

Partnerships Turn Coastal Risk into Circular Water Economy Value

Fort Pierce Utilities Authority Mainland Water Reclamation Facility



Three Converging Challenges

- **Coastal exposure**

The original South Hutchinson Island facility faced risks from sea level rise, storm surge, and extreme weather.

- **Increased water demand**

Industrial cooling at TCEC relied on the Floridan Aquifer, creating pressure on the strategic freshwater source.

- **Community affordability**

For decades, relocation was delayed because the investment exceeded what rates could support. Building a new plant wasn't possible for a long time.



Circular Water Economy value was demonstrated when the team linked resilience, reuse, cost, and trust.

Guiding Principles: Reduce, Reuse and Restore

1

Relocate inland

Move wastewater treatment away from the coastal risk zone.

2

Treat with innovation

Using AquaNerda aerobic granular sludge (AGS) with controls and monitoring.

3

Reuse locally

Supply reclaimed water to the adjacent Treasure Coast Energy Center.

4

Restore value

Reduce aquifer withdrawals and support Indian River Lagoon protection.

Reduce + Recover

The project reduces freshwater withdrawals and recovers treated effluent as a strategic resource.

Partnerships Provide the Heavy Lifting

- **Fund and authorize**

DEP, EPA, Florida Legislature, elected officials

Capital support, appropriations, regulatory alignment

- **Design and deliver**

Haskell, Globaltech, AquaNerda team

Engineering, construction, technology, permitting

- **Reuse and operate**

FMPA, Treasure Coast Energy Center

Industrial cooling reuse and operational integration

- **Build public trust**

City, county, lagoon partners, schools, civic groups

Awareness, letters of support, tours, local legitimacy



Result: Legitimate Circular Water Value

\$75M+

State and federal grant funding secured to reduce ratepayer burden.

1.5 MGD

Groundwater withdrawals avoided for industrial cooling at TCEC.

50%

Estimated reduction in energy consumption from advanced treatment.

15%

Estimated construction cost reduction versus the conventional process.

- **Built for growth**

8 MGD average treatment capacity, 24 MGD peak capacity, future expansion potential to 30 MGD

- **Visible environmental ecosystem improvement**

At min. Of 2 acres of seagrass restoration connect infrastructure investment to Indian River Lagoon stewardship

Why this matters: The numbers make the partnership cheaper to fund, easier to trust, and clearer to explain.

Three leadership Considerations

Build Partnerships First

- 1 Align incentives around shared circular value
- 2 Make trust operational through clear roles, funding, and governance
- 3 Communicate the why early, often, and in plain language



Where can YOUR utility turn a local constraint into a shared circular asset?