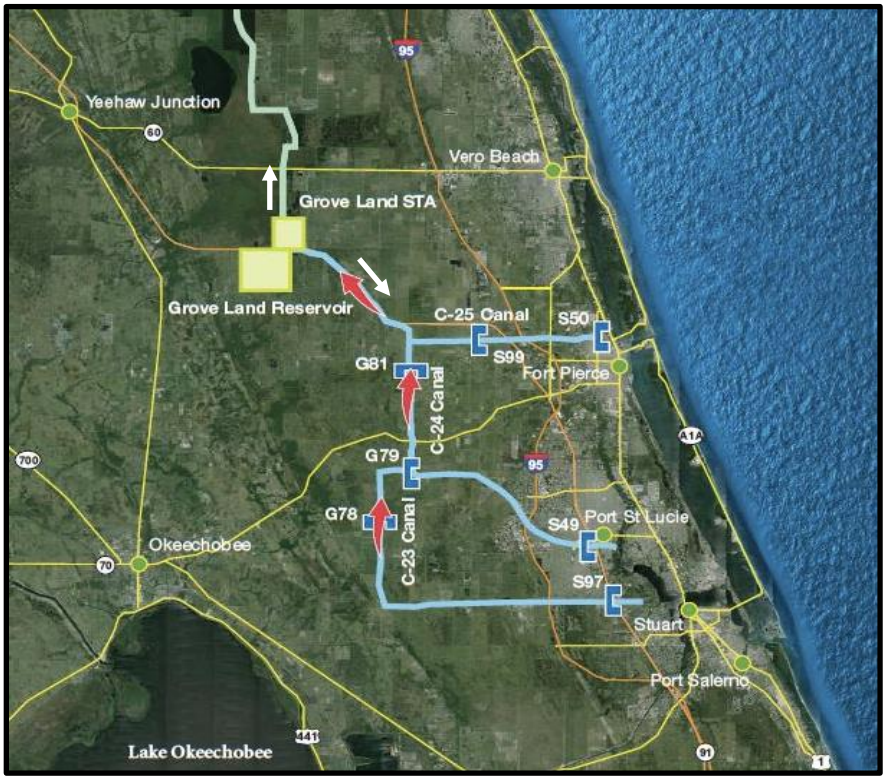
Response to SFWMD Pilot Project Solicitation

Project: Grove Land Reservoir and Stormwater Treatment Area

Purpose

Grove Land Utilities, LLC (GLU) is submitting this document in response to the solicitation issued by the South Florida Water Management District on October 19, 2016 to submit projects that meet the definition of a Pilot Project under FS 373.037. The Grove Land Reservoir and Stormwater Treatment Area (GLRSTA) project meets this definition for SFWMD and also meets the definition for a Pilot Project in SJRWMD due to its physical location, which connects the two Districts in the Ft. Drum Marsh area, and its inclusion in the regional water supply plans of each District. While GLRSTA benefits both SFWMD and SJRWMD, the alternative water supply opportunities associated with the project may be more significant to the SJRWMD and the goals and objectives of the Central Florida Water Initiative (CFWI), which is also recognized in FS 373.037. Therefore, it is GLU's opinion that GLRSTA may be a more appropriate Project for SJRWMD to select as its Pilot Project, with SFWMD and CFWI acting in a supporting role, as opposed to SFWMD taking the lead pursuant to this solicitation. FS 373.037(3) clearly contemplates that a District (SJRWMD) may select as its Pilot (alternative water supply) Project, one that is located in another District (SFWMD) if the Project is in a restricted allocation area (which the Upper East Coast of SFWMD has been so designated) and a substantial quantity of water provided by the Project will be used within the boundaries of the District (SJRWMD) that designated the Project as its Pilot Project. In the case of GLRSTA, it is physically located in both Districts and would meet the definition as a Pilot Project for either, but under this analysis is likely best suited as the Pilot Project for SJRWMD.



Project Description

The Project conceptual design includes an approximately 5,700 acre reservoir which would store water at a depth of 15 feet and an approximately 2,100 acre STA which would store water at a depth of two feet. The Project would store and treat water which would otherwise be discharged to tidal water bodies via the C-25, C-24, and C-23 Canals. Treated water can then be discharged north to the headwaters of the St. Johns River (SJRWMD) as an alternate water supply or to the C-25 Canal (SFWMD). In both cases, water will be treated in the STA to reduce nutrient concentrations prior to discharge.

The Project meets the statutory requirements outlined in the SFWMD solicitation. It is located in an area where the Governing Board of the water management district has applied allocation restrictions with regard to specific sources of water as it is located in the Upper East Coast Regional Water Supply Planning Area and is included in the Central Florida Water Initiative. Furthermore, the Project is identified as an alternative water supply and recommended project in both the SFWMD 2015 UEC regional water supply plan and CFWI.

Outcome and Benefits

The Project provides economical water supply and environmental benefits as freshwater discharges to the Indian River Lagoon (IRL) are reduced and an alternate water supply is provided for the CFWI. The following environmental and water supply benefits are expected to result from the construction of the Project:

- Approximately **136 MGD** of water made available to the headwaters of the St. Johns River and/or local beneficiaries (total water supply estimated as being approximately 122 MGD assuming 10% conveyance losses).

- Approximately 37 metric tons (MT) of Total Phosphorus (TP) to be removed annually through treatment in the STA. If all discharge from GLRSTA is directed to SJRWMD, an annual reduction of 52 MT of TP to the IRL will occur. If discharged to the SJRWMD, the water quality-based effluent limits (WQBELs) will be met.

- Approximately 68 MT of Total Nitrogen (TN) to be removed annually through treatment in the STA. If all discharge from GLRSTA is directed to SJRWMD, an annual reduction of 300 MT of TN to the IRL will occur. If discharged to the SJRWMD, the WQBELs will be met.

- Reduction of freshwater discharges to the IRL will occur as a result of redirecting flow which would otherwise be lost to tide to the headwaters of the St. Johns River. The estimated annual water quantity (discharge reduction) benefits are as follows:

    - 28,954 acre-feet/year to GLRSTA from the C-23 Canal (22% of annual flow)
    - 41,132 acre-feet/year to GLRSTA from the C-24 Canal (37% of annual total)
    - 81,812 acre-feet/year to GLRSTA from the C-25 Canal (57% of annual total)

- Significant reduction in the projected 250 MGD CFWI water supply deficit will be provided. Other proposed surface water projects are estimated to have a water supply benefit ranging from 40 to 54 MGD with project costs being at least $100 million greater than the GLRSTA estimated cost. Therefore, the GLRSTA is a more economical solution when factoring in the greater benefit the Project provides to the CFWI (daily flows of 136 MGD).

Project Cost

The planning level costs for the Project are summarized below in **Table 1**.

Table 1
Total Estimated Capital and Annual O&M Costs (Conceptual Level)
Of the Grove Land Reservoir and Stormwater Treatment Area, 2014 Dollars[1,2]

Item	Value
Capital Cost:	
Reservoir	$268,204377
Stormwater Treatment Area	$47,943,916
Other Improvements:	
Increase Capacity of Intake Water Sources (SFWMD)	$29,582,149
Improvements at Upper St. Johns River Basin (SJRWMD)	$10,553,956
Total Capital Cost (w/o Land Costs)	**$356,284,397**
Reservoir Land Value	57,752,662
STA Land Value	21,391,757
Total Capital Cost (w/Land Costs)	**$435,428,815**
Annual O & M Cost:	
Reservoir	$878,537
Stormwater Treatment Area	$682,016
Other Improvements:	
Increase Capacity of Intake Water Sources (SFWMD)	$129,881
Improvements at Upper St. Johns River Basin (SJRWMD)	$233,804
Project Administration (includes estimated liability insurance premium)	$775,774
Total Annual O&M Cost	**$2,680,012**
Total Annualized Cost	
Annualized Capital Cost over 50 years at 3.5% annual discount rate	$18,563,012
Annual O&M Cost	$2,680,012
Total Annualized Cost w/Land Costs	$21,243,958
Total Unit Cost w/ Land Costs ($ per 1,000 gallons for 136 mgd x 0.90)	**$0.48**

[1] Costs do not include treatment and transmission costs, financing cost, contingency/financial risk and renewal and replacement

[2] August 2014 Financial Feasibility Study of the Grove Land Reservoir and Stormwater Treatment Area, Phase 2 Study – FINAL Report developed by Hazen & Sawyer 2013 costs updated to 2014

Estimated Implementation Schedule:

It is estimated that design, permitting and construction of this project could be completed in six years. Design is currently ongoing and could be completed by December 31, 2019. Permit applications could be submitted by June 30, 2018 and permits obtained by December 31, 2019. Construction and start up would take approximately 3 years and be completed in 2022.

Funding Sought

The funding sought is for the balance of capital costs that are not attributable to and being funded by a specific government entity, beneficiary or constituency.

Criteria for Project Evaluation

The following project characteristics should be evaluated when identifying the effectiveness of proposed Pilot Projects:

1. Timing of construction/implementation

2. Stage of project development

3. Magnitude of benefits provided by project

Timing of construction can have significant economic implications. As construction is delayed/prolonged and the extent of environmental impacts is increased, the economic value of environmental assets may be negatively affected. Timely execution of large scale projects helps minimize this economic impact. Similarly, the stage of planning and development of the project is important, as the feasibility of the project must be fully understood. Lastly, the scale of the project benefits must be considered in order to identify a Pilot Project which is not limited to only localized beneficiaries but instead addresses water supply and/or water quality issues on a regional or super-regional basis.