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INVESTING IN GEORGIA'S
ENERGY, LAND & WATER RESOURCES



Coastal Well Project to Test Deep Aquifer Production

Presentation to House Natural Resources and Environment
Committee

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Why Explore Water Supply Alternatives?

Governor's Water Supply Program launched by Gov. Deal in January 2011

Includes funding for projects of state or regional significance

Coastal Georgia Regional Water Plan recognized reliance on Floridan aquifer and saltwater intrusion issues

New water supply sources needed to meet the coastal region's social and economic goals





Why Explore the Cretaceous Aquifer?

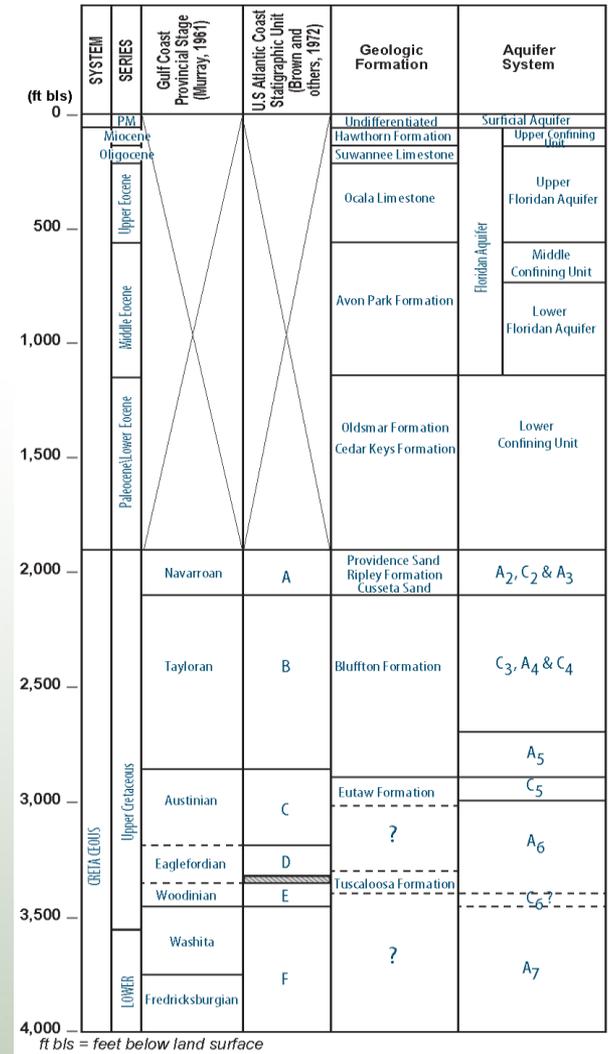
Long pipelines to coastal regions would have large environmental footprint and be costly to construct

Filtration and desalination of ocean water is costly and energy-intensive

There is no available water in surficial aquifers

GEFA's test well project will explore use of Cretaceous aquifer as an alternative to the Floridan aquifer

Modified From Pollard and Vorhis, 1980





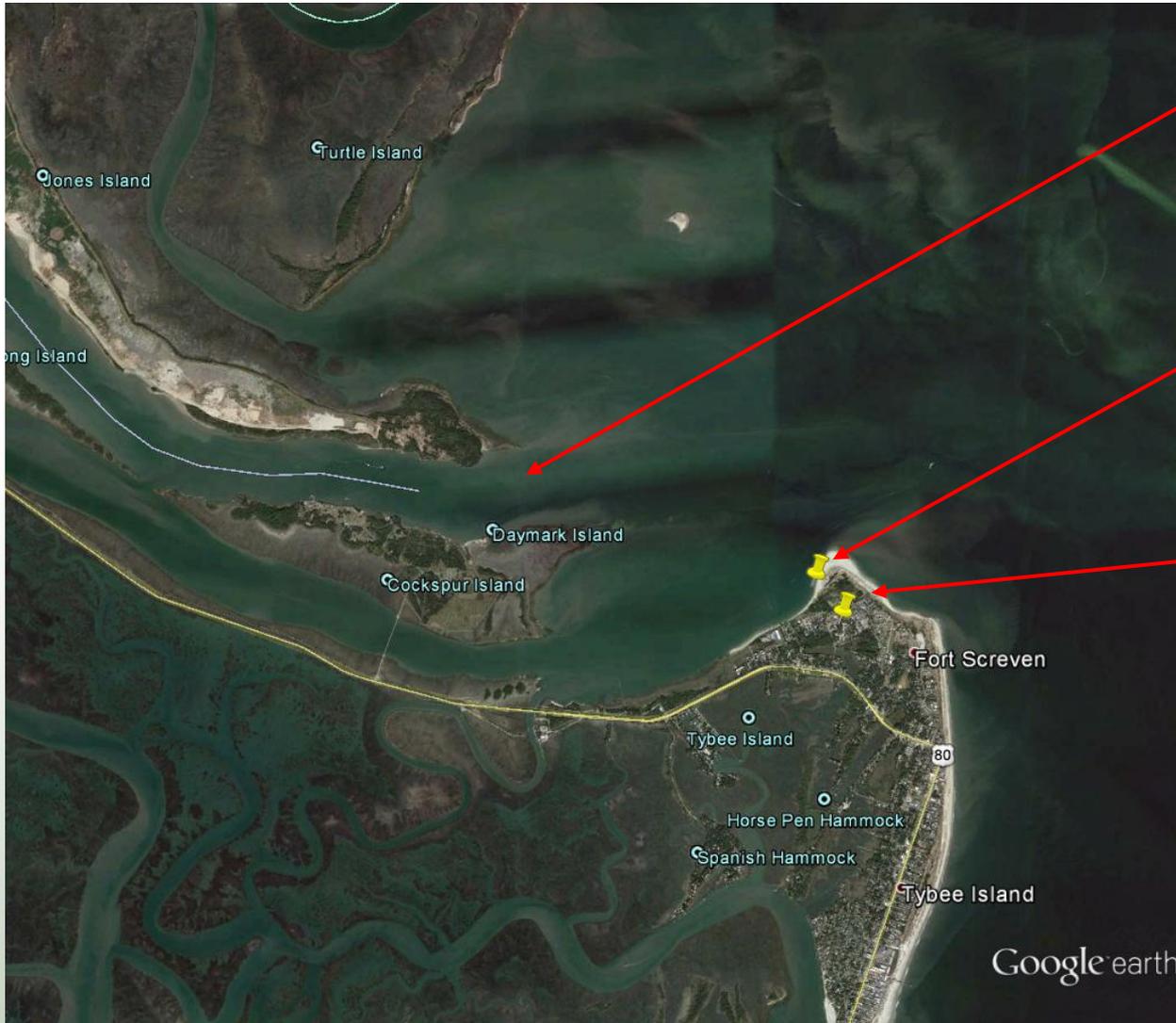
Test use of Cretaceous aquifer by drilling a 4,000 ft. well and pumping for 30 days at a rate of 650 gallons per minute

Purpose of the Test Well Project

- Understand water quality and availability
- Evaluate treatment technologies
- Summarize technical, environmental, and cost implications

Pump Test Water

- Blended with treated water from the Tybee Island Water Pollution Control Plant
- Discharged via an existing pipe to an existing outfall near the mouth of the Savannah River



Savannah River Channel

Tybee Island WPCP Outfall

Cretaceous Well

Cretaceous aquifer well location identified by site-selection team (GEFA, City of Tybee, Georgia Environmental Protection Division, and CH2M HLL) based on review of environmental, social, and cost impacts

Preferred alternative:

- Minimizes environmental impacts (no impact to wetlands, beaches, dunes, & shorelines)
- Uses an existing outfall (no additional construction in sensitive areas)
- Construction impacts will be short-term and minor or moderate





Coordination with City of Tybee Island

City of Tybee Island Contributions

- Provided permanent easement to the state
- Providing broad access to their public works and WPCP sites during construction
- Hosted numerous public meetings
- Mayor, council and staff frequently express support publicly
- Performed initial work to prepare site for drilling of well

GEFA Contributions to Limit Impacts to Public

- Limit overnight work except for limited, key technical phases of drilling, during emergencies or to ensure safety
- Install significant sound walls and other sound mitigating measures
- Mitigate all trees that are removed for construction

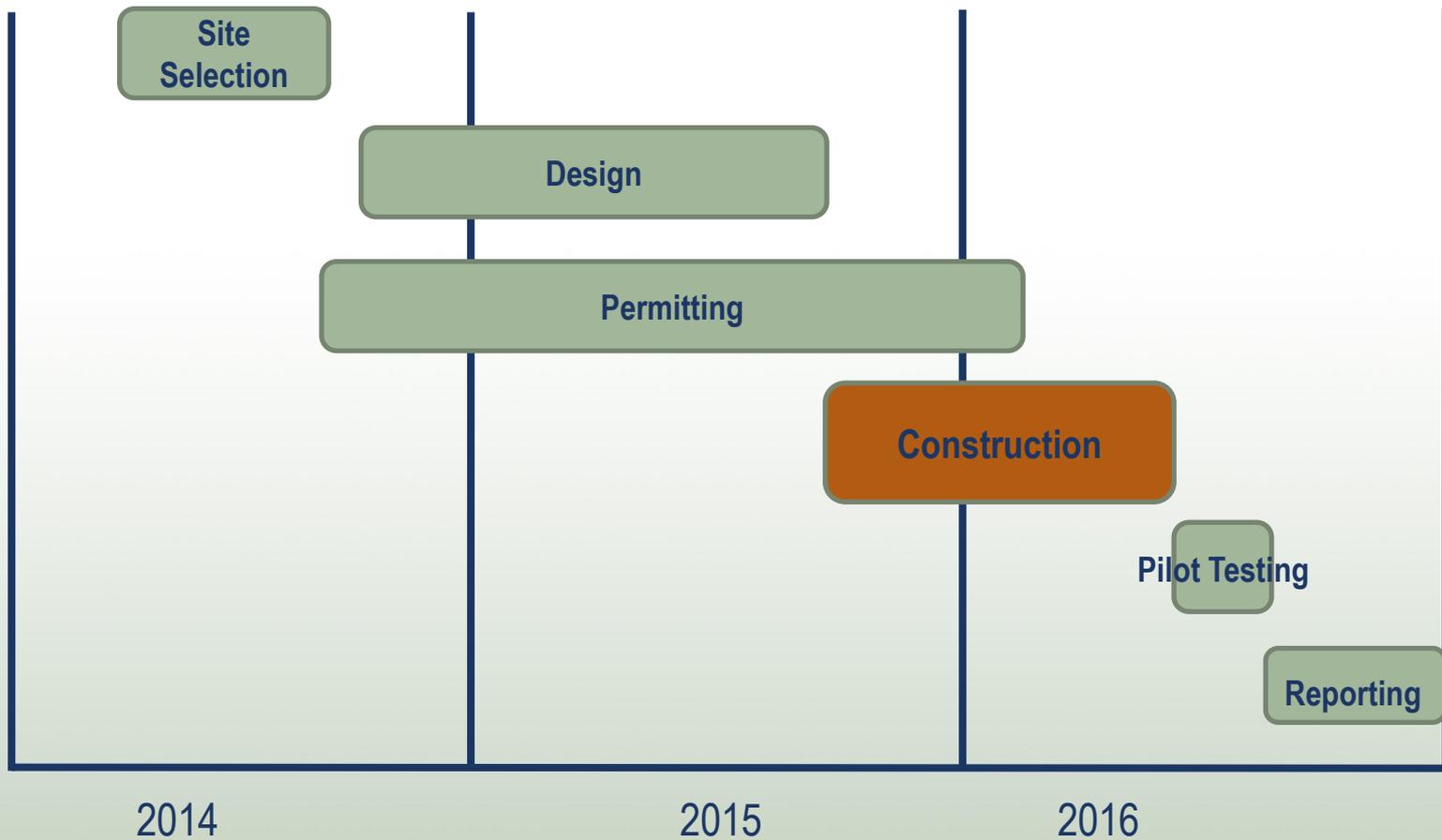


Recent Progress

- Design completed and key permits obtained
- Bid received from Layne Christensen Company
- GEFA evaluating bid and comparing pricing to other deep well projects to ensure its competitive

Upcoming Activities

- Assuming award in September 2015, site preparation will occur in October and drilling will begin in November
- If the project needs to be rebid, this would occur in early 2016 with drilling beginning in the early fall of 2017
- Schedule is driven by permitting requirement that testing must be conducted in the months of July and August



Tybee may enter into an agreement to use the well for water supply with terms including:

- Tybee would be responsible for drinking water permits and any required treatment
- Tybee would be responsible for operating, maintaining and protecting the well

Final reports, including lessons learned, cost analyses and design to be shared with any interested community in the coastal region



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