CITY OF WINTER SPRINGS

2021 ANNUAL DRINKING WATER QUALITY REPORT

PWS ID NUMBER
3590879

CITY OF WINTER SPRINGS
PUBLIC WORKS AND UTILITIES

ABOUT THIS REPORT

Our water treatment plants use proven technology, advanced disinfection, corrosion control, and state certified operators to ensure a high-quality product.

We are proud to present our 2021 Annual Drinking Water Quality Report for the City of Winter Springs. This report is designed to inform you about the quality of water we deliver to your home every day. **It is our pleasure to report that the drinking water we produce meets or exceeds all Federal and State water quality regulations.**

We are diligent in monitoring and upgrading our water procedures, equipment, and facilities to ensure safe and clean water. And, we remain committed to water conservation and protection as we serve the needs of all in our City.

In 2021, the Florida Department of Environmental Protection (FDEP) performed a Source Water Assessment of our system. The assessment was conducted to identify any potential sources of contamination in the vicinity of our groundwater supply wells. There are three potential sources of contamination identified for this system with a low susceptibility level. Assessment results are available on the FDEP Source Water Assessment and Protection Program website at **www.dep.state.fl.us/swapp** or they can be obtained from the City of Winter Springs Water Treatment Plant at 407-327-7587.

The City 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.

If you have any questions about this report or your water utility, please contact the City of Winter Springs at 407-327-1800 Monday through Friday from 8:00 a.m. to 5:00 p.m.

DID YOU KNOW...

1. In 2021, the City distributed an average of 3.81 million gallons per day.
2. We received **55.4 inches** of rainfall in 2021, which was 5.1 inches lower than 2020.
3. The City has a total of **1,158 fire hydrants** that it maintains.
4. Scientists have determined groundwater in the Floridan aquifer as being between **17 to 26,000** years old.
5. The Floridan aquifer is the source of many springs in Florida.

YOUR WATER SUPPLY SOURCE

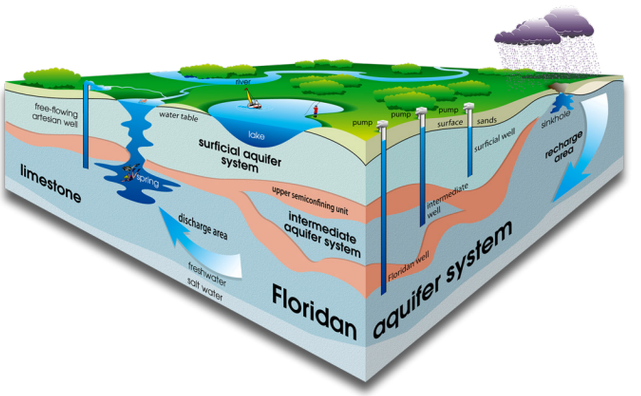
The major source of groundwater supply in Florida is the Floridan Aquifer System, which underlies the entire state.

The vast majority of the public water systems in Florida use groundwater as their source.

The Floridan aquifer system is a principal aquifer of the United States and is one of the most productive aquifers in the world. It covers approximately 100,000 square miles of the southeastern United States including all of Florida and parts of Georgia, Alabama, Mississippi, and South Carolina.

The Floridan aquifer system has been divided into an upper and lower aquifer separated by a unit of lower permeability. The upper Floridan aquifer is the principal source of water supply in most of north and central Florida. Groundwater flow is generally from highs near the center of the state towards the coast. **The Floridan aquifer is the source of the many beautiful springs in Florida.**

The City's source of supply is groundwater from the Floridan aquifer. Water is supplied to our three water treatment plants by eight groundwater wells. Water Treatment Plant #1 is located on Northern Way near Trotwood Park, Water Treatment Plant #2 is located on Sheoah Boulevard behind the Highlands tennis courts, and Water Treatment Plant #3 is located at the corner of Bahama Road and Edgemon Avenue. At Water Treatment Plant #1 Ion Exchange is used to reduce Total Organic Carbon, and at all three Water Treatment Plants Poly Orthophosphate is used as a corrosion inhibitor and to aid with Iron sequestration, the water is aerated through cascade aeration trays, and Chlorine is used for disinfection. We have approximately 244 miles of pipeline that transport potable water to approximately 14,006 connections throughout the City.



WATER CONSERVATION

As part of our commitment to preserving our natural resources while better serving the community, we have implemented a Water Conservation Program.

Our Water Conservation Program seeks to promote water conservation and reduce water consumption among City residents through education, incentive programs, free services such as irrigation audits, and more.

Did you know that Florida withdraws more groundwater than any other state east of the Mississippi? Our groundwater is a clean, affordable source of drinking water, but it is not an inexhaustible resource. If we do not conserve our groundwater, we may have to resort to alternative sources of drinking water such as surface water treatment and/or desalination, both of which are much more costly than our current source of water, the Floridan Aquifer. The economically and environmentally sensible solution is to conserve the groundwater resources we currently utilize.

Irrigation can account for more than 50% of residential water use. You can conserve water by following the watering restrictions listed below. The City of Winter Springs encourages you to request a free irrigation audit to learn how you can maintain a healthy, green lawn while irrigating efficiently and reducing your monthly water bill.

To schedule an irrigation audit, please contact us at 407-327-1800.

Time of Year	Homes with odd numbered or no address	Homes with even numbered addresses	Non-residential Properties
Daylight Saving Time	Wednesday / Saturday	Thursday / Sunday	Tuesday / Friday
Eastern Standard Time	Saturday	Sunday	Tuesday

- Daylight Saving Time: Second Sunday in March until the first Sunday in November
- Eastern Standard Time: First Sunday in November until the second Sunday in March
- Water only when needed and not between 10 a.m. and 4 p.m.
- Water for no more than one hour per zone.
- Restrictions apply to private wells and pumps, ground or surface water, and water from public and private utilities. Some exceptions apply.

WATER WORKS - THE PURSUIT OF EXCELLENCE

Water Works is a vigorous program for achieving the highest water quality. The program was designed to improve the City's water aesthetics and to upgrade the City's current wastewater, reuse, and stormwater infrastructure.

Water Works is a multi-year program that began in 2011 and focuses on improving City facilities and infrastructure related to water. These projects encompass all the City utilities, including the three water treatment plants, both wastewater treatment plants, the water distribution and sewer collection system, the reuse system and augmentation plant, and the stormwater system of ponds, culverts, and pipelines.

Phase 1, which began in 2011, included $3.5 million for the construction of the Lake Jessup Reclaimed Water Augmentation Plant and a $6.3 million drinking water system upgrade in 2015 at Water Treatment Plant No. 1. The Water Treatment Plant upgrade targeted the removal of undesired minerals and improvement of water quality. In addition to improvements to the drinking water system, Phase 1 also included four major stormwater projects. These projects identified and cleaned out debris and sediment from Hurricane Irma and focused on the stabilization of streambanks.

WATER WORKS

Phase 2 of this intensive plan includes improving the **taste and smell** of the drinking water. The City has engaged two of the World's leading engineering firms Carollo Engineers, Inc. and Kimley-Horn and Associates, Inc. to consult with the City on how improvements can be realized. This phase is currently underway. In late 2021, the City completed improvements at Water Treatment Plant No. 1 that increased system capacity by 30% and reduced chlorine demand by more than 60%. More exciting improvements are on the horizon.

The final phase of the program includes replacement of the City's two wastewater reclamation facilities. In 2022, the City will complete a comprehensive wastewater master plan, dynamic wastewater and reclaimed water hydraulic models, and conceptual design reports for each of the two wastewater reclamation facilities. Final engineering, design, and construction will take place over the next few years.

In 2019, the City contracted with Veolia Water North America - South, LLC (Veolia) to assume the operation, maintenance, and management services for the City's drinking water treatment, wastewater treatment, and reuse utilities.

Learn more about the Water Works program at **www.winterspringsfl.org/waterworks**.

TERMS AND ABBREVIATIONS

In the test results tables, you may find unfamiliar terms and abbreviations. To help you better understand these terms we've provided the following definitions.

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

Initial Distribution System Evaluation (IDSE): An important part of the Stage 2 Disinfection Byproducts Rule (DBPR). The IDSE is a one-time study conducted by water systems to identify distribution system locations with high concentrations of Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAAs). Water systems will use results from the IDSE, in conjunction with their Stage 1 DBPR compliance monitoring data, to select compliance monitoring locations for the Stage 2 DBPR.

Level Detected: Results for radiological contaminants, inorganic contaminants, secondary contaminants, synthetic organic contaminants including Pesticides and herbicides, and volatile organic contaminants are the average at any of the sampling points or the highest detected level at any sampling point, depending on the sampling frequency.

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

Maximum Contaminant Level (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 (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 (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 (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.

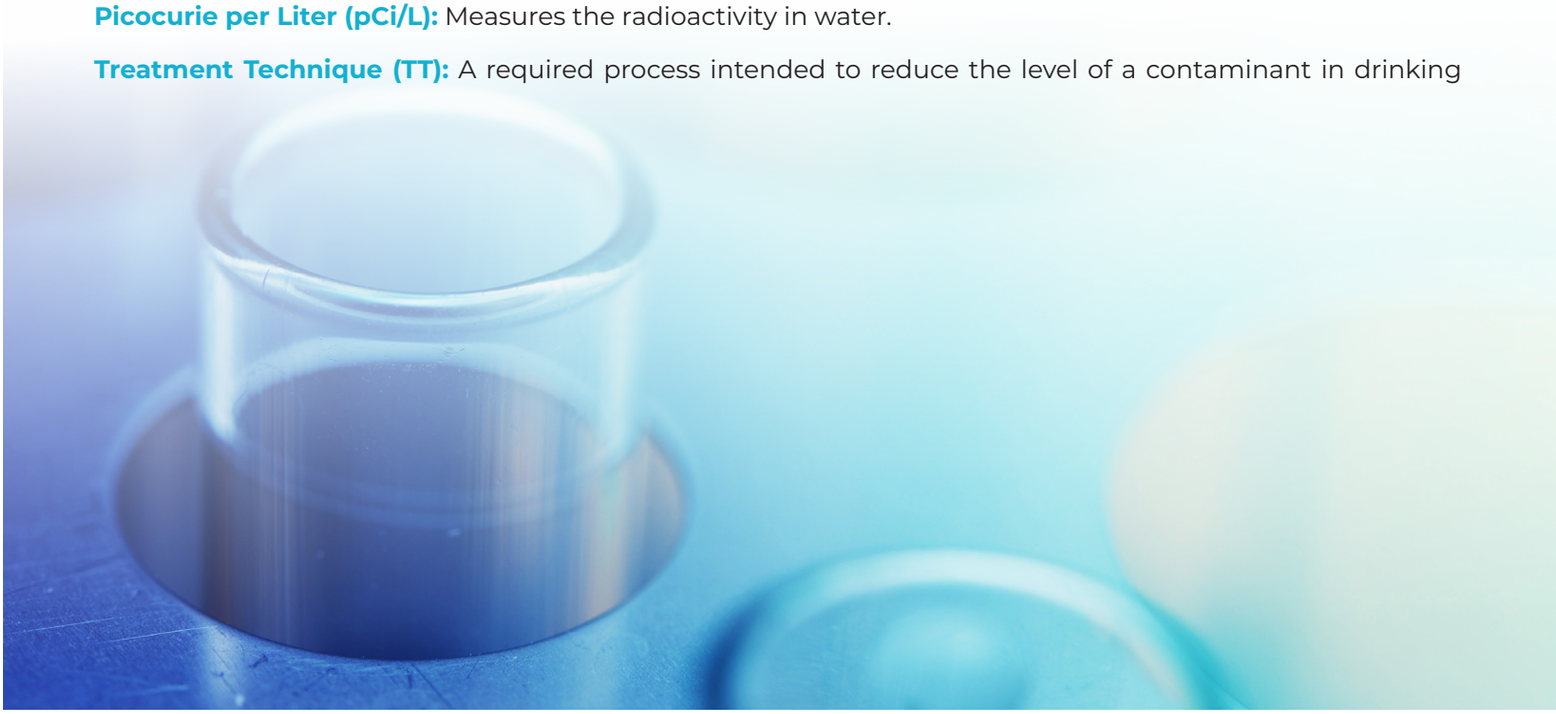
Not Detected (ND): Indicates that the substance was not found by laboratory analysis.

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): Measures the radioactivity in water.

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



2021 DRINKING WATER QUALITY TEST RESULTS

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

Inorganic Contaminants

Contaminant and Unit of Measurement	Date of Sample Analysis	MCL Violation (Y/N)	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Barium (ppm)	1/20	No	0.012	0.0088 - 0.012	2	2	Discharge from drilling waste; Erosion of natural deposits
Nitrate (as Nitrogen) (ppm)	1/21	No	0.025	0.025	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Fluoride (ppm)	1/20	No	0.19	0.14-0.19	4	4	Erosion of natural deposits; Water additive to promote strong teeth.
Sodium (ppm)	1/20	No	37	15-37	N/A	160	Salt water intrusion, leaching from soil

Secondary Contaminants

Contaminant and Unit of Measurement	Date of Sample Analysis	MCL Violation (Y/N)	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Color (color units)	1/20	Yes	17	9.9-17	15	15	Naturally Occuring Organics

Lead and Copper (Tap Water)

Contaminant and Unit of Measurement	Date of Sample Analysis	AL Violation (Y/N)	90th Percentile Result	Number of Sites Exceeding AL	MCLG	MCL	Likely Source of Contamination
Lead (ppb) (Tap Water)	6/20-7/20	No	1.5	0	15	15	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm) (Tap Water)	6/20-7/20	No	0.6	1	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservative

Volatile Organic Contaminants

Contaminant and Unit of Measurement	Date of Sampling	MCL Violation (Y/N)	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Cis-1,2-Dichloroethylene (ppb)	1/21	No	0.74	0.74	70	70	Discharge from industrial chemical factories.

Stage 1 Disinfectants and Disinfection By-Products

Contaminant and Unit of Measurement	Date of Sampling	MCL Violation (Y/N)	Level Detected	Range of Results	MRDLG	MRDL	Likely Source of Contamination
Chlorine (ppm)	1/21-12/21	No	1.52	1.29-1.85	4	4	Water additive used to control microbes

Stage 2 Disinfectants and Disinfection By-Products

Contaminant and Unit of Measurement	Date of Sampling	MCL Violation (Y/N)	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Total Trihalomethanes System (ppb)	1/21 - 12/21	No	69.2 (Highest LRAA)	39.8-83.8	N/A	80	By-product of drinking water disinfection
Haloacetic Acids System (HAA5) (ppb)	1/21 - 12/21	No	32.3 (Highest LRAA)	8.0-32.4	N/A	60	By-product of drinking water disinfection

2021 DRINKING WATER QUALITY TEST RESULTS

One sample during January 2021 at (410 Sandringham Court) had a TTHM result of 83.8 ppb, which exceeds the MCL of 80 ppb. However, the system did not incur an MCL violation because all the annual average results at all sites were at or below the MCL. THM [Total Trihalomethanes]. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer. The City's water treatment personnel addressed the TTHM MCL exceedance by increasing flushing to reduce water age, optimizing chlorine levels, and as a part of upgrades to our main water plant optimized chlorine injection strategy.

In **2020** our system exceeded the MCL for color. Secondary containments are considered to be aesthetic violations, and they are not considered to have major health effects. After receiving the results for our Color samples in January 2020 that were above the MCL additional samples were taken in February 2020. The February 2020 color samples were verified as below the MCL. ***MCL Exceedance for color occurred in 2020. No Color exceedances occurred in 2021. Secondary Contaminant Samples are taken every 3 years - next official color sample is due in January 2023.**

Monitoring Lead and Various Contaminants

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

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

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

To ensure that tap water is safe to drink, the Environmental Protection Agency (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 EPA'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 measures to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the EPA's Safe Drinking Water Hotline (1-800-426-4791).

City of Winter Springs
1126 East State Road 434
Winter Springs, FL 32708

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