



Building a Community  
a Sustainable

# H2.0

## Purification Program



# H2.0 Purification Program

The H2.0 Purification Program began in 2016 with pilot testing two industry-leading purification technologies. The research was a cooperative effort with the St. Johns River Water Management District, focused on identifying sustainable water resources to support the needs of the State. In 2019, following an extensive evaluation of both technologies, performance and cost, JEA selected the membrane-based purification process for future phases of the program. The multi-barrier membrane-based process consists of membrane filtration followed by reverse osmosis and ultraviolet advanced oxidation. This award-winning program supports the objectives of the Florida Department of Environmental Protection and the St. Johns River Water Management District.



**“To explore water purification, JEA has taken a thoughtful phased approach. The phased program is called H2.0, as a nod to providing the 2.0 version of water (H2O) supply.”**



## Background

JEA is one of the largest publicly owned utilities in the U.S. providing water and electric services for more than one million residents in portions of four Northeast Florida counties.

Currently, the Floridan Aquifer is our sole source of drinking water supply. The aquifer is a finite resource and JEA is approaching the permitted allocation limit. Additional water beyond what the aquifer can provide must be developed to meet water demands within the next 10 years. Purified water is a cost effective solution.

JEA has long been a strong environmental steward, and the H2.0 Purification Program is evidence of this commitment. It provides numerous environmental benefits including aquifer sustainability, a resilient and diverse water supply, enhanced conservation, and maximizes the use of available water resources.



Reverse Osmosis

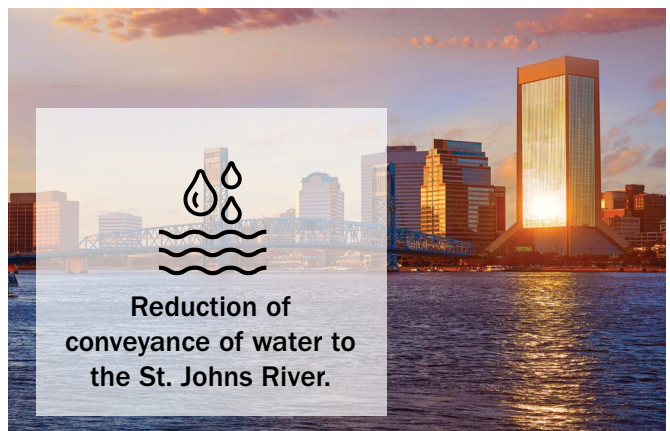
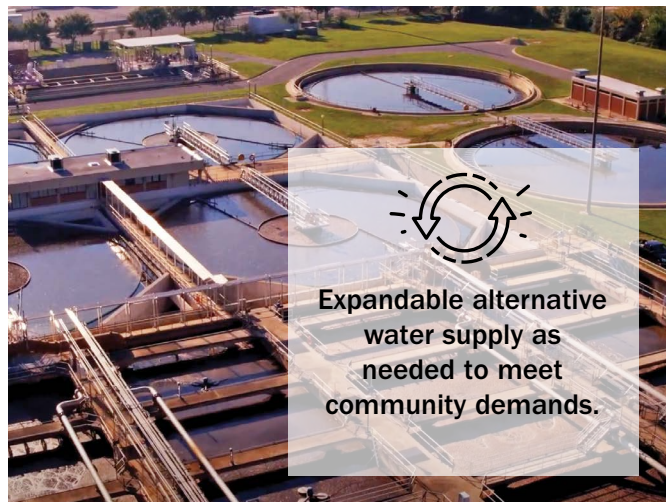
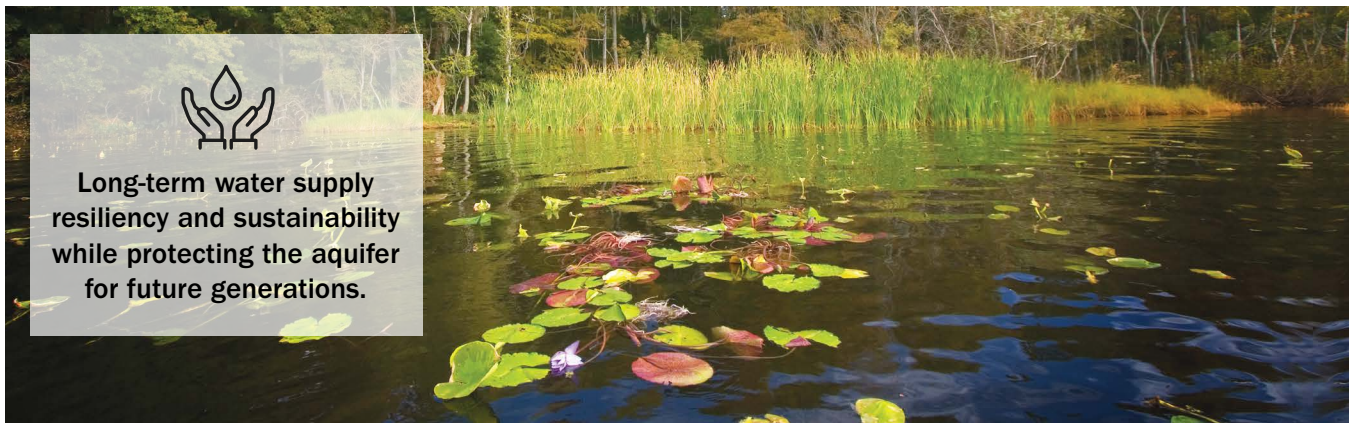


Reverse Osmosis

# H2.0 Purification Program Benefits

The H2.0 Purification Program results in numerous benefits to the community and the environment including:

At JEA, public health and safety is our highest priority. With H2.0, we continue our role as a leader in ensuring a safe, reliable, locally controlled water supply—essential for healthy environments, robust economies and a high quality of life.





## TOP 3 Things to Know about the H2.0 Purification Program



1. Provides a safe, reliable, and sustainable water supply



2. Provides numerous environmental benefits including aquifer sustainability, continued reduction of water conveyed to the St. Johns River, and maximizes the use of available water resources



3. Provides a locally controlled water supply to meet customer needs for decades to come

### Learn More

For more information about JEA's H2.0 Purification Program, visit [jea.com/purifiedwater](http://jea.com/purifiedwater), or email [purifiedwater@jea.com](mailto:purifiedwater@jea.com).

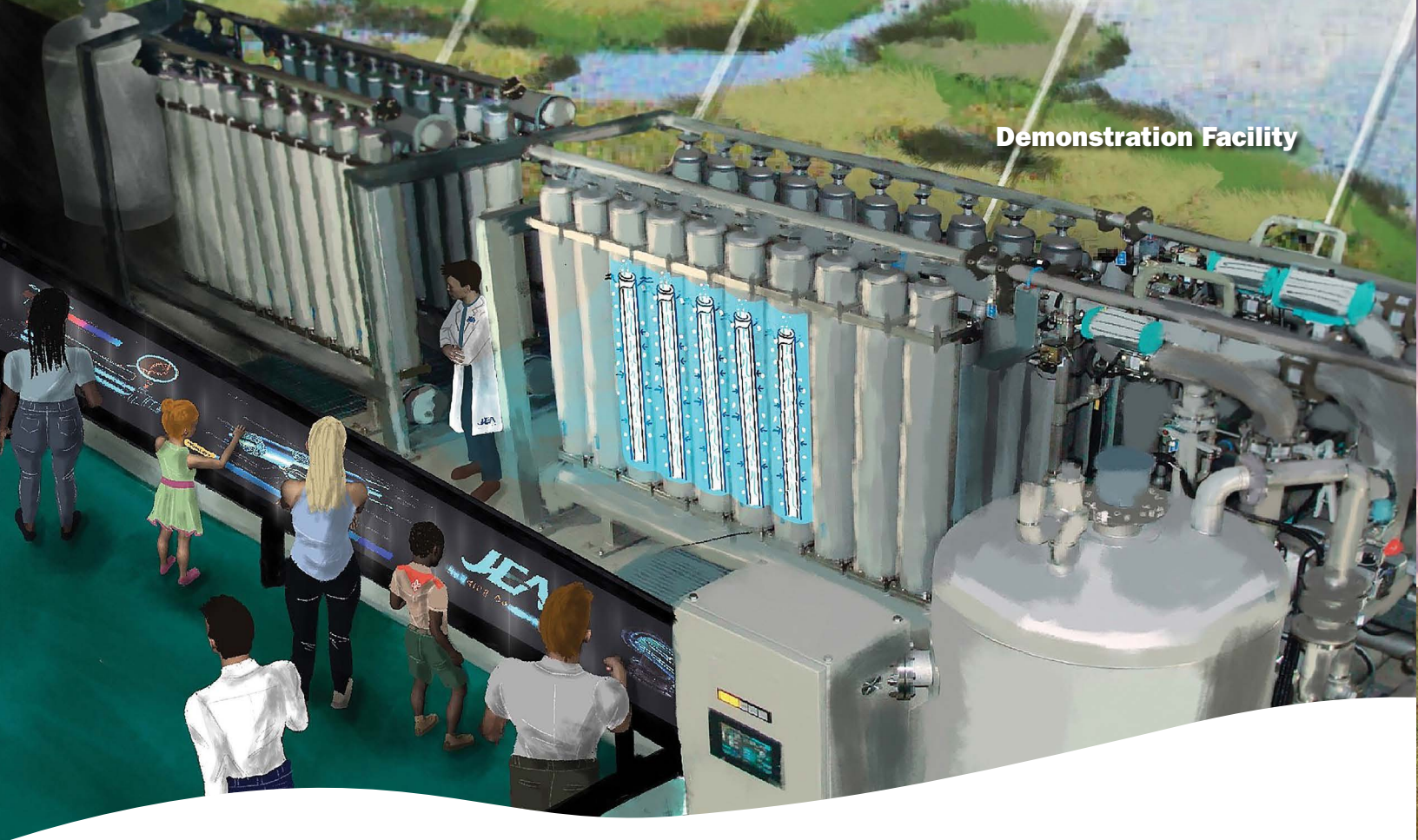


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**Demonstration Facility**



## JEA designed the H2.0 Purification Program in three planned phases:



**Phase I  
Research & Development  
Pilot Testing  
(2016-19) Completed**



**Phase II  
Demonstration Facility  
(2021-24) Design & Construction**



**Phase III  
Full-Scale Implementation  
(as needed to meet demands)**

Phase I involved direct comparison testing of industry leading purification processes. As a result of that pilot testing, JEA selected the multi-barrier membrane-based purification process for the program.

Now, in Phase II, JEA is constructing a 1 million-gallon-per-day demonstration facility to showcase the purification process and the ultra-high purity water produced, while engaging the public and stakeholders in this process. The demonstration facility includes a visitor education center to host the community for tours and tasting of the water. The initial startup includes conveying reclaimed water into the purification process where the purified water is returned to the reclaimed water system (i.e. it is not used in the potable system).

When the purification water meets all Federal and State regulations, it will be used to replenish the aquifer. By doing so, JEA will receive a proportionate increase in the amount of groundwater that supplies existing water treatment facilities.

# Common

# Q

# &

# A

## **Q. Why is JEA developing innovative solutions to providing a sustainable water source?**

A. JEA currently provides more than one million people with 120 million gallons of safe, high-quality drinking water each day. While we have enough water right now, a growing population and economy will increase demand in the future. We must develop alternative water supplies in addition to what the aquifer can provide.

To meet the future needs of our community, we need to ensure a sustainable supply of drinking water. While JEA customers do an excellent job of conserving water, conservation alone will not assure a sustainable supply in the future.

## **Q. How safe is the water?**

A. This program utilizes excess available reclaimed water and further purifies it to drinking water quality using membrane filtration, reverse osmosis, and ultraviolet advanced oxidation, resulting in purified water that exceeds

all regulatory requirements set by the U.S. Environmental Protection Agency and Florida Department of Environmental Protection. This state-of-the-art multi-barrier approach is both proven and reliable, making it the most widely used water purification technology throughout the United States and the World.

## **Q. How will the purification program help with Northeast Florida's economic development?**

A. The facilities will employ engineers, operators, scientists, managers, environmentalists, tour guides and other support staff. Engineering consultants and contractors will be needed to design and build the facilities. The purified water itself is a cost effective water supply that will slowly be phased into the existing supply as needed. The benefit of the program is ensuring a sustainable water supply, essential for healthy environments, robust economies and a high quality of life.

## **Learn More**

For more information about JEA's H2.0 Purification Program, visit us online at [jea.com/purifiedwater](http://jea.com/purifiedwater), or email [purifiedwater@jea.com](mailto:purifiedwater@jea.com).

For more information about how JEA's H2.0 supports the Florida Department of Environmental Protection One Water Florida campaign visit: [floridadep.gov/southwest/sw-permitting/campaign/one-water-florida](http://floridadep.gov/southwest/sw-permitting/campaign/one-water-florida)