



## Fast Facts

It costs from \$650 to more than \$1,000 per acre-foot to desalinate seawater as compared to about \$200 per acre-foot for water from normal supply sources, according to the U.S. Geological Survey.

The Tampa Bay, Florida desalination plant experienced \$75 million in cost overruns and difficult technical problems which required the plant to close for repair from late 2005 to early 2007.

The Tampa desalination plant has a capacity of 25 MGD. The Metro North Georgia Water Planning District estimates metro Atlanta can save 136 MGD by 2030 through implementing water efficiency and conservation measures.

In 2006, a Jonesboro-based business announced plans to build a \$1 million demonstration desalination facility in Brunswick but the project was shelved in 2008 due to financial problems.

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# The Downside of Desalination

## What's at Stake?

As Georgia struggles to meet its water management responsibilities, some officials have proposed increasing water supply using desalination. Desalination is the process of removing salt and other minerals from seawater or brackish water to create water fresh enough for human consumption. While desalination is heavily utilized in Middle Eastern countries, it is generally considered unnecessary in states with numerous more practical alternatives for meeting future water needs, like Georgia.

## Challenges

There are environmental impacts associated with desalination. The process is extremely energy intensive, which could actually lead to more water consumed by cooling towers at power plants. Desalination creates a salty discharge, or brine consisting of the salt and minerals pulled out of the salty water, which must be discharged. Discharging the brine directly into Georgia's coastal estuaries and marshes could lead to consequences including marsh dieback and diseased seafood populations.

Desalination is extremely expensive. It costs from \$650 to more than \$1,000 per acre-foot to desalinate seawater as compared to about \$200 per acre-foot for water from normal supply sources, according to the U.S. Geological Survey. And because Georgia's coastal waters receive a continuous deposit of sediment from the many rivers that empty into the ocean, the filtration process is likely to be much more complex.

Of all the methods available for increasing water supply through business ventures, desalination is one of the least competitive and thus the technology whose proponents are most likely to request public subsidy.

Elected officials must implement good water management. The research, planning, and administrative activities required to resolve water protection, distribution, conservation, and recovery are not simple or cheap.

Studies find that the highest benefit/cost ratio in water management is achieved by eliminating wasteful practices, recovering and reusing wastewater, and repairing leaking distribution systems. Practical water conservation methods can reduce demand at a fraction of the cost of increasing supply with virtually none of the environmental damage. State funds and tax credits should not be used to subsidize unwise pursuit of desalination, which would have counterproductive effects on far better water management options.

## Next Steps

- Conduct an independent analysis of current water demand and supply circumstances in Georgia.
- Explore data that compare water use and efficiency in Georgia by user group with performance in other states.
- Document facts describing the cost of water supplied via desalination compared with other methods (groundwater, surface water, reservoirs, etc.)
- Project Georgia water needs and costs for meeting them under two scenarios: (1) current practices by each user group, and (2) demand reduction to national standards by eliminating waste and improving efficiency for each user group.