Plan

In 2021, 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 low 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:

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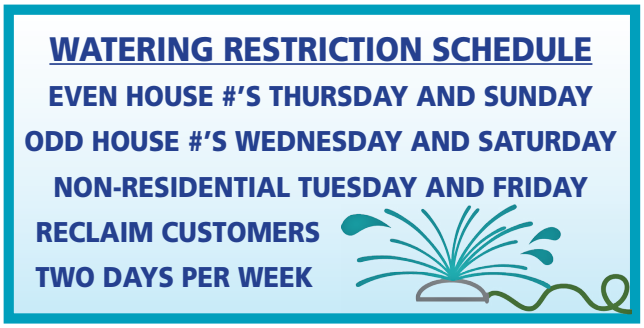

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Maximum residual disinfectant level goal or MRDLG: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

"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.

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

Southeast Service Area

WATER QUALITY RESULTS

Southeast Water System - PWS ID# 3590571

Water Quality Testing Results Table

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)	02/20	N	0.16	0.00 - 0.16	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	02/20	N	0.0092	0.0057 - 0.0092	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	02/20	N	0.42	0.17 - 0.42	4	4	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at the optimum level of 0.7 ppm
Nitrate (as Nitrogen) (ppm)	01/21 - 2/21	N	0.18	0.012 - 0.18	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	02/20	N	11.0	11.0	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.

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)	01/21 - 12/21	N	1.35	0.45 - 2.00	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes

Stage 2 Disinfectants/Disinfection By-Products

* 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
Haloacetic Acids (HAA5) (ppb)	01/21 -12/21	N	26.285*	17.47 - 27.61	NA	MCL = 60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	01/21 - 12/21	N	55.673*	31.10 - 49.17	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)	06/2020	N	0.16	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Drinking Water Quality Report-Southwest Service Area 2021

Back to Service Area Map

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 Floridan Aquifer is the water source for the Southwest Service Area (PWS #3590785) which is obtained from ground water wells and is aerated, chlorinated for disinfection 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, 2021. Data obtained before January 1, 2021, 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 2021, 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 low susceptibility levels. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp.

EPA Would Like You to Know

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

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

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

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

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

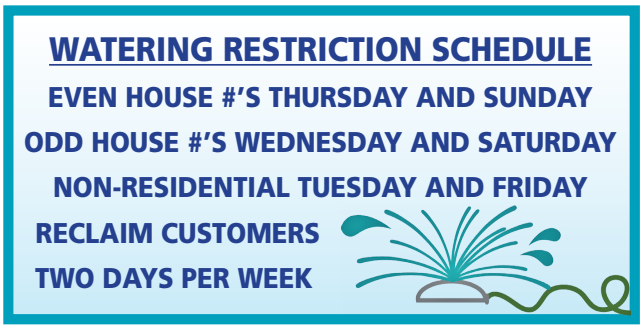
(E) *Radioactive contaminants,* which can be naturally occurring or be the result of oil and gas production and mining activities.

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

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.



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.

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

Southwest Service Area

WATER QUALITY RESULTS

Southwest Water System - PWS ID# 3590785

Water Quality Testing Results Table

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
Barium (ppm)	02/20	N	0.0083	0.0083	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	02/20	N	0.75	0.75	4	4	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at the optimum level of 0.7 ppm
Sodium (ppm)	02/20	N	8.4	8.4	N/A	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.

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)	01/21 - 12/21	N	1.59	0.77 -2.06	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes

Stage 2 Disinfectant/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.

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 (HAA5) (ppb)	01/21	N	13.19	12.84 - 13.19	N/A	MCL = 60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	01/21	N	17.85	15.88 - 17.85	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)	07/2020	N	0.27	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Drinking Water Quality Report-Sun Shadows Consecutive Service Area 2021

Back to Service Area Map

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 Floridan Aquifer is the water source for the Sun Shadows Consecutive Service Area (PWS #3594216) which is obtained from ground water wells which are aerated to remove hydrogen sulfide, filtered with granular activated carbon, chlorinated for disinfection, and orthopolyphosphate is added for corrosion control. 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, 2021. Data obtained before January 1, 2021, 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 2021, the Department of Environmental Protection performed a Source Water Assessment on City of Casselberry, PWS #3590159, 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. There are eleven (11) potential sources of contamination identified for this system with low susceptibility levels. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp.

EPA Would Like You to Know

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

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

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

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

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

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

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

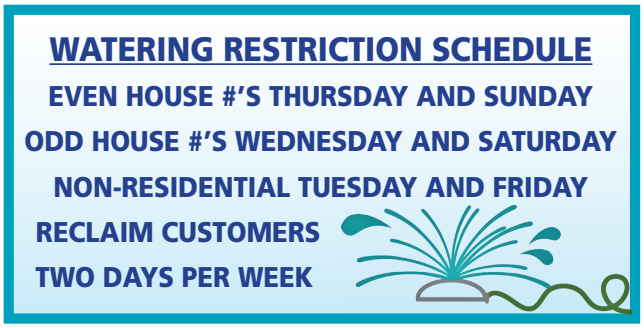
Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by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

Water Quality Parameters

The City of Casselberry and the Florida Department of Environmental Protection (FDEP) have a set of Water Quality Parameters established for the City's drinking water system that allow the City to more efficiently monitor the drinking water system for its potential to corrode lead and copper pipes. From May 8 to June 5, 2019, the alkalinity fell below the established range of 90-150 mg/L CaCO3 equivalent, with the lowest recorded value being 82 mg/L CaCO3 equivalent, resulting in a violation of the City's Water Quality Parameters with FDEP. Alkalinity levels outside the established range can impact the effectiveness of the corrosion control additive the City uses to prevent metals such as lead and copper from plumbing, household fixtures, or older service lines from entering into the water distribution system via pipe corrosion. It is possible that during the period of lowered alkalinity, trace amounts of lead and copper from house-hold fixtures and plumbing may have corroded into the drinking water. It is unknown how much, if any, may have corroded, but levels were not such that it would be considered an emergency. No action was needed to be taken by consumers and no alternative water supplies were needed. However, the City is in the process of developing an alkalinity study to determine whether the established Water Quality Parameters need to be adjusted.

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

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Seminole County Environmental Services is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.



Terms and Abbreviations

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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.

Terms and Abbreviations (Continued)

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.

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

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

Sunshadows Service Area

WATER QUALITY RESULTS

Sun Shadows Consecutive Water System - PWS ID# 3594216

Radioactive 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
Radium 226 + 228 or combined radium (pCi/L) *City of Casselberry*	11/20 - 04/21	N	1.9	ND - 1.9	0	5	Erosion of natural deposits
Alpha Emitters (pCi/L) *City of Casselberry*	11/20 - 04/21	N	2.2	ND - 2.2	0	15	Erosion of natural deposits

Inorganic Contaminants

Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Arsenic (ppb) *City of Casselberry*	11/20 - 04/21	N	0.26	ND - 0.26	0	10	Erosion of natural deposits
Barium (ppm) *City of Casselberry*	11/20 - 04/21	N	0.016	0.01 -0.016	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm) *City of Casselberry*	11/20 - 04/21	N	0.15	0.08 - 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
Nitrate (as Nitrogen)(ppm) *City of Casselberry*	01/21 - 04/21	N	0.22	0.054 - 0.22	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm) *City of Casselberry*	11/20	N	11	11	N/A	160	Salt water intrusion, leaching from soil

Synthetis Organic 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
Dalapon (ppb)	01/21 - 12/21	N	1.5	ND - 1.5	200	200	Runoff from herbicides

Stage 1 Disinfectant/Disinfection By-Product

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
Chlorine (ppm)					MRDLG = 4	MRDL = 4.0	Water additive used to control microbes
Seminole County	01/21 - 12/21	N	1.87	1.03 - 2.22			
City of Casselberry	01/21 - 12/21	N	1.69	0.26 - 3.6			

Stage 2 Disinfectants/Disinfection By-Products

* 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
Haloacetic Acids (five) (HAA5) (ppb)					NA	MCL = 60	By-product of drinking water disinfection
Seminole County	08/21 - 12/21	N	36.46*	28.27 - 44.65			
City of Casselberry	01/21 - 12/21	N	30.15*	11.12 - 41.40			
Total Trihalomethanes (TTHM) (ppb					NA	MCL = 80	By-product of drinking water disinfection
Seminole County	08/21 - 12/21	N	72.13*	55.34 - 88.92			
City of Casselberry	01/21 - 12/21	N	56.85*	18.31- 62.19			

Our annual sample taken in August 2021, had a TTHM result of 88.92 ppb, which exceeded the MCL of 80 ppb. The system did not incur an MCL violation, but was placed back on a quartely monitoring schedule. Some people who drink water containing trihalomethanes in excess of MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

TTHM Monitoring Results (ppb)	1st Quarter 2021	2nd Quarter 2021	3rd Quarter 2021	4th Quarter 2021
SS-4 Sunbranch Ln. Quarterly Results	NA	NA	88.92	55.34
SS-4 Sunbranch Ln. LRAA	NA	NA	NA	72.13

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*	06/21	N	0.081	0	1.3	1.3	Corrosion of household plumbing systems, erosion of natural deposits