SFWMD Pilot Alternative Water Supply Project Option Survey for

Judge Farms Reservoir and Impoundment Project

Prepared by Tohopekaliga Water Authority, November 4, 2016

The Tohopekaliga Water Authority (TWA) proposes the ***Judge Farms Reservoir and Impoundment Project*** for consideration by the South Florida Water Management District (SFWMD) as a potential Pilot Alternative Water Supply (AWS) project under Section 373.037, Florida Statutes. This planned AWS project meets the statutory considerations for a Pilot Program project:

1. This project is located within the Central Florida Water Initiative (CFWI) Area, which is statutorily defined as a restricted allocation area.
2. This project will provide both water supply and environmental (e.g., nutrient reduction) benefits.
3. This project is identified as an AWS project in the CFWI Regional Water Supply Plan, as adopted in 2015.

Project Description

The purpose of this project is to construct a reservoir to provide stormwater treatment to reduce nutrient discharges to Lake Tohopekaliga and provide a supplemental source of water to augment reclaimed water supplies for irrigation, thus reducing potable water demands. The reservoir will remove an estimated 28,000 pounds of nitrogen and 5,400 pounds of phosphorus annually from being discharged to Lake Tohopekaliga and subsequently the Kissimmee River. The reservoir will have the capacity to provide up to 6 million gallons per day (mgd) of water to augment reclaimed water supplies for irrigation and other non-potable uses.

The westerly portion of the 452-acre property known as Judge Farms consists of a large depressional area that has historically been used for sod farming. Due to its natural bowl formation, size, and proximity to surface waters, the property is suitable for a reservoir. Three local stormwater/water conveyance tributaries—East City Ditch, Mill Slough, and the Judge Farms Ditch—flow immediately adjacent to or across the Judge Farms Property before discharging into Lake Tohopekaliga, located at the south end of the property. Future project phases will involve capturing stormwater flows from these three tributaries via intake structures and convey the water to the proposed 400 million gallon (MG) Judge Farms reservoir. A water treatment facility will be constructed to treat the captured stormwater for use as an AWS source for non-potable (reuse) system augmentation. As stated above, the other environmental benefit of the reservoir is its ability to reduce nutrient loads to Lake Tohopekaliga and the Kissimmee River, which has been declared an impaired water body due to excessive nutrient levels, by retaining or detaining stormwater runoff that historically flowed untreated into the lake.

TWA and Osceola County are project partners. The exact percentage split of project funding is not yet determined, as TWA and the County have split discrete project components. The County is providing design, permitting, and construction services for the reservoir, while TWA will reimburse the County for the cost of the property and will become the owner of the reservoir. Additionally, TWA will be paying for the cost of the intake structures, the water treatment facility, and pumping/distribution facilities. This application addresses the expected total cost of the project, and TWA will reimburse the County for its agreed share.

Total Project Cost

The total estimated project capital cost—including planning, permitting, design and construction capital costs—is currently projected at approximately $67,186,000. An estimated breakdown of the project costs by various project phases and infrastructure components can be found in the table provided below under the Schedule section.

Funding Sought

The applicant requests funding support from the SFWMD at a level that the District deems appropriate. Various planning, permitting and design services have already been performed, and initial construction of the Phase 1 portion of the reservoir/impoundment has been initiated by the County. Up to 50% co-funding of future year project phases is requested by the applicant. As the projected FY2017-FY2020 total capital cost is estimated at $56,051,000, the applicant is requesting up to $28,025,500 in co-funding support from the District.

Water Made Available

This project will make up to 6 mgd, on an average daily flow basis, of new water supply available.

Schedule

Lake Toho Restoration/Alternative Water Supply (aka Judge Farms) Project
Water Storage Reservoir, Treatment, and Associated Facilities
Conceptual-Level Schedule for Capital Cost Expenditures
WSP | Parsons Brinckerhoff
May 2016

ID	Cost Category	Component Description	Responsibility	Estimated Cost
Fiscal Year 2016 (Oct 2015-Sep 2016)				
	Non-Construction	Planning, Permitting (incl. WUP), Legal Services (TWA)	TWA	$374,000
	Non-Construction	Engineering, Permitting, Construction Phase Services (County)	County	$1,865,000
1.	Construction	Construct Pond - Phase 1	County	$8,896,000
FY2016 CAPITAL COST TOTAL				**$11,135,000**
Fiscal Year 2017 (Oct 2016-Sep 2017)				
	Non-Construction	Engineering, Permitting, Legal Services (TWA)	TWA	$1,395,000
	Non-Construction	Engineering, Permitting, Construction Phase Services (County)	County	$1,865,000
2.	Construction	Construct Pond - Phase 2	County, w/ TWA contribution	$9,464,000
5.	Construction	Construct Outfall from Reservoir to Lake Toho	County, w/ TWA contribution	$290,000
FY2017 CAPITAL COST TOTAL				**$13,014,000**
Fiscal Year 2018 (Oct 2017-Sep 2018)				
	Non-Construction	Engineering, Permitting, Legal Services	TWA	$2,093,000
	Non-Construction	Construction Phase Services	TWA	$300,000
4.	Construction	Construct Surface Water Intake from Mill Slough	TWA	$5,999,000
FY2018 CAPITAL COST TOTAL				**$8,392,000**
Fiscal Year 2019 (Oct 2018-Sep 2019)				
	Non-Construction	Engineering, Permitting, Legal Services	TWA	$1,739,000
	Non-Construction	Construction Phase Services	TWA	$863,000
3.	Construction	Construct Surface Water Intake from East City Ditch	TWA	$7,029,000
6.	Construction	Construct Water Treatment Facility	TWA	$10,225,000
FY2019 CAPITAL COST TOTAL				**$19,856,000**
Fiscal Year 2020 (Oct 2019-Sep 2020)				
	Non-Construction	Construction Phase Services	TWA	$704,000
7.	Construction	Construct Pipeline East to New Developments	TWA	$7,825,000
8.	Construction	Construct Pipeline West to Reuse System	TWA	$6,260,000
FY2020 CAPITAL COST TOTAL				**$14,789,000**
GRAND TOTAL CAPITAL COST (Conceptual-Level Estimate)				**$67,186,000**
CONSTRUCTION PORTION				**$55,988,000**

Outcome and Benefits

The end goal of this project is to construct a reservoir to provide stormwater treatment to reduce nutrient discharges to Lake Tohopekaliga and provide a supplemental source of water to augment reclaimed water supplies for irrigation, thus reducing potable water demands. The reservoir will remove an estimated 28,000 pounds of nitrogen and 5,400 pounds of phosphorus annually from being discharged to Lake Tohopekaliga and subsequently the Kissimmee River. The reservoir will have the capacity to provide up to 6 mgd of water to augment reclaimed water demands for irrigation.