

Development in Collier County has resulted in an increase of freshwater discharges through canals to the Naples Bay estuary by as much as 10 times compared with pre-development conditions and altered the timing and volume of flows to the other estuaries. Development and altered surface water flows have led to a dramatic decline in natural wetland systems in the County, including nearly 70 percent of the wetlands in the Golden Gate – Naples Bay watershed. The surface water quantity analysis also showed that the drainage system capacity is limited. In some cases, the drainage canals are unable to accommodate the flow associated with large storm events (return periods of 10 years or more). Additionally, although the IQ Water Program distributes over 5 billion gallons of water each year, a significant deficit in IQ water supply exists, resulting in use of high quality water sources being used for irrigation.

The Golden Gate Canal Stormwater Aquifer Storage & Recovery Park project includes harvesting water from the Golden Gate canal to supplement the Irrigation Quality (IQ) Water System through an Aquifer Storage and Recovery (ASR) Program. This project will be phased, developing 5 ASR wells at a time, reducing flow to Naples Bay during the wet season and providing much needed supplemental water supply during the dry season. The first phase includes purchasing suitable property and design.

This project is applicable to the RESTORE guidelines as it will assist in the restoration and protection of natural resources by reducing flow to Naples Bay and offsetting potable water demand, provide flood protection by injecting water into the storage aquifer during storm events, provide jobs for development, construction, and operation of the equipment and site maintenance.

This project is applicable to the Collier County Guiding Principles as it is consistent with the Collier County's Growth Management Plan as addressed by the Collier County Water Management Plan including conservation, coastal management and drainage, help meet levels of service for flood protection, as well as sustainability of future water supplies for the citizens of Collier County. This project is also consistent with the IQ Water Policy in that it will reduce environmental impacts associated with discharge of secondary treated effluent, is consistent with Section 403.064, F.S. which encourages local governments to implement reclaimed water reuse projects, contributes to surficial aquifer recharge, which supports wetlands, enhances environmental quality, and promotes sustainable surface water management. Additionally reduced withdrawal of raw water through use of IQ Water will extend the lifetime and sustainable capacity of the District's potable water supply, treatment, and distribution systems, thereby offsetting or delaying capital and operating investment needed for the development of additional potable water supplies, benefitting all District customers.

Total Cost:

It is estimated that Phase 1 will be approximately \$8 million dollars. Expanding the IQ system would help optimize the management of water resources by offsetting a portion of potable water use which would assist in meeting South Florida Water Management District (SFWMD) priorities in reducing the demand on the region's potable water supply and reducing stress on groundwater resources. It is anticipated that the SFWMD will contribute some funding.

Suggested implementation timeline:

Property purchase and contracting of project design to be completed by the end of Fiscal Year 2014. Construction of the first five wells and intake structure would begin in FY15. Distribution main construction is dependent on site location.