



Coquina Coast

seawater desalination project

Seawater desalination is being examined as an option to diversify local water supplies and reduce reliance on groundwater. The goal is a sustainable water supply project that protects the environment while ensuring adequate drinking water to support the region's economy and quality of life.



Planning for the Future

Palm Coast, Leesburg, DeLand and St. Johns County are currently working together, with support from the St. Johns River Water Management District, on the Coquina Coast Seawater Desalination Project because future groundwater withdrawals in the region will be limited to protect the environment and ensure a sustainable resource.

Recent demand projections show that, even with conservation, the project participants will need 10-15 million gallons per day (mgd) of new drinking water by approximately 2020. Alternatives to groundwater, like seawater desalination, must be developed to meet the public's future drinking water needs.

Using Water Wisely

A sustainable, reliable water supply will require conservation, reclaimed water, plus new alternative water supplies in addition to efficient use of existing supplies. The project participants aim to conserve and reuse their way to the smallest alternative water supply project possible. The more water we save the less alternative supplies we'll need in the future.



A Drought-Proof Option

Seawater desalination is a drought-proof alternative water supply option that can be developed in an environmentally sound manner. Desalination is an advanced treatment process used to remove salt and other minerals from seawater to produce a high-quality drinking water.

Desalination use worldwide has increased dramatically over the past 40 years. Brackish and seawater desalination plants operating worldwide in municipal, military and industrial applications produce a combined daily capacity of more than 18 billion gallons (source: *2009-2010 International Desalination Association Yearbook*).



Many desalination plants use membranes to remove salt from seawater.

Project Status

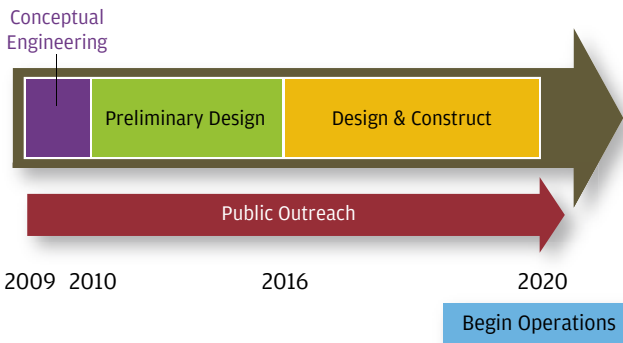
Project work began in 2009.

Recommendations to date include evaluating a land-based desalination facility, and further evaluating 14 areas in Flagler County that may contain sites suitable for the facility. Preliminary analyses also show that saline groundwater withdrawn by

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beach wells may be a viable, cost-effective source of intake water for the plant.

The next phase of the project has been rescheduled to provide water managers a clearer picture of the economy and water demands. Environmental assessments, pilot testing of treatment processes, facility and pipeline siting, and preliminary design may resume in 2014 or later.



Keeping Water Affordable

Preliminary engineer's estimates put the capital cost of a 10-15 mgd plant between \$190 million and \$260 million. However, the exact cost of the facility and associated pipeline will not be known until they are designed.

Alternative water supplies cost more than traditional groundwater, so the project participants are investigating ways to reduce the cost to their customers. For example, water withdrawn from beach wells would reduce construction and operating costs. Blending desalinated water with other water supplies would also lessen rate impacts. Phasing construction to closely align with demand reduces impacts by delaying additional capital and operating expenses until the new supply is needed.

Project partners will also continue to pursue outside funding from state and federal programs to offset costs. The St. Johns River Water Management District has funded up to 30 percent of the eligible project costs to date.



Environmental Protection

Protecting Florida's natural systems and coastal ecosystem are paramount to the project participants. That's why a number of scientific studies will be conducted in Phase 2B to assess whether seawater desalination is a suitable choice for the project participants. Those evaluations include intake and discharge considerations, energy efficiency, fishing, shrimping, endangered species and more. Desalination will be pursued only if studies show the environment will be protected.

Stay Informed

The project participants are committed to an open and inclusive public process as they investigate a seawater desalination facility. Residents can stay informed and involved by:

- Attending business meetings and/or teleconferences.
- Visiting the project web site (coquinacoastdesal.org).
- Following the project on Twitter ([Twitter.com/CoquinaDesal](https://twitter.com/CoquinaDesal)).
- Attending community meetings.

For More Information

For more information, residents can also contact Richard Adams, City of Palm Coast, at (386) 986-2351, or Jerry Salsano, DSV Consulting, at (407) 884-8800.