2020 **WATER QUALITY** REPORT

We are pleased to present our 2020 Annual Water Quality Report.

At JEA, we are committed to providing a safe, reliable and sustainable supply of drinking water. We do this by monitoring our best-in-class treatment processes and performing more than 45,000 water tests every year to ensure we meet all water quality standards. This report provides information about JEA's water treatment systems, results from our water quality testing and details about our water supply.

We take pride in helping to protect and sustain the Floridan Aquifer—the precious water source Northeast Florida residents and businesses depend upon every day. JEA makes substantial investments to safely manage this water supply resource and to operate the system to meet or exceed regulatory requirements.

We know the water we deliver to your home or business is a major driver of the health and economic development of our region, and we take that very seriously. We appreciate the opportunity to provide these integral services and look forward to continuing our pursuit of providing you high quality potable water while preserving our natural resources.

Sincerely,

Jay Stowe,
JEA Managing Director & CEO

FDEP Source Water Assessments

In 2020, the Florida Department of Environmental Protection performed Source Water assessments to identify potential sources of contamination in the vicinity of JEA wells. Potential contamination sources include landfills, fuel storage tanks, dry cleaning facilities and wastewater disposal areas. Visit **fldep.dep.state.fl.us/swapp/** to view assessment results online.

System	# of Potential Sources	Susceptibility Level
Major Grid	116	Low-Moderate
Mayport	6	Low
Lofton Oaks Grid	9	Low
Ponte Vedra Grid	3	Low
Ponce de Leon Grid	5	Low

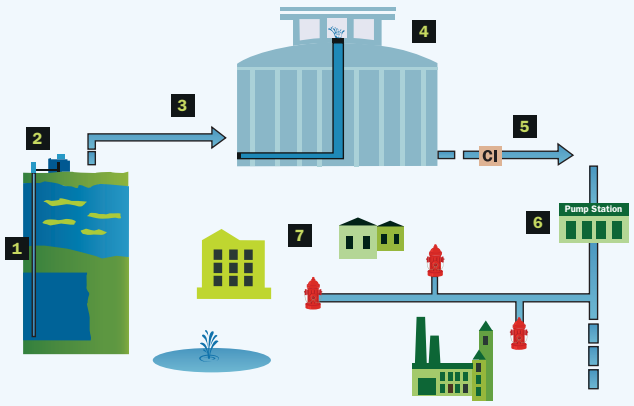
Water Conservation Tips

Inside Your Home

Run the washer and dishwasher only when full.

Use efficient shower heads and lowflow toilets.

Fix all leaks, especially toilet leaks.



1. The Florida Aquifer is the source of water in Northeast Florida. JEA utilizes this source to provide potable (drinking) water to our customers. The aquifer is a gigantic undeground river that courses through limestone formations many hundreds of feet underground. **2. Deep Well** Turbine Pumps are used to draw the water from the aquifer and deliver it through **3. Well Headers** to the **4. Water Treatment Plant**. At the plant, the water is aerated and stored until there is demand for the water. As needed, the water is chlorinated and pumped into the system by the plant's service pumps. **5. Transmission Mains** carry the potable water throughout the many miles of service area and ultimately deliver the water through **6. Distribution Mains**, service connections, and water meters to our **customers**.

Water System Process

The JEA drinking water system consists of wells, water treatment plants, the distribution grid of pipelines, and finally the customers' meters. We have over 130 wells that withdraw water from the Floridan aquifer, about 1,000 feet below land surface. The fresh, clean water is pumped from the well fields to one of 38 water treatment plants, where it then flows through an aerator to remove the sulfur (rotten egg) odor. The water leaves the reservoirs and is disinfected with chlorine per health regulations before it enters over 4,600 miles of water lines for distribution to our customers. Ozone is also utilized at two plants for sulfide removal and to improve taste and odors.

SCADA is a technology that allows us to remotely control and monitor conditions at our water plants 24 hours a day.

JEA's State-of-the-Art Water Monitoring System

JEA has a state-of-the-art operations network in place, called Supervisory Control and Data Acquisition (SCADA), which enables us to monitor our water supply system and bring you an uninterrupted supply of fresh, clean water to your home. SCADA is a technology that allows us to remotely control and monitor conditions at our water plants 24 hours a day. An experienced, state-licensed operator monitors and controls the treatment facilities through a centralized computer system that shows a representation of the water plant system instrumentation and equipment indicating pressure, flow, reservoir levels, chlorine level, and pH, as well as critical alarms. Water pressure throughout the grids is also controlled through the use of more than 400 pressure monitors connect to SCADA, with more points added each month to keep track of the system at the neighborhood level.

Water Conservation Tips

Outside Your Home

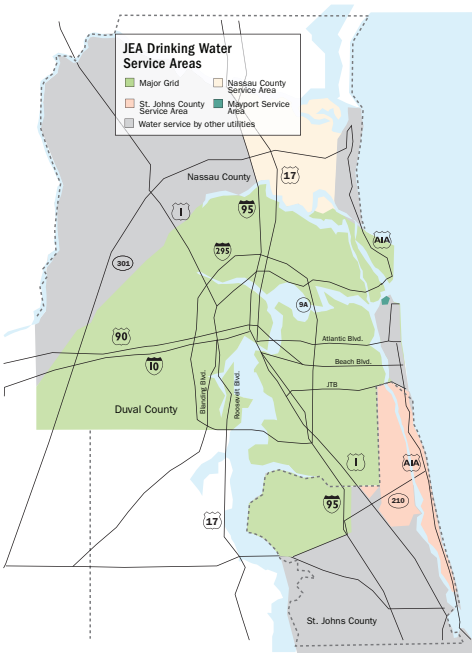
Plant Florida Native plants that do well with less water.

Know and follow mandated watering days.

Install rain sensors.

Jacksonville's Water Grid

JEA's Major Grid provides water to most of Duval County and the northwest portion of St. Johns County. JEA also supplies water to the Yulee area, Mayport, and from Ponte Vedra south to Vilano Beach along A1A. Also along the Intracoastal Waterway in Palm Valley there is one small area that gets its water through an interconnection with the St. Johns County Utility Department. Our grid arrangements provide reliable water service backup as needed, particularly during emergencies or periods of routine plant maintenance shutdowns. jea.com/drinkingwater



Water Hardness Levels

Water is described as "hard" when it contains high levels of dissolved minerals—primarily calcium and magnesium. While these naturally occurring compounds can leave spots on dishes and windows (easily removed with white vinegar), they do not present a health risk. In fact, both calcium and magnesium are commonly taken as health supplements.

The table indicating the total hardness found in all JEA-serviced zip codes can be found at jea.com/hardness.

Water Supply

Over 15 wells were rehabilitated to recover their specific capacity that had been decreased over the years. The additional capacity achieved at these wells increased the overall ability of JEA wellfields to meet customers' demands while lowering the pumping stress on the wells, preserving the water quality for many years to come.

JEA constructed 2 new wells and a water storage tank to provide redundant water supply in Nassau County and south of the river on the Major Grid.

JEA Purified Water Program

There are several possible solutions for ensuring a sustainable water supply in the future. While JEA has already implemented robust conservation initiatives and an expansive reclaimed water system for irrigation purposes, one promising approach is purified water.

Other potential solutions include surface water treatment and desalination, however each of these comes with higher costs and complexity. As other utilities have demonstrated positive environmental impacts through water purification, JEA has committed resources to evaluate purified water as a potential alternative source of water for Northeast Florida.

WATER QUALITY MONITORING RESULTS

System	Major Grid			Mayport			Lofton Oaks Grid			Ponce de Leon Grid			Ponte Vedra Grid			Palm Valley (PV)						
Contaminant & Unit of Measure	Sample Date	Level Detected	Range of Results	Sample Date	Level Detected	Range of Results	Sample Date	Level Detected	Range of Results	Sample Date	Level Detected	Range of Results	Sample Date	Level Detected	Range of Results	Sample Date	Level Detected	Range of Results	Violation Y/N	MCLG or MRDLG	MCL or MRDL	Likely Sources of Contamination
Radioactive Contaminants																						
Alpha emitters (pCi/L)	02/17	7.07	ND-7.07	ND	ND	ND	ND	ND	ND	03/18	2.9	ND-2.9	02/17	3.36	ND-3.36	ND	ND	ND	N	0	15	Erosion of natural deposits
Radium 226+228 or combined radium (pCi/L)	02/17	1.296	ND-1.296	03/18	0.9	N/A	02/17	0.748	ND-0.748	03/18	1.9	0.6-1.9	ND	ND	ND	03/20	0.5	ND-0.5	N	0	5	Erosion of natural deposits
Inorganic Contaminants																						
Antimony (ppb)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	03/20	0.12	ND-0.12	N	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic (ppb)	03/20	1.03	ND - 1.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	03/20	0.038	0.015-0.038	03/18	0.028	NA	03/20	0.033	0.027-0.033	03/18	0.019	0.015-0.019	03/20	0.025	0.024-0.025	03/20	0.022	0.020-0.022	N	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	03/20	0.84	0.37-0.84	03/18	0.69	N/A	03/20	0.92	0.59-0.92	03/18	0.99	0.93-0.99	03/20	0.79	0.789-0.793	03/20	0.78	0.75-0.78	N	4	4.0	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
Lead (point of entry) (ppb)	03/20	1.7	ND-1.7	ND	ND	ND	03/20	0.06	ND-0.06	03/18	0.3	ND-0.3	03/20	0.32	0.27-0.32	ND	ND	ND	N	0	15	Residue from man-made pollution such as auto emissions and paint; lead pipe, casing, and solder
Nickel (ppb)	03/20	17.8	ND-17.8	ND	ND	ND	03/20	1.08	ND-1.08	ND	ND	ND	03/20	0.73	N-0.73	03/20	7	ND-7	N	N/A	100	Pollution from mining and refining operations; natural occurrence in soil
Nitrate (as Nitrogen) (ppm)	03/20	0.18	ND-0.18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	03/20	0.13	0.12-0.13	N	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	03/20	5.15	ND-5.15	ND	ND	ND	03/20	1.1	ND-1.1	ND	ND	ND	03/20	0.66	ND-0.66	ND	ND	ND	N	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	03/20	106.44	7.67-106.44	03/18	13.752	N/A	03/20	34.05	20.65-34.05	03/18	56.61	36.64-56.61	03/20	22.79	21.99-22.79	03/20	25.0	23.0-25.0	N	N/A	160	Salt water intrusion, leaching from soil
Thallium (ppb)	03/20	0.52	ND-0.52	ND	ND	ND	03/20	0.66	ND-0.66	ND	ND	ND	ND	ND	ND	ND	ND	ND	N	0.5	2	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
Synthetic Organic Contaminants																						
Di(2-ethylhexyl)phthalate (ppb)	03/20-12/20	4.0	ND-4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N	0	6	Discharge from rubber and chemical factories
Stage 1 Disinfectants and Disinfection Byproducts**																						
Bromate (ppb)	01/20-12/20	6.66	ND-9.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N	0	10.0	By-product of drinking water disinfection
Chlorine (ppm)	01/20-12/20	1.04	0.20-2.20	1/20-12/20	0.93	0.29-1.58	01/20-12/20	0.96	0.20-2.00	1/20-12/20	1.33	0.37-2.20	01/20-12/20	0.94	0.23-1.35	01/20-12/20	1.4	0.83-2.20	N	4	4.0	Water additive used to control microbes
Stage 2 Disinfectants and Disinfection Byproducts**																						
Haloacetic Acids (five) (HAA5) (ppb)	01/20-12/20	22.43	10.92-35.87	07/20-10/20	N/A	17.52-28.32	01/20-12/20	21.32	14.79-30.48	01/20-12/20	13.11	6.05-18.54	01/20 12/20	12.92	8.93-17.69	10/20	23.44	22.55-23.44	N	N/A	60	By-product of drinking water disinfection
TTHM [Total Trihalomethanes] (ppb)	01/20-12/20	77.86	28.48-141.46*	07/20-10/20	N/A	45.21-113.00*	01/20-12/20	65.65	45.70-77.28	01/20-12/20	79.96	27.60-105.32*	01/20-12/20	73.31	37.48-72.16	10/20	61.98	59.74-61.98	N	N/A	80	By-product of drinking water disinfection

* Although the MCL value was exceeded, the annual average results were below the MCL.
**Level Detected for Disinfectants and Disinfection Byproducts is the highest locational running annual average of monthly/quaterly averages if sampled monthly/quarterly, or the highest result if sampled annually. N/A indicates 4 quarters of samples have not yet been taken, so the Level Detected cannot be calculated.

Lead and Copper (Tap Water)																						
System	Major Grid			Mayport			Lofton Oaks Grid			Ponce de Leon Grid			Ponte Vedra Grid			Palm Valley (PV)						Likely Sources of Contamination
Contaminant & Unit of Measure	Sample Date	Level Detected	Range of Results	Sample Date	Level Detected	Range of Results	Sample Date	Level Detected	Range of Results	Sample Date	Level Detected	Range of Results	Sample Date	Level Detected	Range of Results	Sample Date	Level Detected	Range of Results	Violation Y/N	MCLG or MRDLG	MCL or MRDL	
Copper (ppm)	06/20-07/20	0.09	0 of 99	06/20-07/20	1.01	2 of 13	06/20-08/20	0.03	0 of 34	06/20-08/20	0.10	0 of 11	06/20-07/20	0.21	0 of 27	06/20-07/20	0.15	0 of 14	N	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	06/20-07/20	1.31	1 of 99	06/20-07/20	0.61	0 of 13	06/20-08/20	0.62	1 of 34	06/20-08/20	1.26	0 of 11	06/20-07/20	1.53	0 of 27	06/20-07/20	0.60	0 of 14	N	0	15	Corrosion of household plumbing systems; erosion of natural deposits
Secondary Contaminants																						
System	Major Grid			Mayport			Lofton Oaks Grid			Ponce de Leon Grid			Ponte Vedra Grid			Palm Valley (PV)						
Contaminant & Unit of Measure	Sample Date	90th Percentile	# Exceeding AL	Sample Date	90th Percentile	# Exceeding AL	Sample Date	90th Percentile	# Exceeding AL	Sample Date	90th Percentile	# Exceeding AL	Sample Date	90th Percentile	# Exceeding AL	Sample Date	90th Percentile	# Exceeding AL	Violation Y/N	MCLG or MRDLG	AL (Action Level)	Likely Sources of Contamination
Chloride (ppm)	03/20-06/20	301	9.6-301	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	Y+	N/A	250	Natural occurrence from soil leaching
Odor (threshold odor number)	03/20-06/20	4	ND-4	NR	NR	NR	NR	NR	NR	03/18-04/18	64	1-64	NR	NR	NR	NR	NR	NR	Y+	N/A	3	Naturally occurring organics
Sulfate (ppm)	03/20-06/20	253	22.6-253	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	Y+	N/A	250	Natural occurrence from soil leaching
Total Dissolved Solids (ppm)	03/20-06/20	903	156-903	NR	NR	NR	NR	NR	NR	03/18-04/18	662	528-662	NR	NR	NR	NR	NR	NR	Y+	N/A	500	Natural occurrence from soil leaching

*High levels of these contaminants do not show adverse health effects. Note: St. Johns Forest WTP (Major Grid) has a FDEP Variance for Sulfate levels not to exceed 500 mg/L.

Important Information

The Water Quality Report is provided to all customers of community water systems on an annual basis as required by the Environmental Protection Agency (EPA) under the 1996 Safe Drinking Water Act Amendments.

JEA 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, 2019 Data obtained before January 1, 2019, and presented in this report are from the most recent testing done in accordance with the laws, rules, and regulations. Out of more than 100 contaminants for which JEA routinely tests, only those that have been detected appear in the tables.

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.

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 800-426-4791**.

Terms & Abbreviations

In the table above, 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.
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.
Non-Detect (ND) – means not detected and indicates that the substance was not found by laboratory analysis.
Not Required (NR) – Secondary contaminants with sample results below the MCL are not required to be reported.
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.
Variances and Exemptions – State or EPA permission not to meet an MCL under certain conditions.

Note: MCLs are set at stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink two liters of water every day at the MCL for a lifetime to have a one-in-a-million chance of having the described effect.

Additional Information

Lead: 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. JEA 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 **epa.gov/safewater/lead**.

TTHM [Total Trihalomethanes]: The following samples during 2020 exceeded the TTHM MCL of 80 ppb. However, the system did not incur an MCL violation because all annual average results at all sites were below the MCL. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kdineys, or central nervous systems, and may have an increased risk of getting cancer.

Major Grid:
6506 Greenfern Lane: 84.40 ppb (Jul), 141.46 ppb (Oct)
172 Wandering Woods Way: 80.06 ppb (Oct)
9170 Milton Drive: 91.52 ppb (Oct)

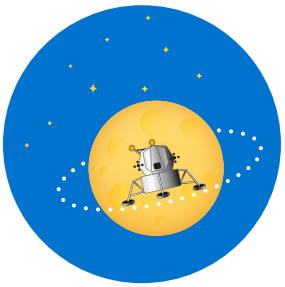
Ponce de Leon Grid:
2371 S. Ponte Vedra Blvd.: 102.68 & 105.32 ppb (Jul)

Mayport:
4200 Ocean Street: 113.00 ppb (Jul)

Immuno-compromised Persons

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 from their health care providers about drinking water. 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.**

JEA's 8,000+ miles
of water/wastewater pipes
is greater than the
6,783 miles
it takes to drive a lunar rover
around the circumference
of the moon.

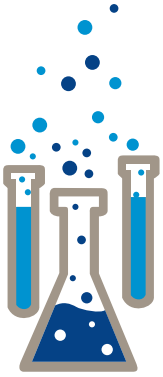


22,618 Feet
New water pipe installed
in 2020 to replace aging
infrastructure

A cleaner St. Johns River

JEA's 11
wastewater treatment plants have substantially reduced the nitrogen levels in treated wastewater discharged to the St. Johns River.

$2 Billion
JEA has invested in improvements to our local water and wastewater systems



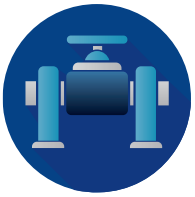
We collect & analyze
45,000
water samples throughout our service area during the year to ensure we're providing our community with safe, clean drinking water.

With over
4,600 miles
of water lines for distribution to our customers, JEA's water system is one of the largest and most complex in the country. That's why we continually inspect, maintain and upgrade our existing infrastructure to meet an ever-increasing need for reliability.

JEA produced on averge
19 million gallons
per day of reclaimed water.

363,597
Water Customers

17,031
Reclaimed Customers



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Water Treatment Plants

An estimated
40–50%
of the water JEA provides our customers is used outdoors, primarily for irrigation

For more information on JEA's water quality tests or to request a report, please contact us.

Phone: (904) 665-6000
Email: WaterQuality@jea.com
Online: jea.com/WQR2020

By mail: JEA Water Quality
1002 N. Main St.
Jacksonville, FL 32206

In person: Printed copies are available at JEA's Downtown Customer Service Center and at every branch of the Jacksonville Public Library. JEA's board meetings are held on the third Tuesday of every month at JEA's downtown offices, located at 21 W. Church St., Jacksonville. The public is invited to attend.