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

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**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/](fldep.dep.state.fl.us/swapp/) to view assessment results online.

<table>
<thead>
<tr>
<th>System</th>
<th># of Potential Sources</th>
<th>Susceptibility Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Grid</td>
<td>116</td>
<td>Low-Moderate</td>
</tr>
<tr>
<td>Mayport</td>
<td>6</td>
<td>Low</td>
</tr>
<tr>
<td>Lofton Oaks Grid</td>
<td>9</td>
<td>Low</td>
</tr>
<tr>
<td>Ponte Vedra Grid</td>
<td>3</td>
<td>Low</td>
</tr>
<tr>
<td>Ponce de Leon Grid</td>
<td>5</td>
<td>Low</td>
</tr>
</tbody>
</table>

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**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.

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1. The Floridan 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 underground 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.
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.

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

**Radioactive Contaminants**

<table>
<thead>
<tr>
<th>Date</th>
<th>Detected</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>02/22</td>
<td>0.23</td>
<td>0.23-0.23</td>
</tr>
</tbody>
</table>

**Inorganic Contaminants**

<table>
<thead>
<tr>
<th>Contaminant &amp; Unit of Measure</th>
<th>Date</th>
<th>Detected</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium (ppm)</td>
<td>02/10</td>
<td>0.05</td>
<td>0.05-0.05</td>
</tr>
<tr>
<td>Copper (ppb)</td>
<td>02/17</td>
<td>0.296</td>
<td>ND–0.296</td>
</tr>
<tr>
<td>Manganese (ppb)</td>
<td>02/17</td>
<td>0.18</td>
<td>0.18-0.18</td>
</tr>
</tbody>
</table>

**Organic Contaminants**

<table>
<thead>
<tr>
<th>Contaminant &amp; Unit of Measure</th>
<th>Date</th>
<th>Detected</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Dissolved Solids (ppg)</td>
<td>03/20</td>
<td>0.025</td>
<td>0.025-0.025</td>
</tr>
</tbody>
</table>

**Synthetic Organic Contaminants**

<table>
<thead>
<tr>
<th>Contaminant &amp; Unit of Measure</th>
<th>Date</th>
<th>Detected</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Di(2-ethylhexyl)phthalate (ppb)</td>
<td>02/20</td>
<td>0.23</td>
<td>0.23-0.23</td>
</tr>
</tbody>
</table>

**Stage 1 Disinfectants and Disinfection Byproducts**

<table>
<thead>
<tr>
<th>Contaminant &amp; Unit of Measure</th>
<th>Date</th>
<th>Detected</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorine (ppm)</td>
<td>03/20</td>
<td>4.0</td>
<td>ND–4.0</td>
</tr>
</tbody>
</table>

**Stage 2 Disinfectants and Disinfection Byproducts**

<table>
<thead>
<tr>
<th>Contaminant &amp; Unit of Measure</th>
<th>Date</th>
<th>Detected</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluoride (mg/L)</td>
<td>03/20</td>
<td>0.7</td>
<td>0.7-0.7</td>
</tr>
</tbody>
</table>

**Pesticides and Other Organic Contaminants**

<table>
<thead>
<tr>
<th>Contaminant &amp; Unit of Measure</th>
<th>Date</th>
<th>Detected</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pesticides and herbicides</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Addition of Water Quality to Drinking Water**

- **Radioactive Contaminants**: Levels of radioactive substances in drinking water are usually monitored to determine the level of decay of the substance. The detection of such substances can help in the control of radioactive materials in water systems.
- **Inorganic Contaminants**: These include contaminants such as metals and minerals, which can come from natural sources such as rock and soil, or from human activities such as industrial processes or agricultural practices.
- **Organic Contaminants**: These are substances that can be harmful to human health. They can come from natural sources such as plants and animals, or from human activities such as industrial processes or agricultural practices.
- **Synthetic Organic Contaminants**: These are substances that are added to water to improve its quality or for specific purposes.
- **Stage 1 Disinfectants and Disinfection Byproducts**: These include disinfectants and disinfection byproducts that are added to water to kill pathogens or to prevent the growth of microorganisms.
- **Stage 2 Disinfectants and Disinfection Byproducts**: These include disinfectants and disinfection byproducts that are added to water to kill pathogens or to prevent the growth of microorganisms.
- **Pesticides and Other Organic Contaminants**: These are substances that are added to water to control pests or to improve its quality.

**Additional Considerations**

- **Possible Health Effects**: The possible health effects of water contaminants depend on the specific contaminant and the level at which it is present. For example, high 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. It is not responsible for providing high-quality drinking water, but cannot control the variety of materials used in water 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 your tap water, you may want to have your water tested. Information on lead in drinking water, testing methods, and ways you can help to minimize exposure is available on the Safe Drinking Water Hotline at 800-426-4791.

**TTHM (Total Trihalomethanes)**

The following samples during 2020 exceeded the TTHM MCL of 80 ppb. However, the system did not re-circulate because annual average results at all sites were below the MCL. Some people who drink water containing TTHMs in excess of the MCL may experience problems with their teeth, mouth, or canals in some systems, and may have an increased risk of getting cancer.

**Algal Growth**

- **4800 Gannet Lane**: 40-42 ppb (MCL: 41 ppb)
- **112 Running Water Way**: 40.00 ppb (MCL)
- **1070 Willet Lane**: 91.50 ppb (MCL)

**Magnesium**:

- **400 Ocean Street**: 111.00 ppb (MCL)

- **Lead**: 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. It is not 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 your tap water, you may want to have your water tested. Information on lead in drinking water, testing methods, and ways you can help to minimize exposure is available on the Safe Drinking Water Hotline at 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.

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

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.

20,618 Feet
New water pipe installed in 2020 to replace aging infrastructure.

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 average 19 million gallons per day of reclaimed water.

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

363,597
Water Customers

17,031
Reclaimed Customers

38
Water Treatment Plants

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.