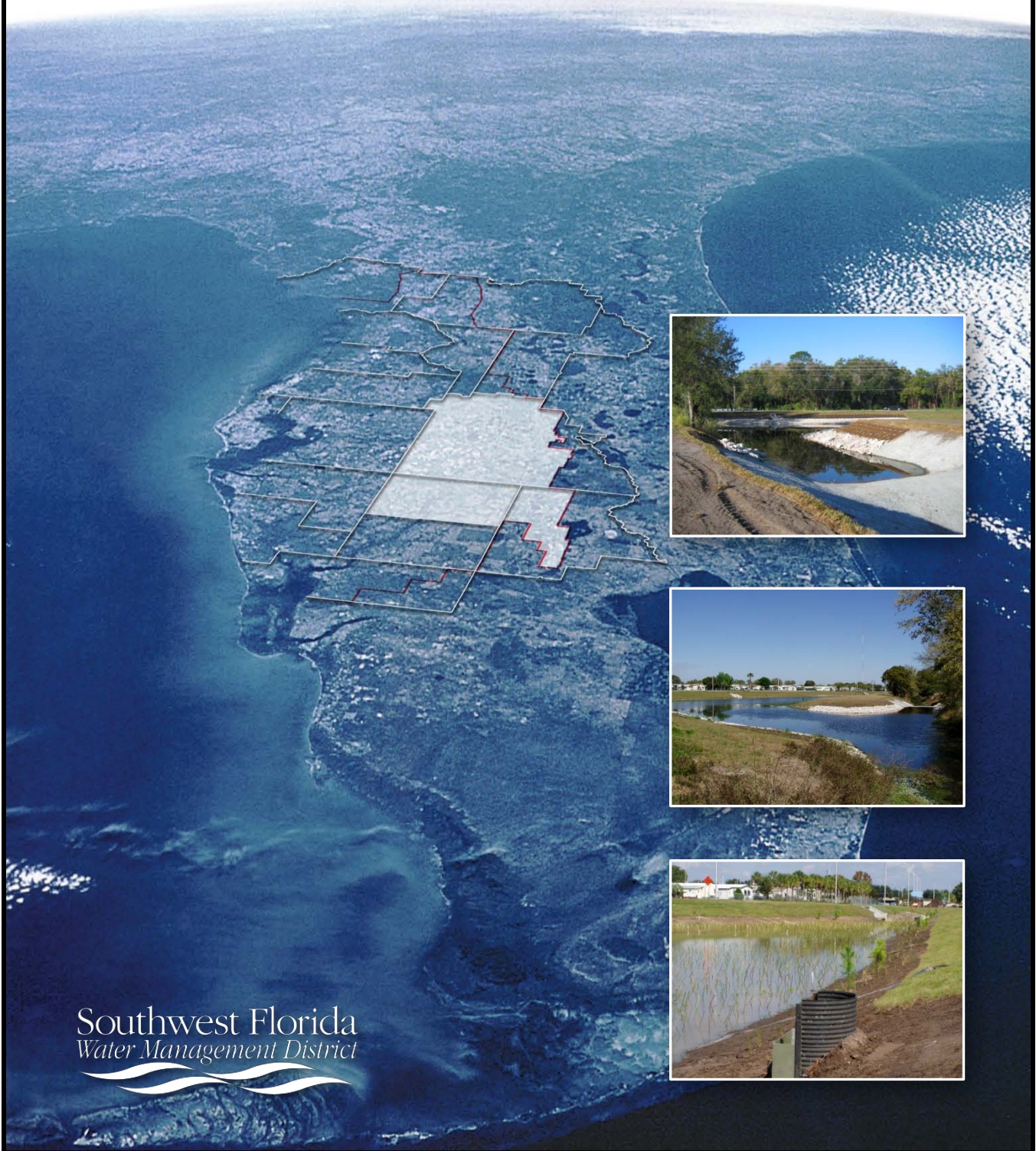


SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

Fiscal Year 2021

Cooperative Funding Initiative Applications

Heartland Region



Southwest Florida
Water Management District

Coop Funding By Region For FY2021

Heartland Region

Project	Project Name	Project Cost
N898	Reclaimed - Haines City Reclaimed Water Tank and Pump Station	\$6,800,000
N899	Study - Polk Co. Reclaimed Recharge Study in Dover/Plant City WUCA & Northwest Polk Area	\$1,735,000
N926	Restoration - Lake Eva & Lake Henry Restoration	\$7,466,000
Q067	Reclaimed - Polk Co. NERUSA Southeast Reuse Loop	\$4,373,500
Q099	WMP - Sebring WMP Update	\$600,000
Q164	Crooked Lake - Sunset Trail Stormwater Retrofit	\$1,000,000
Q166	Bartow Golf Course Irrigation System	\$1,046,000
Q170	Evaluation of Aquifer Recharge Technologies for Upper Peace Creek Watershed	\$300,000
Q174	Winter Haven Southern Chain of Lakes - Lake Lulu Watershed Protection Project	\$2,260,000
Q176	Winter Haven/Upper Peace Creek Watershed Optimization Model	\$750,000
Q177	Reclaimed Water - Winter Haven Southern Basin Aquifer Recharge	\$4,300,000
Q178	Crystal Lake Sediment Management Feasibility Study	\$361,283
Q181	Highlands Hammock SP/Little Charlie Bowlegs WMP	\$540,000
Q184	Brackish - Polk Regional Water Cooperative Southeast Wellfield	\$462,200,000
Q186	Emergency Potable Water Interconnect Between Winter Haven and Dundee	\$500,000
Q187	Demand Management Plan Strategic Implementation	\$250,000
Q188	Crescent Lake Implementation of BMP's	\$2,270,000
Q195	Emergency Potable Water Interconnect Between Winter Haven and Eagle Lake	\$500,000
Q198	Pollard Road Regional Water Main	\$1,500,000
Q200	Winter Haven Direct Potable Reuse Feasibility	\$400,000
Q201	Polk County Parks & Natural Resources Small-Scale Project Evaluations	\$420,000
Q203	Lake Annie Surface Water Restoration	\$268,000
Q209	Cherry Hill Source Water Augmentation	\$1,735,000
Region Total		\$501,574,783

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name Reclaimed - Haines City Reclaimed Water Tank and Pump Station
Project Number N898
Cooperator Haines City
Department Public Works
Contact Person Nelson Vega
Address 300 N. 5th Street
City State Zip Haines City, FL 33844
Phone # 863-421-3777 ext5328
Email nvega@hainescity.com

Project Type:

☒ Water Supply ☐ Water Quality ☐ Flood Protection ☐ Natural Systems

Strategic Initiatives:

☐ Water Quality Maintenance and Improvement ☐ Water Quality Monitoring
☐ Alternative Water Supply ☐ Conservation
☒ Reclaimed Water ☐ Regional Water Supply Planning
☐ Emergency Flood Response ☐ Floodplain Management
☐ Minimum Flows and Level Establishment and Monitoring ☐ Minimum Flows and Levels Recovery
☐ Natural Systems Conservation and Restoration ☐ Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

☐ Charlotte ☐ Citrus ☐ Desoto ☐ Hardee ☐ Hernando ☐ Highlands ☐ Hillsborough ☐ Lake
☐ Levy ☐ Manatee ☐ Marion ☐ Pasco ☐ Pinellas ☐ Sarasota ☐ Sumter ☒ Polk

Project Description/Benefit/Cost

Description:

This project includes final design, permitting, and construction of a transfer pump station, a 3.0 million gallon storage tank, a high service pump station, an off-site booster station, associated yard piping, electrical modifications, instrumentation, controls, and other necessary appurtenances. Preliminary design and a Third-party review was completed in FY 2018 with the support of District funding. The District required a third-party review because the conceptual construction estimate is greater than \$5 million dollars. The FY 2019 budget will be used to support engineering design. The FY 2020 budget will be used to support the completion of engineering design and construction. The FY 2021 funding request will be used to support the completion of construction of the project.

Benefit:

The contractual Measurable Benefit is the design, permitting, and construction of equipment that will enable the City to store and supply reclaimed water to existing and future customers in the "Ridge Lakes" area of the Central Florida Water Initiative (CFWI). Construction will be done in accordance with the permitted plans.

Cost:

The total project cost is estimated to be \$6,800,000 (Preliminary Design, Third-Party Review, Final Design, Permitting and Construction). The cost estimate was revised following a third party review, and the City agreed to pay the additional project costs so that the total cost to SWFWMD remains unchanged. Haines City is a REDI community, and has a cost-share percentage of 32.385% for a total anticipated cost of \$2,105,000. The District share is capped at \$4,620,000 for this project. If construction bids are lower than anticipated, then the City and District's costs will go down proportionately based on the following cost split of [32.385% (City) and 67.615% (SWFWMD)]. The City is implementing value engineering to increase the likelihood for lower bid prices. Value engineering that is being incorporated includes the use of an existing transfer pump station wetwell in lieu of constructing a new wetwell, bid alternates for backup pumps and generator allowing for elimination of those items if the bid prices are too high, and consideration of direct purchase of much of the equipment and materials, including the pumps, and possibly the piping and valves, which will save 6.5% in sales tax on the materials. The City is currently working towards completion of the final design for this project. The project funding and amended contract agreement was approved on May 4, 2019. The contract amendment included a new schedule for the completion of the project. SWFWMD has currently provided \$225,000 in cost-share for this project in 2018. No cost share has occurred in 2019 since final design cannot be invoiced until it is 100% complete.

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

The City is currently pursuing additional reclaimed water customers to maximize the offset of groundwater and potable water uses in the City. The City is actively negotiating with the high school, middle school, two local churches, Sofidel, and Modular Pavers. Sun Orchard was connected to the City's reclaimed water system for irrigation purposes in April of 2018. Several upcoming developments have agreed to connect to the City's reclaimed water transmission main, and connection will be funded by each developer. Additionally, the City will be completing Phase II of the Lake Eva Feasibility Study in FY 2020 to determine if lake levels in Lake Eva can be sufficiently raised with nearby rapid infiltration basins. The City is also progressing on a wetland treatment system at Lake Boomerang that would incorporate trails and a public park with a wetland treatment system. The City has been working with Southern Dunes to provide small rapid infiltration basins at their property, which would also provide some levels of aquifer recharge in that area. An SRF loan has been approved for the construction of the irrigation piping for several of the irrigation customers listed, and for the construction of the small rapid infiltration basins at Southern Dunes. Design and construction of these complimentary efforts is expected to be completed prior to completion of the new ground storage tank and pump stations.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share	75,000	1,123,747	981,254		2,180,001
General Fund-District Wide	225,000	2,346,253	2,048,746		4,619,999
Total	300,000	3,470,000	3,030,000		6,800,000

Matching Fund Reduction

☒ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines

1-Final Design

Milestone

100% Bid Ready Documents

Projected Date

01/16/2020

2-Permitting

Milestone

Haines City Building Department

Projected Date

01/16/2020

3-Permitting

Milestone

FDEP ERP

Projected Date

01/16/2020

4-Bidding and Contractor Procurement

Milestone

Award, Contract Agreement, NTP to Low Bidder

Projected Date

04/30/2020

5-Construction

Milestone

Commence Construction

Projected Date

05/01/2020

6-Construction

Milestone

Substantial Completion of Construction

Projected Date

03/31/2021

7-Construction

Milestone

Final Completion of Construction

Projected Date

04/30/2021

Data Collection Assessment:

☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name Study - Polk Co. Reclaimed Recharge Study in Dover/Plant City WUCA & Northwest Polk Area
Project Number N899
Cooperator Polk County Utilities
Department Utilities Technical Services
Contact Person Tania Mcmillan
Address 1011 Jim Keene Blvd
City State Zip Winter Haven, FL 33880
Phone # 863-298-4190
Email taniamcmillan@polk-county.net

Project Type:

☒ Water Supply
 ☐ Water Quality
 ☐ Flood Protection
 ☐ Natural Systems

Strategic Initiatives:

<input type="checkbox"/> Water Quality Maintenance and Improvement	<input type="checkbox"/> Water Quality Monitoring
<input type="checkbox"/> Alternative Water Supply	<input type="checkbox"/> Conservation
<input checked="" type="checkbox"/> Reclaimed Water	<input type="checkbox"/> Regional Water Supply Planning
<input type="checkbox"/> Emergency Flood Response	<input type="checkbox"/> Floodplain Management
<input type="checkbox"/> Minimum Flows and Level Establishment and Monitoring	<input type="checkbox"/> Minimum Flows and Levels Recovery
<input type="checkbox"/> Natural Systems Conservation and Restoration	<input type="checkbox"/> Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

<input type="checkbox"/> Charlotte	<input type="checkbox"/> Citrus	<input type="checkbox"/> Desoto	<input type="checkbox"/> Hardee	<input type="checkbox"/> Hernando	<input type="checkbox"/> Highlands	<input type="checkbox"/> Hillsborough	<input type="checkbox"/> Lake
<input type="checkbox"/> Levy	<input type="checkbox"/> Manatee	<input type="checkbox"/> Marion	<input type="checkbox"/> Pasco	<input type="checkbox"/> Pinellas	<input type="checkbox"/> Sarasota	<input type="checkbox"/> Sumter	<input checked="" type="checkbox"/> Polk

Project Description/Benefit/Cost

Description:

This project request is for an ongoing (N899; initially approved in the FY2018 CFI cycle) feasibility study to determine whether indirect aquifer recharge with reclaimed water or other innovative non-traditional reuse solutions are viable options to supplement Polk County's Northwest Regional Utility Service Area (NWRUSA) water supplies. The initial phase of the project included a Preliminary Design Report for the NWRUSA Cherry Hill Water Production Facility (WPF) with hydrogeological and water resource modeling support. The support services included a review of the potential water supply options in the NWRUSA and provided an analysis of those options. Included in the analysis, was an initial water quality data analysis and the identified potential benefits obtainable from a reclaimed water pilot study. A Technical Memorandum was prepared and a final recommendation for each source/option was provided. This effort determined that traditional aquifer recharge through Rapid Infiltration Basins was not feasible for the proposed sites (the Cherry Hill WPF and the 50-acre site adjacent to the County's Northwest Regional Wastewater Treatment Facility (NWRWWTF)) due to unfavorable geological conditions. During Phase 2 of the study, the County investigated enhanced recharge and Soil Aquifer Treatment alternative options. Additional activities associated with this effort were anticipated to include groundwater modeling, geotechnical work, lithologic cores collection, and aquifer recharge testing. The groundwater modeling and geotechnical work revealed limited horizontal capacity across the site for Soil Aquifer Treatment. Based on these results, engineered treatment is being proposed in lieu of the Soil Aquifer Treatment approach. This next phase will include a field-scale investigation and feasibility study of the full advanced treatment of reclaimed water. A demonstration project with pilot testing will be performed in the County's NWRUSA, which is within the Hillsborough River Groundwater Basin and the Central Florida Water Initiative area. If successful, this project will provide the County with the information needed to assess alternatives to installing future reclaimed water lines for non-potable irrigation. Upon successful demonstration testing, the County will then complete design/permitting and initiate construction for full scale implementation.

Benefit:

Polk County currently withdraws UFA groundwater for the service area and supplies public access quality reclaimed water from the NWRWWTF for irrigation to residents and businesses with installed reclaimed water system infrastructure. The NWRWWTF was constructed as a 3.0 million gallons per day (MGD) facility and is currently permitted at 3.0 MGD. Up to 1.5 MGD of highly treated reclaimed water could be used to protect groundwater supplies within the Floridan aquifer from advancing or increasing saltwater intrusion, as well as to supplement groundwater supplies in the western Polk County/eastern Hillsborough area. This area is adjacent to the Most Impacted Area, the Dover/Plant City Water Use Caution Area and the Southern Water Use Caution Area. The project would enable the County to maximize reclaimed water usage to 100%, supplement water levels in the Upper Floridan aquifer, potentially obtain additional water supplies from the existing wellfield to delay expensive alternative water supply projects

and possibly slow or minimize the movement of saltwater intrusion along the coast. The County will continue to maximize activation of public access reuse along existing transmission lines and developments to achieve the current commitment as documented in prior Cooperative Funding Agreements and will build upon the results of the "Polk County Northeast Regional Utility Service Indirect Aquifer Recharge Project (N304)."

Cost:

Total project cost for feasibility study, and field-scale investigation/ pilot testing: \$1,735,000; Polk County share is \$867,500. FY2018 District share request was \$250,000; FY2019 District share request was \$250,000; FY2020 District share request was \$95,000. The remaining District share \$272,500 is being requested in FY2021. The project costs for this study was revised to \$1,735,000 from an original cost estimate of \$1,000,000. The reasons for this cost increase include: 1) a refined scope of work and updated project costs for the pilot study based on FDEP input; and 2) expanded duration and scope of water quality sampling to provide the data for potential permitting requirements.

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

Polk County has numerous programs and ordinances that address water conservation, flood protection, stormwater management and related water resource issues. Many of these programs are made possible by a Municipal Service Taxing Unit that was adopted in 2013 specifically for water resources activities. Primary among these programs is the County's NPDES Municipal Separate Stormwater System (MS4) permit. Polk County's Comprehensive Plan (Comp Plan), Ord. #92-36, addresses Stormwater Management, Surface Water, Groundwater, Flood Plains, Wetlands and Ecological Communities while the Land Development Code (LDC), Ord. #00-09, addresses Surface Water Protection, Wetlands Protection, Concurrency–Stormwater, Landscaping, including language for Florida Yards and Neighborhoods and Low Impact Development, and Stormwater Management. In 2013, the County adopted a fertilizer management ordinance (#13-005) that provides guidelines for fertilizer application quantities and timing and has implemented a street-sweeping program for monthly sweeping of paved roads, mainly in high priority TMDL watersheds. Active since 1985, our ambient water quality program takes quarterly samples from 134 lake and stream sites to assess nutrients, metals, and bacteria levels. The County has adopted Flood Plain Ord. #00-009 and participates in the National Flood Insurance Program administered through the Federal Emergency Management Act (FEMA). All development is required to receive the proper building and site alteration permits and new structures are required to be placed above the base flood elevation when the base flood elevation is known. We are also a participant in FEMA's Community Rating System and have received a class 8 rating. The Comp Plan requires water-conserving plumbing fixtures and landscape features to be included in the Building Code. The Building Division enforces the guidelines outlined in the 1994 Standard Plumbing Code. Polk County's Year Round Water Conservation Measures and Water Shortage Ord. #04-07 allows for improved enforcement of watering restrictions as set by the District and allows for localized limits on the use of reclaimed water to be the same as irrigation standards for potable water. Polk County Utilities' (PCU) Division Water Conservation Program Manual provides educational, regulatory, financial and operational measures for encouraging water conservation throughout our service areas. PCU's Reclaimed Water Program continues to be an integral part of the County's conservation efforts. Ord. #03-021 requires all new developments served by a wastewater treatment system that produce public access quality reclaimed water to install internal reuse distribution systems and to tie-in when reclaimed water becomes available. The Ordinance prohibits the use of potable water for irrigation once reclaimed water becomes available at a particular location. Polk County promotes Florida-Friendly landscaping and promotes the use of drought-tolerant native vegetation for landscape planting and buffer matrixes. Polk County remains an active member in both the Tampa Bay and Charlotte Harbor National Estuary Programs. The County is also a major cooperator and funding source to the Lake Action/ Education Drive, a non-profit public education group. We also work closely with the County Extension Service for public education and outreach activities, including funding of the Florida Friendly Yards program through IFAS. Our Circle B Bar Reserve hosts numerous educational events that inform the public about local natural resources. Polk County also organizes the annual 7 Rivers Water Festival, a public education event for all things related to water resources.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share	500,000	95,000	272,500		867,500
Hillsborough River	500,000	95,000	272,500		867,500
Total	1,000,000	190,000	545,000		1,735,000

Matching Fund Reduction

☐ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines

Commence

Milestone	Projected Date
Project Management	11/01/2019
Design	11/01/2019
Data Collection and Groundwater Modeling	11/01/2019
Permitting	11/01/2019
Bidding and Contract Award	01/01/2020
Construction	10/15/2020
Construction Engineering & Inspection (CEI)	10/15/2020
Demonstration Testing	04/01/2021

Complete

Milestone	Projected Date
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Design	04/01/2020
Data Collection and Groundwater Modeling	04/01/2020
Permitting	05/01/2020
Bidding and Contract Award	10/15/2020
Construction	03/30/2021
Construction Engineering & Inspection	03/31/2021
Demonstration Testing	09/30/2022
Project Management	09/30/2022

Data Collection Assessment:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Groundwater or Surface Water Level measurements | <input checked="" type="checkbox"/> Groundwater or Surface Water Quality measurements |
| <input checked="" type="checkbox"/> Monitor Well Installation | <input checked="" type="checkbox"/> Lithologic/Geophysical data |
| <input checked="" type="checkbox"/> Aquifer Testing | |

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SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name Restoration - Lake Eva & Lake Henry Restoration
Project Number N926
Cooperator Haines City
Department Public Works
Contact Person Nelson Vega
Address 300 N. 5th Street
City State Zip Haines City, FL 33844
Phone # 863-421-3777 ext5328
Email nvega@hainescity.com

Project Type:

☒ Water Supply
 ☒ Water Quality
 ☐ Flood Protection
 ☒ Natural Systems

Strategic Initiatives:

<input checked="" type="checkbox"/> Water Quality Maintenance and Improvement	<input type="checkbox"/> Water Quality Monitoring
<input type="checkbox"/> Alternative Water Supply	<input checked="" type="checkbox"/> Conservation
<input type="checkbox"/> Reclaimed Water	<input type="checkbox"/> Regional Water Supply Planning
<input type="checkbox"/> Emergency Flood Response	<input type="checkbox"/> Floodplain Management
<input type="checkbox"/> Minimum Flows and Level Establishment and Monitoring	<input checked="" type="checkbox"/> Minimum Flows and Levels Recovery
<input checked="" type="checkbox"/> Natural Systems Conservation and Restoration	<input type="checkbox"/> Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

<input checked="" type="checkbox"/> Charlotte	<input type="checkbox"/> Citrus	<input checked="" type="checkbox"/> Desoto	<input checked="" type="checkbox"/> Hardee	<input type="checkbox"/> Hernando	<input type="checkbox"/> Highlands	<input type="checkbox"/> Hillsborough	<input type="checkbox"/> Lake
<input type="checkbox"/> Levy	<input type="checkbox"/> Manatee	<input type="checkbox"/> Marion	<input type="checkbox"/> Pasco	<input type="checkbox"/> Pinellas	<input type="checkbox"/> Sarasota	<input type="checkbox"/> Sumter	<input checked="" type="checkbox"/> Polk

Project Description/Benefit/Cost

Description:

This application is a continuation of CFI project number N926, Restoration - Lake Eva & Lake Henry Restoration, for preparation of final construction documents, bidding, and construction of improvements to meet regional integrated water resources needs and specifically: address the District Lake Eva Minimum Level (MFL); improve water quality in Lake Eva (verified impaired); improve groundwater recharge; and natural systems restoration. In August 2019, the Lake Eva and Lake Henry Restoration Feasibility Study was completed and the project team (including City and District) selected a preferred alternative for implementation. The selected project includes: diverting excess surface runoff to Lake Eva; 145 acres of natural systems/wetland restoration including rehydration; groundwater/aquifer recharge; stormwater BMP retrofits for urban areas discharging to Lake Eva, and revegetation of Lake Eva. Since a vast majority of the nutrient load to Lake Eva is from stormwater runoff, five stormwater BMP retrofits are proposed for major outfalls along with two gross pollutant removal structures to capture trash, organic debris, and larger sediment.

Benefit:

The proposed 145-acre natural systems/wetland restoration element will convert pasture, ditches, and degraded wetlands to freshwater marshes, swamp forest, and slough. Native vegetation will be planted and diverted excess surface water will rehydrate the wetland. Model results indicate the average annual water volume discharging from Lake Henry to the Morrison Ranch property will increase by more than 500 acre-feet (ac-ft) with an additional 600 ac-ft draining from the Morrison Ranch property to Lake Eva. Only a portion of the Haines City Canal discharge will flow into Lake Eva; a majority of the discharge will continue south to Little Lake Hamilton, Lake Hamilton (verified impaired), etc. Therefore, the specified pollutant load reductions will benefit not only Lake Eva but also downstream lakes in the Peace Creek watershed. Based on model results, the average annual number of days Lake Eva is at or above the District's established Minimum Lake Level increases from 151 days to 348 days. Supporting project figures and conceptual plans are provided in the Documents section of the application.

Water Quality benefits: estimated TN load reduction 3,159 lb/yr; TP reduction 351 lb/yr; TSS reduction 98,480 lb/yr.

Natural systems restoration benefits (combination of elements): restoration of 145-acres of Natural Systems/Wetlands

Estimated additional groundwater recharge is 155 Million Gal /year.

Expect to meet Lake Eva MFL with estimated additional 628 ac ft/yr of flow to Lake Eva.

Cost:

CFI Cost-Benefit Results; all rankings are "High": Water Quality TN reduction \$104/lb; TP reduction \$940/lb; TSS reduction \$3.35/lb. Natural Systems Restoration (combination of elements) \$17,241/ac restored.

Cooperative Funding Initiative request includes:

FY21 Prepare final construction documents: District \$198,000; Cooperator \$66,000
 FY21 Bidding/Conformed Documents: District \$24,000; Cooperator \$8,000
 FY21 Construction: District \$495,000; Cooperator \$165,000
 FY21 Construction Support Services: District \$13,500; Cooperator \$4,500
 FY21 Totals: District \$730,500; Cooperator \$243,500
 FY22 Construction: District \$4,455,000; Cooperator \$1,485,000
 FY22 Construction Support Services: District \$114,000; Cooperator \$38,000
 FY22 Totals: District \$4,569,000; Cooperator \$1,523,000

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

The City of Haines City has an active stormwater utility that collects assessments and instituted a Lakes Management initiative to improve local lakes and impaired water bodies. This project is consistent with the District's Water Quality Maintenance and Improvement strategic initiative, Comprehensive Watershed Management Initiative (CWM) for Lake Wales Ridge, and Heartland Region priority and objectives to Improve Ridge Lakes and Peace Creek Canal. Through the District's Ridge Lakes Restoration Initiative along the Lake Wales Ridge, emphasis is placed on protecting lake management strategies. Stormwater treatment is identified as a high priority. Subsequently, the objective of this project is the protection and enhancement of water quality through stormwater treatment as well as enhancement and restoration of natural systems and recharge of surficial groundwater and Floridan aquifer. Two main challenges existing in the Peace Creek Canal watershed – nutrient loading from urban runoff and the loss of natural systems, will be addressed through the proposed project by treating stormwater runoff and reducing non-point source loading of nutrients, natural systems restoration, groundwater recharge, decreasing nonnative/undesirable species, and increasing native aquatic and upland vegetation.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share	100,000		243,500	1,523,000	1,866,500
Peace River	300,000		730,500	4,569,000	5,599,500
Total	400,000		974,000	6,092,000	7,466,000

Matching Fund Reduction

☒ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines

Final Construction/Bid Documents Complete	05/31/2021
Construction Bidding Complete	08/31/2021
Construction Complete	09/30/2022

Data Collection Assessment:

☒ Land Survey ☒ Other data collection: Geotechnical

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name Reclaimed - Polk Co. NERUSA Southeast Reuse Loop
Project Number Q067
Cooperator Polk County Utilities
Department Utilities Technical Services
Contact Person Tania Mcmillan
Address 1011 Jim Keene Blvd
City State Zip Winter Haven, FL 33880
Phone # 863-298-4190
Email taniamcmillan@polk-county.net

Project Type:

☒ Water Supply
 ☐ Water Quality
 ☐ Flood Protection
 ☐ Natural Systems

Strategic Initiatives:

<input type="checkbox"/> Water Quality Maintenance and Improvement	<input type="checkbox"/> Water Quality Monitoring
<input type="checkbox"/> Alternative Water Supply	<input type="checkbox"/> Conservation
<input checked="" type="checkbox"/> Reclaimed Water	<input type="checkbox"/> Regional Water Supply Planning
<input type="checkbox"/> Emergency Flood Response	<input type="checkbox"/> Floodplain Management
<input type="checkbox"/> Minimum Flows and Level Establishment and Monitoring	<input type="checkbox"/> Minimum Flows and Levels Recovery
<input type="checkbox"/> Natural Systems Conservation and Restoration	<input type="checkbox"/> Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

<input type="checkbox"/> Charlotte	<input type="checkbox"/> Citrus	<input type="checkbox"/> Desoto	<input type="checkbox"/> Hardee	<input type="checkbox"/> Hernando	<input type="checkbox"/> Highlands	<input type="checkbox"/> Hillsborough	<input type="checkbox"/> Lake
<input type="checkbox"/> Levy	<input type="checkbox"/> Manatee	<input type="checkbox"/> Marion	<input type="checkbox"/> Pasco	<input type="checkbox"/> Pinellas	<input type="checkbox"/> Sarasota	<input type="checkbox"/> Sumter	<input checked="" type="checkbox"/> Polk

Project Description/Benefit/Cost

Description:

This proposal is for the continuation of the Q067 Southeast Reuse Loop project, including design, permitting and construction of approximately 24,800 feet of 16-20 inch reclaimed water transmission mains and other necessary appurtenances in the southeastern part of the Northeast Regional Utility Service Area (NERUSA) along Ernie Caldwell Boulevard and US Hwy 17/92. The project will provide an interconnect and loop between the Ernie Caldwell Reclaimed Water cooperative funding project (N868) and the NERUSA Loughman and Ridgewood Reclaimed Water Transmission project (N772) to enable supply to future planned subdivisions along the route. Please note this is proposed as a two-year project. The proposed reclaimed water transmission mains will provide redundancy for Polk County's current and future public access reuse customers on the east side of the NERUSA by looping reclaimed water mains along the Ernie Caldwell Blvd., US 17/92, and CR 54 corridors. Major components of our public access reuse system in this area are vulnerable to a single point of failure (e.g. the reclaimed water main along CR54). The distributed nature of our water production facilities and the interconnected nature of our wastewater system provides redundancies that do not require immediate looping along the Ernie Caldwell Blvd. corridor. However, new water mains and force mains will be necessary to serve new developments in this area according to capacity-driven recommendations outlined in Polk County's NERUSA Master Plan update in 2016. Polk County is currently negotiating with Standard Sand & Silica Co. regarding the terms of a developer's agreement for their property along Ernie Caldwell Blvd. and US 17/92. Pending the results of that negotiation, it is possible that potable water mains and wastewater force mains could be installed concurrent with the reclaimed water main. The selection process for a reclaimed water main design consultant will account for the possibility of including the potable water main and force main along this route.

Benefit:

The primary objective of this project is to meet future development demands and further reduce per capita demands on potable groundwater by at least 50%. The Measurable Benefit, which was derived from Polk County's NERUSA 2016 Master Plan update, is the supply and utilization of approximately 0.522 mgd of reclaimed water for residential irrigation use in the Central Florida Water Initiative area (CFWI), to be achieved by 5 years post project completion. An Estimated Impact Analysis used for long range planning by Polk County's Land Development Division provides reasonable assurance that the number of homes anticipated in the Q067 development area would support the demand of approximately 0.522 mgd of reclaimed water. At least 50% of the residential customers served in new developing subdivisions in the targeted area will be connected to the proposed reclaimed water system within 3 years of project completion. Polk County's water use in NERUSA is exceptionally efficient, having an average reclaimed water utilization of 383 gpd of flow and offset. This is a result of Polk County's stringent reclaimed watering restrictions that mirror the restrictions established for irrigating with potable water.

Cost:

Total project cost: \$4,373,500 (Design, Permitting, Construction); Polk County share (50%): \$2,186,750; District share: \$2,186,750, \$1,093,375 of which was requested in FY2020. \$983,375 is requested in FY2021, and the remaining amount of \$110,000 will be requested in FY2022.

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

Polk County has numerous programs and ordinances that address water conservation, flood protection, stormwater management and related water resource issues. Many of these programs are made possible by a Municipal Service Taxing Unit that was adopted in 2013 specifically for water resources activities. Primary among these programs is the County's NPDES Municipal Separate Stormwater System (MS4) permit. Polk County's Comprehensive Plan (Comp Plan), Ord. #92-36, addresses Stormwater Management, Surface Water, Groundwater, Flood Plains, Wetlands and Ecological Communities while the Land Development Code (LDC), Ord. #00-09, addresses Surface Water Protection, Wetlands Protection, Concurrency–Stormwater, Landscaping, including language for Florida Yards and Neighborhoods and Low Impact Development, and Stormwater Management. In 2013, the County adopted a fertilizer management ordinance (#13-005) that provides guidelines for fertilizer application quantities and timing and has implemented a street-sweeping program for monthly sweeping of paved roads, mainly in high priority TMDL watersheds. Active since 1985, our ambient water quality program takes quarterly samples from 134 lake and stream sites to assess nutrients, metals, and bacteria levels. The County has adopted Flood Plain Ord. #00-009 and participates in the National Flood Insurance Program administered through the Federal Emergency Management Act (FEMA). All development is required to receive the proper building and site alteration permits and new structures are required to be placed above the base flood elevation when the base flood elevation is known. We are also a participant in FEMA's Community Rating System and have received a class 8 rating. The Comp Plan requires water-conserving plumbing fixtures and landscape features to be included in the Building Code. The Building Division enforces the guidelines outlined in the 1994 Standard Plumbing Code. Polk County's Year Round Water Conservation Measures and Water Shortage Ord. #04-07 allows for improved enforcement of watering restrictions as set by the District and allows for localized limits on the use of reclaimed water to be the same as irrigation standards for potable water. Polk County Utilities' (PCU) Division Water Conservation Program Manual provides educational, regulatory, financial and operational measures for encouraging water conservation throughout our service areas. PCU's Reclaimed Water Program continues to be an integral part of the County's conservation efforts. Ord. #03-021 requires all new developments served by a wastewater treatment system that produce public access quality reclaimed water to install internal reuse distribution systems and to tie-in when reclaimed water becomes available. The Ordinance prohibits the use of potable water for irrigation once reclaimed water becomes available at a particular location. Polk County promotes Florida-Friendly landscaping and promotes the use of drought-tolerant native vegetation for landscape planting and buffer matrixes. Polk County remains an active member in both the Tampa Bay and Charlotte Harbor National Estuary Programs. The County is also a major cooperator and funding source to the Lake Action/ Education Drive, a non-profit public education group. We also work closely with the County Extension Service for public education and outreach activities, including funding of the Florida Friendly Yards program through IFAS. Our Circle B Bar Reserve hosts numerous educational events that inform the public about local natural resources. Polk County also organizes the annual 7 Rivers Water Festival, a public education event for all things related to water resources.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share		1,093,375	983,375	110,000	2,186,750
Peace River		1,093,375	983,375	110,000	2,186,750
Total		2,186,750	1,966,750	220,000	4,373,500

Matching Fund Reduction

☐ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines**Commence Target**

Milestone	Projected Date
Design and Permitting	10/31/2019
CEI	10/01/2020
Construction Transmission	01/01/2021
GIS data; As-built survey; Record drawings; Completion Certification	04/01/2022

Complete Target

Milestone	Projected Date
Design and Permitting	04/01/2021
Construction Transmission	06/01/2022
CEI	06/01/2022
GIS data; As-built survey; Record drawings; Completion Certification	12/31/2022

Data Collection Assessment:

☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name WMP - Sebring WMP Update
Project Number Q099
Cooperator Highlands County
Department Natural Resources
Contact Person Kenya Anderson
Address 505 S. Commerce Avenue
City State Zip Sebring, FL 33870
Phone # 863-402-6877
Email kanderso@hcbcc.org

Project Type:

☐ Water Supply
 ☐ Water Quality
 ☒ Flood Protection
 ☐ Natural Systems

Strategic Initiatives:

☐ Water Quality Maintenance and Improvement
 ☐ Water Quality Monitoring
☐ Alternative Water Supply
 ☐ Conservation
☐ Reclaimed Water
 ☐ Regional Water Supply Planning
☐ Emergency Flood Response
 ☒ Floodplain Management
☐ Minimum Flows and Level Establishment and Monitoring
 ☐ Minimum Flows and Levels Recovery
☐ Natural Systems Conservation and Restoration
 ☐ Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

☐ Charlotte
 ☐ Citrus
 ☐ Desoto
 ☐ Hardee
 ☐ Hernando
 ☒ Highlands
 ☐ Hillsborough
 ☐ Lake
☐ Levy
 ☐ Manatee
 ☐ Marion
 ☐ Pasco
 ☐ Pinellas
 ☐ Sarasota
 ☐ Sumter
 ☐ Polk

Project Description/Benefit/Cost

Description:

Complete a Watershed Management Plan (WMP) update for the Sebring watershed in Highlands County including watershed elevation, floodplain analysis, Level of Service determination (LOS), and Best Management Practices (BMPs) alternative analysis. This will identify solutions to the flooding concerns in the Sebring Country Estates, Sebring Hills, Lake Haven, Orange Blossom, Silver Fox, and Sebring Falls areas. FY2021 funding will be used to complete the flood plain analysis and begin the LOS and BMPs.

Benefit:

The WMP will evaluate flooding problems that exist in the watershed. Currently, flood analysis models are available and are over 10 years old. The watershed has experienced moderate changes since last study, and the watershed includes regional or intermediate storm-water systems. The Sebring watershed is one of the district's top 20 priority watersheds for WMP updates.

Cost:

Total project cost: \$350,000 Highlands County (25% REDI): \$87,500 District: \$262,5000 with \$131,250 requested in FY2020 and \$131,250 anticipated to be requested in future years.

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

Cooperator's Community Rating System class is 8 and is in the 6 to 9 range.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share		100,000	50,000		150,000
General Fund-District Wide		300,000	150,000		450,000
Total		400,000	200,000		600,000

Matching Fund Reduction

☒ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines

Project Development	12/01/2020
Data Collection and Evaluation	03/01/2021
Draft Documents	08/01/2021
Final Documents	10/01/2021
District Verifications	12/31/2021

Data Collection Assessment:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Groundwater or Surface Water Level measurements | <input checked="" type="checkbox"/> Surface Water Flow (Discharge) measurements |
| <input checked="" type="checkbox"/> Groundwater or Surface Water Quality measurements | <input checked="" type="checkbox"/> Rainfall or Other Meteorological measurements |
| <input checked="" type="checkbox"/> LIDAR/Elevation data | <input checked="" type="checkbox"/> Aerial Imagery |
| <input checked="" type="checkbox"/> Mapping/GIS data | |

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name Crooked Lake - Sunset Trail Stormwater Retrofit
Project Number Q164
Cooperator Polk County
Department Land Development Division
Contact Person Lawrence Updike
Address 3000 Sheffield Road
City State Zip Bartow, FL 33880
Phone # 863-535-2323 ext216
Email connerupdike@polk-county.net

Project Type:

☐ Water Supply ☒ Water Quality ☐ Flood Protection ☐ Natural Systems

Strategic Initiatives:

<input checked="" type="checkbox"/> Water Quality Maintenance and Improvement	<input type="checkbox"/> Water Quality Monitoring
<input type="checkbox"/> Alternative Water Supply	<input type="checkbox"/> Conservation
<input type="checkbox"/> Reclaimed Water	<input type="checkbox"/> Regional Water Supply Planning
<input type="checkbox"/> Emergency Flood Response	<input type="checkbox"/> Floodplain Management
<input type="checkbox"/> Minimum Flows and Level Establishment and Monitoring	<input type="checkbox"/> Minimum Flows and Levels Recovery
<input type="checkbox"/> Natural Systems Conservation and Restoration	<input type="checkbox"/> Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

<input type="checkbox"/> Charlotte	<input type="checkbox"/> Citrus	<input type="checkbox"/> Desoto	<input type="checkbox"/> Hardee	<input type="checkbox"/> Hernando	<input type="checkbox"/> Highlands	<input type="checkbox"/> Hillsborough	<input type="checkbox"/> Lake
<input type="checkbox"/> Levy	<input type="checkbox"/> Manatee	<input type="checkbox"/> Marion	<input type="checkbox"/> Pasco	<input type="checkbox"/> Pinellas	<input type="checkbox"/> Sarasota	<input type="checkbox"/> Sumter	<input checked="" type="checkbox"/> Polk

Project Description/Benefit/Cost

Description:

Sunset Trail is a County maintained unpaved (stabilized with asphalt millings) road located along the east side of Crooked Lake near Babson Park. There is no existing stormwater management system for the road and consequently, runoff discharges directly into Crooked Lake without treatment (Designated as an Outstanding Florida Water). During heavy rainfall events significant erosion occurs from the unpaved road surface and from areas within the right-of-way which in-turn generates large sediment deposits into the lake. Sunset Trail has limited right of way for treatment ponds and has approximately 35 feet of elevation difference from the intersection of West Mann Road down to its terminus near the lake. The County's Natural Resources Division and Roads & Drainage Division have worked with the lakefront property owners in the past for access to remove the accumulated material. This project involves the purchase of right-of-way for pond sites, installation of stormwater infrastructure to control/treat discharges into Crooked Lake, and to possibly of stabilizing the road surface with a permeable pavement surface.

Benefit:

The proposed project will provide a tremendous net benefit to one of Florida's designated Outstanding Florida Water bodies by eliminating the sediment deposits currently draining into Crooked Lake. Reducing the amount of TSS and nutrient loads will be an over benefit to the lakes ecosystem and prevent further degradation of it's water quality (see provided video). It is well known that sediment particles carry ions or molecules of nutrients, pesticides, heavy metals, and volatile chemicals, such as petroleum products, that can be released by disturbances such as stormwater runoff. By stabilizing the road surface of Sunset Trail and providing storm water treatment areas to tame runoff velocities it can be expected much of the TSS will be eliminated and/or prevented from entering Crooked Lake.

At the time of this Application, Polk County is in the process of hiring a consultant to analyze the pre vs post project nutrient removal (TSS) in order to provide an accurate BCA for the project. That information should be available by November and will be provided as a supplement to this CFA.

Cost:

This CFI application is for construction of the proposed project and acquisition of a 2-acre parcel. The reimbursable elements of the proposed project are estimated to cost \$1,000,000. It is anticipated that based on this estimate the County would be responsible for \$500,000 and SWFWMD would contribute \$500,000. The County anticipates to solely fund and complete the project design and

permitting before June 1 2020. The following is an estimated breakdown of individual project components:

- Construction \$750,000
- Property Acquisition \$250,000

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

The Polk County Building Department requires and enforces the guidelines established for municipalities in the 1994 Standard Plumbing Code (amended by County Ordinance No. 98-02). The Polk County Comprehensive Plan states that water conserving plumbing fixtures and landscape ordinances will be investigated for development to amend the Building Code, as outlined by F.S. 373.0391. The County promotes Florida-Friendly landscaping, as in F.S. 166.048 and promotes the use of drought-tolerant native vegetation for municipalities and its residents in its Comprehensive Plan, Conservation Element, and by amendment LDC2003T-11 to the Land Development Code, 10/15/2003. Ordinance 04-09 further refined the LDC, specifically, Chapter 7, Section 720, by addressing specific landscape planting requirements primarily for commercial property/development. In addition, Section 720 was revised again 01/03/05 by Ordinance 04-80 to establish specific buffer matrixes including trees.

Polk County's Year Round Water Conservation Measures and Water Shortage Ordinance (No. 04-07), authorizes law enforcement officers and representatives of any agency from within Polk County to levy fines for violations. PCU's Reclaimed Water Program requires all new developments served by a wastewater treatment system that produces public access quality reclaimed water to install internal reuse distribution systems and to tie in when reclaimed water becomes available. County Ordinance No. 03-021 prohibits the use of potable water for irrigation once reclaimed water becomes available at a particular location.

Polk County has adopted a Flood Plain Ordinance (No. 00-009 Land Development Code) as required to participate in the National Flood Insurance Program (NFIP) administered through the Federal Emergency Management Act (FEMA). All development is required to receive the proper building and site alteration permits. All new structures are required to be placed above the base flood elevation (when the base flood elevation is known). We are also a participant in FEMA's Community Rating System and have received a class 8 rating.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share			500,000		500,000
Peace River			500,000		500,000
Total			1,000,000		1,000,000

Matching Fund Reduction

☐ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines

Construction

Milestone	Projected Date
Start Construction	11/01/2020
Complete Construction	05/01/2021

Construction Bidding

Milestone	Projected Date
Procure Contractor	08/01/2020

Engineering

Milestone	Projected Date
Complete Design & Permitting	06/01/2020

Right-of-Way

Milestone	Projected Date
Complete Purchase	03/01/2020

Data Collection Assessment:

☒ Land Survey

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name Bartow Golf Course Irrigation System
Project Number Q166
Cooperator Bartow
Department Public Works Department
Contact Person Lynn Zemba
Address 190 S. Idlewood Ave.
City State Zip Bartow, FL 33830
Phone # 863-534-6878
Email llassi@chastainskillman.com

Project Type:

☒ Water Supply
 ☐ Water Quality
 ☐ Flood Protection
 ☐ Natural Systems

Strategic Initiatives:

<input type="checkbox"/> Water Quality Maintenance and Improvement	<input type="checkbox"/> Water Quality Monitoring
<input type="checkbox"/> Alternative Water Supply	<input checked="" type="checkbox"/> Conservation
<input type="checkbox"/> Reclaimed Water	<input type="checkbox"/> Regional Water Supply Planning
<input type="checkbox"/> Emergency Flood Response	<input type="checkbox"/> Floodplain Management
<input type="checkbox"/> Minimum Flows and Level Establishment and Monitoring	<input type="checkbox"/> Minimum Flows and Levels Recovery
<input type="checkbox"/> Natural Systems Conservation and Restoration	<input type="checkbox"/> Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

<input type="checkbox"/> Charlotte	<input type="checkbox"/> Citrus	<input type="checkbox"/> Desoto	<input type="checkbox"/> Hardee	<input type="checkbox"/> Hernando	<input type="checkbox"/> Highlands	<input type="checkbox"/> Hillsborough	<input type="checkbox"/> Lake
<input type="checkbox"/> Levy	<input type="checkbox"/> Manatee	<input type="checkbox"/> Marion	<input type="checkbox"/> Pasco	<input type="checkbox"/> Pinellas	<input type="checkbox"/> Sarasota	<input type="checkbox"/> Sumter	<input checked="" type="checkbox"/> Polk

Project Description/Benefit/Cost

Description:

The City of Bartow's 18-hole municipal golf course is currently irrigated by an existing 8-inch diameter well located about 4,000 feet from the Peace River. The Peace River gaging station, which is an MFL evaluation point, is immediately downstream of the golf course. A water audit of the golf course indicated that an irrigation system incorporating recent technological advances could significantly improve system efficiency and reduce overall water use. After review of the audit findings with golf course irrigation specialists, Bartow proposes to enter into a design-build agreement to construct a new fully automated centrally controlled system. They will be able to manage the water flow throughout the system, prevent over-pressurization, and more uniformly and efficiently apply the irrigation water to the turf resulting in significant water savings. Removal of approximately 5 acres of irrigated turf from the irrigation cycle will also help to reduce current water consumption. A key feature of the project includes a new central control system to monitor irrigation rotors in real time. The control system will detect and analyze leaks on the piping network and will automatically shut down the system in the event of a broken pipe network. The system will also notify the owner of the issue. The new system will allow the authorized golf course staff to have remote access to the automated controls utilizing a computer, tablet, or mobile device. This access can be done from outside the facility which is not currently possible. All rotors will be individually controlled allowing for irrigation of only the areas that need to be watered. Full circle rotors will be replaced with part circle rotors and the number of rotors will be reduced from 950 to 645 to further reduce consumption. The system will monitor rainfall and shut the system down once a rainfall event occurs. The system will then measure the amount of rainfall and deduct that amount from the planned irrigation and apply the balance. Two monitoring locations are planned on the course to allow for irrigation according to the local empirical data gathered at each rain sensor device. In addition to the new control system and sprinkler heads, new HDPE transmission pipe will replace the 30+ year old lines that have been prone to breakage.

Benefit:

By implementing the proposed improvements, the audit identified a reduction in pumping of potable ground water by an estimated 45%. This is in accordance with a July 5, 2018 report prepared by the District's Water Management consultant, Masuen Consulting, LLC. The City has reviewed the consultant's report and after consultation with golf course irrigation specialists, believes the estimated water savings are achievable with a new intelligent controlled irrigation system (see attached drawings). Utilizing this estimate and the most recent annual pumpage (i.e., Sep 2018–August 2019) of 75,845,000 gallons per year, a 45% reduction in water use would result in a savings of approximately 93,500 gallons per day. In addition, with an average of 12 main line breaks per year and an estimated loss of 125,000 to 175,000 gallons per break, replacement of the pipe is estimated to result in an annual water savings of 1.5 to 2.1 million gallons, or approximately 4,100 to 5,700 gpd.

Cost:

The estimated cost for this project is as follows. Items: Irrigation Equipment and Controls Total Cost = \$425,000 with City Cost = \$212,500 and District Cost = \$212,500. Pipe Replacement Total Cost = \$156,000 with City Cost = \$78,000 and District Cost = \$78,000. Installation Cost = \$465,000 with City Cost = \$232,500 and District Cost = \$232,500. Total Project Cost = \$1,046,000 with City Cost = \$523,000 and District Cost = \$523,000.

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

The golf course management staff will actively participate in the District's water conservation and public education programs in addition to training provided by the equipment supplier. The golf course manager will prepare and implement a detailed water conservation program whereby irrigation system programming and utilization is constantly monitored for maximum water use efficiency and conservation. The City promotes water conservation on their website with both Water Conservation Tips and by recommending the District's water saving program "Skip a week" irrigation watering during the winter months. In addition, the City's Code of Ordinances includes Article VII, Year-Round Water Conservation Measures and Water Shortage Ordinance, which was adopted to assist the District in implementation of its year-round water conservation measures and water shortage plan. This Ordinance incorporates 40D-21 and 40D-22, FAC, by reference, to regulate lawn irrigation, landscape irrigation, and related outdoor water use. Also, 100% of the City's wastewater is beneficially reused by providing cooling water to Duke Energy which reduces their groundwater withdrawal quantities.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share			523,000		523,000
Peace River			523,000		523,000
Total			1,046,000		1,046,000

Matching Fund Reduction

☐ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines

Advertise for Bids	06/01/2020
Receive Bids	07/31/2020
Award Contract	10/01/2020
Complete Construction	01/31/2021

Data Collection Assessment:

☒ No data will be collected for this project

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name Evaluation of Aquifer Recharge Technologies for Upper Peace Creek Watershed
Project Number Q170
Cooperator Winter Haven
Department Winter Haven Water
Contact Person Mike Britt
Address P.O. Box 2277
City State Zip Winter Haven, FL 338802277
Phone # 863-291-5853 ext630
Email mbritt@mywinterhaven.com

Project Type:

☒ Water Supply
 ☐ Water Quality
 ☒ Flood Protection
 ☒ Natural Systems

Strategic Initiatives:

<input type="checkbox"/> Water Quality Maintenance and Improvement	<input type="checkbox"/> Water Quality Monitoring
<input checked="" type="checkbox"/> Alternative Water Supply	<input type="checkbox"/> Conservation
<input type="checkbox"/> Reclaimed Water	<input type="checkbox"/> Regional Water Supply Planning
<input type="checkbox"/> Emergency Flood Response	<input checked="" type="checkbox"/> Floodplain Management
<input type="checkbox"/> Minimum Flows and Level Establishment and Monitoring	<input type="checkbox"/> Minimum Flows and Levels Recovery
<input checked="" type="checkbox"/> Natural Systems Conservation and Restoration	<input type="checkbox"/> Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

<input type="checkbox"/> Charlotte	<input type="checkbox"/> Citrus	<input type="checkbox"/> Desoto	<input type="checkbox"/> Hardee	<input type="checkbox"/> Hernando	<input type="checkbox"/> Highlands	<input type="checkbox"/> Hillsborough	<input type="checkbox"/> Lake
<input type="checkbox"/> Levy	<input type="checkbox"/> Manatee	<input type="checkbox"/> Marion	<input type="checkbox"/> Pasco	<input type="checkbox"/> Pinellas	<input type="checkbox"/> Sarasota	<input type="checkbox"/> Sumter	<input checked="" type="checkbox"/> Polk

Project Description/Benefit/Cost

Description:

This project will determine whether it is feasible to use aquifer recharge wells (upper and lower aquifer), rapid infiltration basins and surficial aquifer recharge technologies for managing excess surface water in the Upper Peace Creek Watershed (in the Winter Haven area), to improve flooding, water supply and natural systems. Components of this study will include: an estimate of excess water available in the Peace Creek system; determination as to whether enough excess surface water is available to meet future needs; determination and recommendation of potential beneficial uses of excess water, including MFL recovery of Ridge Lakes and Peace River; benefits for the management of lake levels in the SWIM Priority Chain of Lakes; wetland restoration alternatives; benefits for future water supply; water quality analysis of surface and groundwater systems; evaluation of confining units and recharge potential; recommendations for soil borings and construction of surficial, UFA and LFA monitor wells; priority locations and available land; identification of optimum locations to manage excess water from the Peace Creek system; creation of an aquifer recharge project plan to meet multiple water resource benefits including flood control, water supply and natural systems; conceptual design plans, costs and priorities for recommended projects; potential of incorporating recovered water into reuse water systems; and recommending surface and groundwater monitoring system.

Benefit:

Recovering excess water during flood conditions is expected benefit water supply, MFLs in the SWUCA region, help manage lake levels, and reduce flooding.

Cost:

Costs for this project are estimated as follows; Review Existing Information - \$25,000; Evaluate Excess Water Sources - \$100,000; Determine Water Resource Needs - \$50,000; Develop an Aquifer Recharge Project Plan - \$25,000; Prepare Draft Feasibility Study - \$25,000; Prepare Final Feasibility Study - \$25,000; Prepare Conceptual Design Plans and Cost Estimates - \$50,000; Costs are estimated by city staff based on previous feasibility studies.

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

The City of Winter Haven has adopted ordinances for emergency water restrictions, stormwater treatment exceeding state standards, and a tiered rate structure water discourages the overuse of potable water. The city distributes 1MGD of reuse water and is increasing this capacity to and additional 4MGD. The City adopted and ordinance for flood plain management that requires consistency with the National Flood Insurance Program and has a Class 8 status. The City has adopted a Sustainable Water Resource Management Plan and is undertaking a One Water Master Plan.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share		100,000	50,000		150,000
Peace River		100,000	50,000		150,000
Total		200,000	100,000		300,000

Matching Fund Reduction

☐ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines

April, 2022 - August, 2022

Milestone

Evaluate Excess Water

Projected Date

08/31/2022

January, 2022 - May, 2022

Milestone

Prepare Final Feasibility Study

Projected Date

05/31/2022

July, 2021 - September, 2021

Milestone

Determining Water Resource Needs

Projected Date

09/30/2021

June, 2021 - July, 2021

Milestone

Prepare Final Feasibility Study

Projected Date

07/31/2021

March, 2021 - June, 2021

Milestone

Review Existing Information

Projected Date

06/30/2021

May, 2022 - July, 2022

Milestone

Prepare Conceptual Design Plans

Projected Date

07/31/2022

October, 2020 - March, 2021

Milestone

Hire Consultant

Projected Date

03/31/2021

September, 2021 - December, 2021

Milestone

Develop an Aquifer Recharge Plan

Projected Date

12/31/2021

Data Collection Assessment:

☒ No data will be collected for this project

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name Winter Haven Southern Chain of Lakes - Lake Lulu Watershed Protection Project
Project Number Q174
Cooperator Polk County Natural Resources
Department Environmental Resources
Contact Person Tabitha Biehl
Address 4399 Winter Lake Road
City State Zip Lakeland, FL 33803
Phone # 863-668-4673 ext201
Email tabithabiehl@polk-county.net

Project Type:

☐ Water Supply
 ☒ Water Quality
 ☒ Flood Protection
 ☒ Natural Systems

Strategic Initiatives:

<input checked="" type="checkbox"/> Water Quality Maintenance and Improvement	<input type="checkbox"/> Water Quality Monitoring
<input type="checkbox"/> Alternative Water Supply	<input type="checkbox"/> Conservation
<input type="checkbox"/> Reclaimed Water	<input type="checkbox"/> Regional Water Supply Planning
<input type="checkbox"/> Emergency Flood Response	<input checked="" type="checkbox"/> Floodplain Management
<input type="checkbox"/> Minimum Flows and Level Establishment and Monitoring	<input type="checkbox"/> Minimum Flows and Levels Recovery
<input checked="" type="checkbox"/> Natural Systems Conservation and Restoration	<input type="checkbox"/> Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

<input type="checkbox"/> Charlotte	<input type="checkbox"/> Citrus	<input type="checkbox"/> Desoto	<input type="checkbox"/> Hardee	<input type="checkbox"/> Hernando	<input type="checkbox"/> Highlands	<input type="checkbox"/> Hillsborough	<input type="checkbox"/> Lake
<input type="checkbox"/> Levy	<input type="checkbox"/> Manatee	<input type="checkbox"/> Marion	<input type="checkbox"/> Pasco	<input type="checkbox"/> Pinellas	<input type="checkbox"/> Sarasota	<input type="checkbox"/> Sumter	<input checked="" type="checkbox"/> Polk

Project Description/Benefit/Cost

Description:

(A complete and formatted version of the description is uploaded in documents) This application is for a feasibility study examining the Winter Haven Southern Chain of Lakes - Lake Lulu Watershed Protection Project (Project) that will create water quality improvement, provide flood protection and provide natural systems protection. Lake Lulu (WBID 1521) is part of the Winter Haven Southern Chain of Lakes (SCOL) and is the headwater of the Wahneta Farms Drainage Canal, which ultimately leads to the Peace River. The SCOL has a TMDL for nutrients (total phosphorus – TP) and the 315-acre lake receives stormwater runoff from both county and City of Winter Haven lands. Both organizations are working together and have an interest in this project. The lake has a 315-acre (1,270,000 m2) surface area and has a somewhat irregular oval shape. It is bounded on the north primarily by private residences. It has no eastern or western sides, as the lake's shore comes to a point on those two sides. The entire south side of the lake is lined with a swampy area and a dense growth of trees. Lake Lulu is directly connected by canal to Lake Shipp to the west and Lake Eloise and Lake Roy to the east. Overall the goal is to improve the health of Lake Lulu, and the water that exits the Chain of Lakes System entering the Wahneta Drainage Canal ultimately feeding the Peace River. This feasibility study will evaluate several different options to determine what will maximize the protection of the natural system wetlands surrounding Lake Lulu and improving the water quality leaving Lake Lulu. It explores the advantages of addressing the landscape and soils around the lake that may still be polluting the water as it leaves the waterbody. Incorporates future development plans around the lake that could contribute to the recreational and educational aspects of the Winter Haven Chain of Lakes. By preserving the landscape around Lake Lulu as natural wetlands and incorporate recommend action items we will optimize water quality improvement in the watershed. The southern shoreline project area is a little over 200 acres. Currently 40 acres has some level of public ownership or preservation, 21 acres City of Winter Haven, 19 acres has a SWFWMD easement. Approximately 129 acres is in private ownership open to placing an easement over the lands. The remaining 42 acres would be evaluated during the feasibility study as to the necessity and if the opportunity presented the County may pursue acquisition. This would be the acquisition assistance sought from the District for this project in addition to the feasibility study. The feasibility study will address the linear feet of shoreline protected/ restored, non-native species removal needs and potential plantings with minimal earthwork, providing a acres restored and cost / acre restored number. While the southern wetlands appears to be natural in condition, some research on the project area reviewing past aerials (1952-1988) does depict clearing in the wetlands and ditching. This study would take a closer look at the topography of the site and evaluate areas that may need minimal earthwork to restore the wetlands or optimize the hydrology of the site. This project application will study the feasibility and provide the options to enhance the wetland system on the southern shoreline of Lake Lulu focusing on the southern shoreline to improve water quality, regional flood protection and natural systems protection. The Winter Haven Chain of Lakes S.W.I.M plan approved in 1998 lists the Winter Haven Chain of Lakes as a priority water body. The

study will determine benefit measurements in regards to protecting the largest last remaining natural shoreline on the Southern Winter Haven Chain of Lakes.

Benefit:

This feasibility study will focus on the southern shoreline of Lake Lulu to improve water quality, regional flood protection and natural systems protection. The Winter Haven Chain of Lakes S.W.I.M plan approved in 1998 lists the Winter Haven Chain of Lakes as a priority water body. The focus of this study is to determine benefit measurements in regards to protecting the largest last remaining natural shoreline on the Southern Winter Haven Chain of Lakes. The measurable benefits for this feasibility is the completed watershed evaluation and proposed benefits to the recommended project.

Cost:

The total project cost for the Winter Haven Southern Chain of Lakes - Lake Lulu Watershed Protection Project for feasibility study and acquisition of land is estimated at \$2,260,000. The breakdown in cost is provided as an additional attachment. This applications estimates that \$160,000 will be contributed towards the feasibility study and the remaining \$2,100,000. The County is proposing a 50/50 split between Polk and the District funding, resulting in shared contribution to the project of \$1,130,000.

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

Polk County has numerous programs and ordinances that address water conservation, flood protection, stormwater management and related water resource issues. Many of these programs are made possible by a Municipal Service Taxing Unit that was adopted in 2013 specifically for water resources activities. Primary among these programs is the County's NPDES Municipal Separate Stormwater System (MS4) permit. Polk County's Comprehensive Plan (Comp Plan), Ord. #92-36, addresses Stormwater Management, Surface Water, Groundwater, Flood Plains, Wetlands and Ecological Communities while the Land Development Code (LDC), Ord. #00-09, addresses Surface Water Protection, Wetlands Protection, Concurrency–Stormwater, Landscaping, including language for Florida Yards and Neighborhoods and Low Impact Development, and Stormwater Management. In 2013, the County adopted a fertilizer management ordinance (#13-005) that provides guidelines for fertilizer application quantities and timing and has implemented a street-sweeping program for monthly sweeping of paved roads, mainly in high priority TMDL watersheds. Active since 1985, our ambient water quality program takes quarterly samples from 134 lake and stream sites to assess nutrients, metals, and bacteria levels. The County has adopted Flood Plain Ord. #00-009 and participates in the National Flood Insurance Program administered through the Federal Emergency Management Act (FEMA). All development is required to receive the proper building and site alteration permits and new structures are required to be placed above the base flood elevation when the base flood elevation is known. We are also a participant in FEMA's Community Rating System and have received a class 8 rating. The Comp Plan requires water-conserving plumbing fixtures and landscape features to be included in the Building Code. The Building Division enforces the guidelines outlined in the 1994 Standard Plumbing Code. Polk County's Year Round Water Conservation Measures and Water Shortage Ord. #04-07 allows for improved enforcement of watering restrictions as set by the District and allows for localized limits on the use of reclaimed water to be the same as irrigation standards for potable water. Polk County Utilities' (PCU) Division Water Conservation Program Manual provides educational, regulatory, financial and operational measures for encouraging water conservation throughout our service areas. PCU's Reclaimed Water Program continues to be an integral part of the County's conservation efforts. Ord. #03-021 requires all new developments served by a wastewater treatment system that produce public access quality reclaimed water to install internal reuse distribution systems and to tie-in when reclaimed water becomes available. The Ordinance prohibits the use of potable water for irrigation once reclaimed water becomes available at a particular location. Polk County promotes Florida-Friendly landscaping and promotes the use of drought-tolerant native vegetation for landscape planting and buffer matrixes. Polk County remains an active member in both the Tampa Bay and Charlotte Harbor National Estuary Programs. The County is also a major cooperator and funding source to the Lake Action/ Education Drive, a non-profit public education group. We also work closely with the County Extension Service for public education and outreach activities, including funding of the Florida Friendly Yards program through IFAS. Our Circle B Bar Reserve hosts numerous educational events that inform the public about local natural resources. Polk County also organizes the annual 7 Rivers Water Festival, a public education event for all things related to water resources.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share			1,130,000		1,130,000
Peace River			1,130,000		1,130,000
Total			2,260,000		2,260,000

Matching Fund Reduction

☐ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines

Request for Bids	09/01/2021
Approval of Cooperative Agreement	12/01/2021
Notice to Proceed (NTP) to Contractor	12/01/2021
Data Collection and Evaluation	03/01/2022
Draft Documents	09/01/2022
Final Documents	12/01/2022
Acquisition	12/01/2022

Data Collection Assessment:

☒ Groundwater or Surface Water Quality measurements ☒ LIDAR/Elevation data ☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name Winter Haven/Upper Peace Creek Watershed Optimization Model
Project Number Q176
Cooperator Winter Haven
Department Winter Haven Water
Contact Person Mike Britt
Address P.O. Box 2277
City State Zip Winter Haven, FL 338802277
Phone # 863-291-5853 ext630
Email mbritt@mywinterhaven.com

Project Type:

☒ Water Supply
 ☐ Water Quality
 ☒ Flood Protection
 ☒ Natural Systems

Strategic Initiatives:

<input type="checkbox"/> Water Quality Maintenance and Improvement	<input type="checkbox"/> Water Quality Monitoring
<input checked="" type="checkbox"/> Alternative Water Supply	<input type="checkbox"/> Conservation
<input type="checkbox"/> Reclaimed Water	<input type="checkbox"/> Regional Water Supply Planning
<input type="checkbox"/> Emergency Flood Response	<input checked="" type="checkbox"/> Floodplain Management
<input type="checkbox"/> Minimum Flows and Level Establishment and Monitoring	<input type="checkbox"/> Minimum Flows and Levels Recovery
<input checked="" type="checkbox"/> Natural Systems Conservation and Restoration	<input type="checkbox"/> Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

<input type="checkbox"/> Charlotte	<input type="checkbox"/> Citrus	<input type="checkbox"/> Desoto	<input type="checkbox"/> Hardee	<input type="checkbox"/> Hernando	<input type="checkbox"/> Highlands	<input type="checkbox"/> Hillsborough	<input type="checkbox"/> Lake
<input type="checkbox"/> Levy	<input type="checkbox"/> Manatee	<input type="checkbox"/> Marion	<input type="checkbox"/> Pasco	<input type="checkbox"/> Pinellas	<input type="checkbox"/> Sarasota	<input type="checkbox"/> Sumter	<input checked="" type="checkbox"/> Polk

Project Description/Benefit/Cost

Description:

The Winter Haven/Upper Peace Creek area is one of the fastest growing metropolitan regions in the country and also located in an area that needs restoration. In 2016, the Peace Creek Watershed Summary Report and Implementation Plan, cooperatively funded by the City of Winter Haven and SWFWMD (Project N564), recommended that the City and District jointly address flooding, Chain of Lakes lake level management, upper Peace River recovery, aquifer recharge, water supply, natural system restoration and also consider economic development and recreation. The report encouraged a systems view of the watershed and estimated that necessary planning work could cost \$1,650,000 and necessary projects could reach \$122M, including design and construction. The recommendations of the Peace Creek Watershed Summary Report and Implementation Plan that will be addressed include: develop a water budget for various hydrologic conditions; update surface and groundwater models; create an integrated ground and surface water model; develop a watershed optimization/conjunctive use planning model that incorporates economic, social and environmental considerations, including future development; create a flood mitigation plan with a list of priority projects; evaluate impacts of future development; evaluate water storage and treatment opportunities; consider future needs for meeting Peace River minimum flows; evaluate land requirements for storage and treatment; create a watershed monitoring plan, if recommended; and create a financial plan.

Benefit:

This effort will proactively address existing and anticipated flooding, natural systems, water supply and economic development needs under various hydrologic conditions. Addressing these related water resource scenarios holistically is expected to save considerable funding in the future. The results of this effort will consider the needs of Winter Haven lakes, Ridge lakes and Peace River. This effort will be closely coordinated with the Peace Creek Aquifer Recharge evaluation project also being recommended during this funding cycle. As the Peace Creek Watershed Summary Report indicated, there is the possibility that \$122M in projects could be necessary to ensure that this watershed is sustainable long term. Doing the proper planning work will ensure that these projects are well planned from the outset.

Cost:

This project will cost \$750,000 and include the following elements: Developing a water budget: \$50,000; Developing an integrated surface/groundwater model: \$250,000; Developing an Optimization Model: \$100,000; Flood Mitigation Plan: \$150,000; Watershed Monitoring Plan: \$100,000; Financial Plan: \$50,000; Final Report: \$50,000.

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

The City of Winter Haven has adopted ordinances for stormwater management, flood protection and emergency water restrictions and has adopted a tiered rate structure to conserve potable water. The City distributes 1MGD of reuse water to offset potable water supplies and has adopted a Sustainable Water Resource Management Plan. The City is also undertaking an Integrated/One Water Master Plan.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share		225,000	150,000		375,000
Peace River		225,000	150,000		375,000
Total		450,000	300,000		750,000

Matching Fund Reduction

☐ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines

Hire Consultant	03/31/2021
Integrated Surface and Groundwater Model	03/31/2022
Flood Mitigation Plan	10/31/2022
Final Report	12/31/2022

Data Collection Assessment:

☒ No data will be collected for this project

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name Reclaimed Water - Winter Haven Southern Basin Aquifer Recharge
Project Number Q177
Cooperator Winter Haven
Department Winter Haven Water
Contact Person Mike Britt
Address P.O. Box 2277
City State Zip Winter Haven, FL 338802277
Phone # 863-291-5853 ext630
Email mbritt@mywinterhaven.com

Project Type:

☒ Water Supply
 ☐ Water Quality
 ☐ Flood Protection
 ☒ Natural Systems

Strategic Initiatives:

<input type="checkbox"/> Water Quality Maintenance and Improvement	<input type="checkbox"/> Water Quality Monitoring
<input checked="" type="checkbox"/> Alternative Water Supply	<input type="checkbox"/> Conservation
<input type="checkbox"/> Reclaimed Water	<input type="checkbox"/> Regional Water Supply Planning
<input type="checkbox"/> Emergency Flood Response	<input type="checkbox"/> Floodplain Management
<input type="checkbox"/> Minimum Flows and Level Establishment and Monitoring	<input type="checkbox"/> Minimum Flows and Levels Recovery
<input checked="" type="checkbox"/> Natural Systems Conservation and Restoration	<input type="checkbox"/> Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

<input type="checkbox"/> Charlotte	<input type="checkbox"/> Citrus	<input type="checkbox"/> Desoto	<input type="checkbox"/> Hardee	<input type="checkbox"/> Hernando	<input type="checkbox"/> Highlands	<input type="checkbox"/> Hillsborough	<input type="checkbox"/> Lake
<input type="checkbox"/> Levy	<input type="checkbox"/> Manatee	<input type="checkbox"/> Marion	<input type="checkbox"/> Pasco	<input type="checkbox"/> Pinellas	<input type="checkbox"/> Sarasota	<input type="checkbox"/> Sumter	<input checked="" type="checkbox"/> Polk

Project Description/Benefit/Cost

Description:

The Winter Haven area is located in the Southern Water Use Caution Area because of historical impacts to lake levels and river flows. The area south of Lake Lulu was identified in the 2012 Aquifer Recharge Feasibility Study (cooperatively funded between the SWFWMD and City of Winter Haven) as a high priority recharge area to benefit the Floridan Aquifer and lake levels in the SWIM Priority Southern Chain of Lakes. The area South of Lake Lulu was purchased for the future Harmony on Lake Eloise Development in 2015. The City of Winter Haven reuse interconnect project (cooperatively funded by the SWFWMD and City of Winter Haven) with access to 4 MGD of highly treated reuse water will run adjacent to this future development site. The City of Winter Haven and SWFWMD are currently cooperating on a feasibility study to recharge reuse water at this site that will be complete in September, 2020. Preliminary results indicate that this study will recommend that this site could be used for aquifer recharge in conjunction with the future development project. The proposed project will implement the recommendations of the feasibility study to design and construct an aquifer recharge system in conjunction with the Harmony on Lake Eloise Development south of Lake Lulu to benefit regional aquifer levels and the lake levels of the Southern Chain of Lakes. It is anticipated that construction of aquifer recharge components will occur as the development moves forward, including recharge areas in conjunction with right of ways, open space and possibly stormwater management areas.

Benefit:

It is anticipated that this project will recharge up to 500,000 gpd of treated reuse water to create alternative water supplies, benefit lake levels for the SWIM Priority Southern Chain of Lakes and benefit lake levels for Lake McLeod which is not meeting MFLs.

Cost:

Construction for this project is estimated to cost \$4,000,000 spread over 2 years.

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

The City of Winter Haven has adopted ordinances for emergency water restrictions, stormwater treatment and a tiered rate structure to conserve potable water. Winter Haven distributes 1MGD of reuse water to offset groundwater and has adopted a floodplain protection ordinance. The City has adopted a Sustainable Water Resource Management Plan and is undertaking a One Water Master Plan.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
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Applicant Share	150,000	500,000	1,500,000	2,150,000
Peace River	150,000	500,000	1,500,000	2,150,000
Total	300,000	1,000,000	3,000,000	4,300,000

Matching Fund Reduction

☐ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines

Hire Consultant	03/31/2020
Preliminary Design	12/31/2021
Permitting	09/30/2022
Final Design	12/31/2022
Construction Contractor Award	03/31/2023
Final Construction	12/31/2024

Data Collection Assessment:

☒ No data will be collected for this project

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name Crystal Lake Sediment Management Feasibility Study
Project Number Q178
Cooperator City of Lakeland
Department Lakes And Stormwater
Contact Person Laurie Smith
Address 407 Fairway Avenue
City State Zip Lakeland, FL 33801
Phone # 863-834-6276
Email Laurie.Smith@lakelandgov.net

Project Type:

☐ Water Supply ☒ Water Quality ☐ Flood Protection ☐ Natural Systems

Strategic Initiatives:

☒ Water Quality Maintenance and Improvement ☐ Water Quality Monitoring
☐ Alternative Water Supply ☐ Conservation
☐ Reclaimed Water ☐ Regional Water Supply Planning
☐ Emergency Flood Response ☐ Floodplain Management
☐ Minimum Flows and Level Establishment and Monitoring ☐ Minimum Flows and Levels Recovery
☐ Natural Systems Conservation and Restoration ☐ Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

☐ Charlotte ☐ Citrus ☐ Desoto ☐ Hardee ☐ Hernando ☐ Highlands ☐ Hillsborough ☐ Lake
☐ Levy ☐ Manatee ☐ Marion ☐ Pasco ☐ Pinellas ☐ Sarasota ☐ Sumter ☒ Polk

Project Description/Benefit/Cost

Description:

This cooperative funding request is to conduct a feasibility/pilot study on Crystal Lake in Lakeland, FL to further investigate sediment nutrient treatment alternatives that were tested in a laboratory bench scale evaluation. Two previous project phases were conducted jointly by the City of Lakeland and Polk County to evaluate stormwater, groundwater and sediment nutrient loads to Crystal Lake. Results from the previous studies indicated that sediment nutrient cycling in the lake was by far the greatest load contributor, representing approximately 90% of the total nutrient load to the lake. Since sediments were found to be a major contributing source of nutrients in Crystal Lake, BMPs such as targeted dredging, aeration, and/or chemical treatment/capping alternatives may be necessary for internal nutrient reduction. Results of the Phase II monitoring and sediment flux study estimated that the annual average internal sediment nutrient loads are 1,378.8 lb TP/yr and 5,031.8 lb ammonia-N/yr respectively. Preliminary chemical treatment alternatives displayed effective results at reducing total phosphorus flux rates and loads from the sediments. As part of the recommendations from the Phase II flux and groundwater seepage study, a feasibility study was recommended instead of moving into full-scale implementation since one of the highest ranked alternatives is relatively new with very few projects implemented at a larger scale in Florida. The feasibility study would assess in-situ performance of an innovative chemical inactivation product called Phoslock, which is a lanthanum-modified bentonite clay that is used as a remediation tool to strip dissolved phosphorus from the water column and increase the sediment phosphorus sorption capacity. This product is non-toxic and used in drinking water treatment processes. However, without other similar full-scale projects to assess performance and potential impacts to water quality and/or the ecosystem, a feasibility project at a smaller field scale is warranted. Phoslock had a bench-scale derived performance efficiency of 86% for TP reduction, and was the top ranked alternative from the Phase II study.

Benefit:

The Crystal Lake Feasibility Study will assess the effectiveness of a sediment management and treatment BMP in a pilot scale demonstration project. The evaluation of sediment management BMP for water quality improvement through this feasibility study will directly impact the Districts main areas of responsibility including the development of projects to maintain and improve water

quality, as well as the enhancement of the ecological health of lakes and surrounding systems. Information gained from the results of this study could be used broadly for future lake management and water quality restoration projects. The direct impacts to water quality in terms of in-situ performance efficiencies and load reductions for Phoslock application as a chemical inactivation amendment to reduce sediment nutrient cycling will be important for many other impaired lakes under the SWFWMD's purview.

Cost:

The total cost for the feasibility/pilot study is expected to be \$200,000 for FY2021, with the City/County share of the project to be 50%, or \$100,000 and the District's share to be \$100,000. The costs include pilot scale project design, implementation of isolated treatment, and pre/post pilot monitoring, analysis and reporting. It is important to note that, to date, the City and County have spent over \$160,000 on the previous two phases, without any other additional funding from state or federal entities, to assess nutrient sources and to develop conceptual BMPs for Crystal Lake.

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

The City of Lakeland maintains a continued commitment to stormwater management. The City adopted a stormwater utility in December 1999 to provide a dedicated funding source for operation and maintenance of the City's stormwater system, pollution abatement devices and lake improvement projects. The stormwater utility fee is \$6.00 per month for single-family residential customers. Mobile homes and attached multi-living residential units are assessed \$4.00 and \$3.50 per month, respectively. Fees for non-residential customers are based on the amount of impervious (pavement, roofs, sidewalk) area on the property. These customers are assessed a monthly rate of \$6.00 per 5,000 square feet of impervious area. The City provides a robust street sweeping program which operates six street sweepers that maintain 551 lane miles of curbed street. In one year these street sweepers have cleaned the equivalent of 18,787 miles of streets and collected 2,555 tons of debris. The street sweeper vehicles are wrapped with eye-catching graphics to help educate the community about pollution prevention. Toby's Water Warriors campaign as well as storm drain markers provide public education for City of Lakeland Lakes and Stormwater program. The City, in cooperation with other Polk County MS4 entities, has a professionally developed stormwater education public service advertisement that plays at most of the area theatres and reaches tens of thousands of movie goers per year. City codes prohibit the placement or deposition of compost, brush, grass, etc. in or on any City street. Fines may cost up to \$500.00 per incident.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share	161,283		100,000		261,283
Peace River			100,000		100,000
Total	161,283		200,000		361,283

Matching Fund Reduction

☐ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines

Develop Feasibility/Pilot Design and Monitoring Plan

Milestone	Projected Date
Feasibility/Pilot Implementation Design Development	03/02/2021
Feasibility/Pilot Pre/Post Monitoring Plan Development	05/03/2021

Implement Feasibility/Pilot Demonstration Project

Milestone	Projected Date
Pre monitoring	06/01/2021
Commencement of pilot study	07/01/2021
Completion of pilot study	08/01/2022
Post monitoring completion and reporting	12/31/2022

Data Collection Assessment:

☒ Groundwater or Surface Water Quality measurements ☒ Sediment

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name Highlands Hammock SP/Little Charlie Bowlegs WMP
Project Number Q181
Cooperator Florida State Parks
Department Florida Park Service
Contact Person Rosalind Rowe
Address 1846 S. Tamiami Trl
City State Zip Osprey, FL 34299
Phone # 941-882-7203
Email Rosalind.Rowe@FloridaDEP.gov

Project Type:

☐ Water Supply
 ☐ Water Quality
 ☒ Flood Protection
 ☒ Natural Systems

Strategic Initiatives:

<input type="checkbox"/> Water Quality Maintenance and Improvement	<input type="checkbox"/> Water Quality Monitoring
<input type="checkbox"/> Alternative Water Supply	<input type="checkbox"/> Conservation
<input type="checkbox"/> Reclaimed Water	<input type="checkbox"/> Regional Water Supply Planning
<input type="checkbox"/> Emergency Flood Response	<input checked="" type="checkbox"/> Floodplain Management
<input type="checkbox"/> Minimum Flows and Level Establishment and Monitoring	<input type="checkbox"/> Minimum Flows and Levels Recovery
<input checked="" type="checkbox"/> Natural Systems Conservation and Restoration	<input type="checkbox"/> Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

<input type="checkbox"/> Charlotte	<input type="checkbox"/> Citrus	<input type="checkbox"/> Desoto	<input checked="" type="checkbox"/> Hardee	<input type="checkbox"/> Hernando	<input checked="" type="checkbox"/> Highlands	<input type="checkbox"/> Hillsborough	<input type="checkbox"/> Lake
<input type="checkbox"/> Levy	<input type="checkbox"/> Manatee	<input type="checkbox"/> Marion	<input type="checkbox"/> Pasco	<input type="checkbox"/> Pinellas	<input type="checkbox"/> Sarasota	<input type="checkbox"/> Sumter	<input type="checkbox"/> Polk

Project Description/Benefit/Cost

Description:

This is a three-year project to complete a Watershed Evaluation and Watershed Management Plan (WMP) for the 46 square miles of the Little Charlie Bowlegs Creek basin in Highlands and Hardee Counties; 14 square miles of this watershed is Highlands Hammock State Park, which will additionally require a Natural Systems surface water improvement and management plan. The project includes floodplain analysis, Level of Service determination (LOS), and Best Management Practices (BMPs) alternative analyses for both Floodplain Management of the entire basin and surface water management for the park within the basin. This application for FY2021 funding will be used to initiate the watershed assessment and evaluation. The Watershed Assessment/Evaluation will include assembly and evaluation of watershed data: topographic mapping; survey of stormwater elements; preliminary watershed connectivity mapping; GIS inventories of wetlands, water bodies, infrastructure, stormwater elements and control points; preliminary watershed link/connectivity mapping; and initial GIS processing and development for peer review. There is currently no assessment for this watershed; this study fills a gap in SWFWMD information and planning for this portion of the Peace River Basin.

This project was initiated by concerns from District 4 Florida Park Service and Highlands Hammock State Park regarding flooding and erosion problems in the park and the impact of the hydrology on the health of several natural communities, including the slough and blackwater stream that become Charlie Bowlegs Creek. The concerns cannot be addressed adequately by looking only at the 9200-acre "watershed" within the park boundary. Water flows into the park via Tiger Branch along the northeast corner, Haw Branch along the east-central area, the slough system along the southern-most boundary that becomes Little Charley Bowlegs Creek in the park, and the sheet flow and channeled drainage from adjacent lands' agricultural works from the southwest corner. The water ultimately exits the park at the northwest corner through Little Charley Bowlegs Creek. The Charley Bowlegs Creek basin includes all these systems, and Highlands Hammock State Park sits at the core of the basin. The highest priority area for flooding and erosion management is the northern-most section of the park. The highest priority area for natural systems management is essentially through the central core of the park, south to north, and the water quality going into and out of Little Charlie Bowlegs Creek. Highlands Hammock State Park has one of the highest state park rankings for biodiversity, including many endemic, threatened and endangered species. Several are found only in a very few counties in the heart of Florida. In the past, an extensive system of ditches, dikes, dams and canals were installed under the mistaken belief that fire and drought would destroy the park and that maintaining water along certain perimeters would offer protection. The changes in surface flow from those structures, and from

roads, are impacting several natural communities, including the one for which the park is named. A full assessment of the basin is needed to make the best decisions about what should be changed at the park, and in what manner.

Benefit:

The benefits include: 1) having comprehensive baseline data as an ongoing resource for watershed management of the Charley Bowlegs watershed, for this, a comprehensive geodatabase will be available for the basin; 2) BMP recommendations for projects for flood protection, water quality, and natural system improvement, restoration and preservation in the watershed; and 3) long-term protection of natural communities that are rich in biodiversity, particularly Florida endemic species.

Cost:

Total Project Cost: \$540,000

Expenses: Contracted services to complete a Watershed Evaluation, a Watershed Management Plan for 49 square miles of Little Charlie Bowlegs basin, and a Natural Systems Hydrology Management Plan for Highlands Hammock State Park, contained within the basin.

Costs for Current FY: \$150,000

Expenses: Contracted services for Project Plan, assembly and evaluation of all applicable watershed data and the initial GIS processing and development for peer review.

Costs for subsequent years: \$390,000

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

This project will complete Object 1 in the highlands Hammock State Park 2018 ten-year Unit Management Plan's Goal for Hydrologic Management. This objective is to provide a full-park hydrology assessment. It also will assist with completing Objects 2 and 3 of that goal, by defining management BMPs for at least three problem areas in the Park, and subsequently define at least three projects to begin improving surface water flows in the park. It addresses several key requirements of the Highlands County 2030 Comprehensive Plan (Protect Cultural Resources, Obj.7; Protect Natural Resources, Obj.9; and Hazard Mitigation, Obj. 11). For Hardee County, it addresses their Conservation Development Program, Policy L9, Conservation Element Goals C1, C4 and C5.

Previous hydrology studies: One, by PBS&J, 2006. *Lake Wales Ridge Hydrologic Restoration – Highland Hammock State Park*, Highlands County, Florida. Prepared for SWFWMD Brooksville FL. PBS&J, Tampa, FL. This study was done as part of the park's acquisition of the Seven Lakes parcel, approximately 650 acres in the southeast corner of the park.

For the Watershed Assessment portion of the project, Florida Park Service staff will share (and develop, as needed) GIS data for, and ArcGIS maps of, improved and unimproved roads, fire lines, ditches, dikes, moats, dams, weirs, canals and other likely hydrology-changing structures introduced within the 9200+ acres of the park. Data gathered for such projects & construction contracts will be identified and shared. Also, the Park maintains a historic collection of maps and photographs, many of which date from the 1930s; staff can research and identify those useful to evaluating historical surface water data. For the Watershed Management Plan's BMP analyses and the Natural Systems portion of the plan, FPS will provide GIS and ArcGIS data for locations of endemic, threatened and imperiled species and imperiled natural communities, as well as data for all archaeological, historic and cultural sites registered in the Park. The park will also assist SWFWMD with designating points within the park for collecting essential data for the Natural Systems aspect of the BMP modeling.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share			75,000	195,000	270,000
Peace River			75,000	195,000	270,000
Total			150,000	390,000	540,000

Matching Fund Reduction

☐ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines

FY2021

Milestone	Projected Date
Project Development	02/20/2021
Data acquisition	06/30/2021
Geodatabase of Model Features	07/30/2021
Watershed Evaluation	08/30/2021

FY2022

Milestone

Peer Review and Open House
Watershed Model Development
WMP Project Development

Projected Date

02/28/2022
03/30/2022
12/30/2022

FY2023**Milestone**

LOS Determination
Floodplain Results
Surface Water Resource Assessment
BMP Alternative Analysis (FPM)
BMP Natural Systems Analysis
Final Approved Deliverables

Projected Date

03/30/2023
04/30/2023
05/30/2023
07/30/2023
08/30/2023
09/30/2023

Data Collection Assessment:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Groundwater or Surface Water Level measurements | <input checked="" type="checkbox"/> Surface Water Flow (Discharge) measurements |
| <input checked="" type="checkbox"/> Groundwater or Surface Water Quality measurements | <input checked="" type="checkbox"/> Rainfall or Other Meteorological measurements |
| <input checked="" type="checkbox"/> Lithologic/Geophysical data | <input checked="" type="checkbox"/> Land Survey |
| <input checked="" type="checkbox"/> LIDAR/Elevation data | <input checked="" type="checkbox"/> Aerial Imagery |
| <input checked="" type="checkbox"/> Mapping/GIS data | <input checked="" type="checkbox"/> Other data collection: As determined during initial assessments |

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SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name Brackish - Polk Regional Water Cooperative Southeast Wellfield
Project Number Q184
Cooperator PRWC
Department
Contact Person Peter Hernandez
Address 601 S. Lake Destiny Road
City State Zip Maitland, FL 32751
Phone # 407-906-1776
Email peter.hernandez@wright-pierce.com

Project Type:

☒ Water Supply
 ☐ Water Quality
 ☐ Flood Protection
 ☐ Natural Systems

Strategic Initiatives:

<input type="checkbox"/> Water Quality Maintenance and Improvement	<input type="checkbox"/> Water Quality Monitoring
<input checked="" type="checkbox"/> Alternative Water Supply	<input type="checkbox"/> Conservation
<input type="checkbox"/> Reclaimed Water	<input type="checkbox"/> Regional Water Supply Planning
<input type="checkbox"/> Emergency Flood Response	<input type="checkbox"/> Floodplain Management
<input type="checkbox"/> Minimum Flows and Level Establishment and Monitoring	<input type="checkbox"/> Minimum Flows and Levels Recovery
<input type="checkbox"/> Natural Systems Conservation and Restoration	<input type="checkbox"/> Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

<input type="checkbox"/> Charlotte	<input type="checkbox"/> Citrus	<input type="checkbox"/> Desoto	<input type="checkbox"/> Hardee	<input type="checkbox"/> Hernando	<input type="checkbox"/> Highlands	<input type="checkbox"/> Hillsborough	<input type="checkbox"/> Lake
<input type="checkbox"/> Levy	<input type="checkbox"/> Manatee	<input type="checkbox"/> Marion	<input type="checkbox"/> Pasco	<input type="checkbox"/> Pinellas	<input type="checkbox"/> Sarasota	<input type="checkbox"/> Sumter	<input checked="" type="checkbox"/> Polk

Project Description/Benefit/Cost

Description:

The member governments in the Polk Regional Water Cooperative (PRWC) are facing an estimated water deficit of 46 million gallons per day (MGD) by the year 2041 and an estimated 90 MGD deficit in 2068. For the past four years, the Polk Regional Water Cooperative (PRWC) has been actively developing alternative water supply sources to replace its traditional water supply source, the upper Floridan aquifer. PRWC developed a planning-level document prioritizing five "nominated" alternative water supply projects including the Southeast Wellfield (SE), West Polk Lower Floridan Aquifer (WP), Peace Creek (PC), Peace River and Land Use Transitions (PR) and Alafia River (AR) projects through cooperative funding agreements N447 and N448. Of these projects, PRWC is currently developing conceptual level, conceptual design or preliminary design documents for four "candidate" projects – the SE, WP, PC and PR projects. The current efforts are being completed through the Phase 1 Combined Projects Implementation Agreement, which is cooperatively funded with SWFWMD as follows.

- Southeast Wellfield (N905) – Includes Conceptual and Preliminary Design
- West Polk Lower Florida Aquifer (N882) – Includes Conceptual and Preliminary Design
- Peace Creek Integrated Water Supply Plan (N928) – Includes Preliminary Design and Integrated Water Supply Plan
- Peace River and Land Use Transitions (Q133) – Includes Conceptual Planning and Water Supply Availability

The next phases of these projects will be included in the Phase 2 Implementation Agreement, which includes design and construction of the selected projects based on the preliminary design. Through the development of these projects, PRWC has identified an initial design and construction phase for the projects called Phase 2A. Phase 2A includes SE Phase 1, WP Phase 1 and SE Phase 2. PRWC is requesting funding assistance in support of the Phase 2A projects. Phase 2A (Project) is a seven-year program starting in FY2021 and extending through FY2027. A groundwater withdrawal of 37.5 MGD has been authorized for the SE project by the South Florida Water Management District (SFWMD) under Water Use Permit No. 53-00293-W. The 40-year consumptive use permit (CUP) was issued to Polk County Utilities on April 28, 2014. This permit will support an ultimate water supply production of about 30 MGD from the SE project. The 30-MGD water production facility is master planned to be expanded in seven phases beginning with the 7.5-MGD initial phase. PRWC has completed the conceptual design and is currently working the preliminary design for the SE Phase 1 project. SE Phase 1 includes the design and construction of a 7.5- million MGD reverse osmosis water production facility and transmission system to PRWC member utilities with a buildout capacity of 30 MGD. The new funding will build upon the previous funding efforts, starting with the final design of SE Phase 1. The SE project is located along the west side of Lake Weohyakapka in southeast Polk County. The project includes construction of a WTP, wellfield and raw water transmission main to the WTP, concentrate disposal well(s), and finished water transmission mains.

Benefit:

Water obtained from this alternative supply project will be used by PRWC project partners to reduce stress on the Upper Florida Aquifer (UFA). The project will improve surface waters and wetlands currently impacted by withdrawals from the UFA. The project was also identified within the CFWI regional water supply plan as a potential future water supply solution.

Cost:

The projected phase 2A combined project costs are outlined below. These costs represent design, engineering, administration and construction of the Phase 2A combined project costs through 2027. All costs are rounded to the nearest hundred thousand dollars. As this project moves forward subsequent CFI applications are to be provided. A breakdown of the individual component costs is attached in the document section.

Fiscal Year 2021 - \$23,400,000

Fiscal Year 2022 - \$148,700,000

Fiscal Year 2023 - \$78,100,000

Fiscal Year 2024 - \$10,400,000

Fiscal Year 2025 - \$10,400,000

Fiscal Year 2026 - \$125,500,000

Fiscal Year 2027 - \$65,700,000

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

The PRWC and its members are considering a mix of activities to achieve compliance with the guidelines set forth by the CFWI. This mix of activities will contain but are limited to conservation efforts to be achieved by rates and tariffs along with more holistic approaches to save water. Another way that the use of potable water can be offset is by the more effective use of highly treated wastewater aka reuse water. Water Management District Cooperative Funding Requests from the PRWC and / or its members are requested through separate funding applications.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share			11,700,000	219,400,000	231,100,000
General Fund-District Wide			11,700,000	219,400,000	231,100,000
Total			23,400,000	438,800,000	462,200,000

Matching Fund Reduction

☐ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines

Begin Conservation Implementation Program	10/01/2020
Obtain SWFWMD Cooperative Funding	10/01/2020
Begin Final Design with SWFWMD and SRF Funding	11/01/2020
Potential WIFIA funding approval	07/01/2021
Complete Design of Initial 7.5-MGD Water Production Facility	12/19/2021
Complete Final Design of Initial Transmission System	12/19/2021
Complete Construction of Initial 7.5-MGD Water Production Facility	12/19/2023
Member Governments Receive PRWC Water	12/20/2023

Data Collection Assessment:

☒ Land Survey ☒ LIDAR/Elevation data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name Emergency Potable Water Interconnect Between Winter Haven and Dundee
Project Number Q186
Cooperator Winter Haven
Department Winter Haven Water
Contact Person Mike Britt
Address P.O. Box 2277
City State Zip Winter Haven, FL 338802277
Phone # 863-291-5853 ext630
Email mbritt@mywinterhaven.com

Project Type:

☒ Water Supply
 ☐ Water Quality
 ☐ Flood Protection
 ☐ Natural Systems

Strategic Initiatives:

☐ Water Quality Maintenance and Improvement
 ☐ Water Quality Monitoring
☐ Alternative Water Supply
 ☐ Conservation
☐ Reclaimed Water
 ☒ Regional Water Supply Planning
☐ Emergency Flood Response
 ☐ Floodplain Management
☐ Minimum Flows and Level Establishment and Monitoring
 ☐ Minimum Flows and Levels Recovery
☐ Natural Systems Conservation and Restoration
 ☐ Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

☐ Charlotte
 ☐ Citrus
 ☐ Desoto
 ☐ Hardee
 ☐ Hernando
 ☐ Highlands
 ☐ Hillsborough
 ☐ Lake
☐ Levy
 ☐ Manatee
 ☐ Marion
 ☐ Pasco
 ☐ Pinellas
 ☐ Sarasota
 ☐ Sumter
 ☒ Polk

Project Description/Benefit/Cost

Description:

The water supply systems of the Cities of Winter Haven and Dundee are located approximately 300 feet apart. A project to interconnect these systems will provide assurances that water supply will be available during emergency conditions. The City of Winter Haven will design and permit this project, which is not being requested under this funding request. The proposed project is for construction.

Benefit:

Assurance that water supplies will be available during emergency conditions.

Cost:

The proposed project is only for construction, which is estimated at \$500,000.

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

The City of Winter Haven has adopted ordinances for emergency water restrictions and a tiered water conservation rate structure. The City also has an ordinance for floodplain protection that requires consistency with the National Flood Insurance Rate Program. The City also has a reuse water distribution system that distributes 1MGD of reuse water and is expanding this system to include 4MGD of additional reuse. The City has adopted a Sustainable Water Resource Management Plan and is developing an Integrated/One Water Master Plan.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share		200,000	50,000		250,000
Peace River		200,000	50,000		250,000
Total		400,000	100,000		500,000

Matching Fund Reduction

☐ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines

Construction Bids
Hire Contractor
Project Construction

01/31/2021
03/31/2021
03/31/2022

Data Collection Assessment:

☒ No data will be collected for this project

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name Demand Management Plan Strategic Implementation
Project Number Q187
Cooperator PRWC
Department
Contact Person Peter Hernandez
Address 601 S. Lake Destiny Road
City State Zip Maitland, FL 32751
Phone # 407-906-1776
Email peter.hernandez@wright-pierce.com

Project Type:

☒ Water Supply
 ☐ Water Quality
 ☐ Flood Protection
 ☐ Natural Systems

Strategic Initiatives:

<input type="checkbox"/> Water Quality Maintenance and Improvement	<input type="checkbox"/> Water Quality Monitoring
<input type="checkbox"/> Alternative Water Supply	<input checked="" type="checkbox"/> Conservation
<input type="checkbox"/> Reclaimed Water	<input type="checkbox"/> Regional Water Supply Planning
<input type="checkbox"/> Emergency Flood Response	<input type="checkbox"/> Floodplain Management
<input type="checkbox"/> Minimum Flows and Level Establishment and Monitoring	<input type="checkbox"/> Minimum Flows and Levels Recovery
<input type="checkbox"/> Natural Systems Conservation and Restoration	<input type="checkbox"/> Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

<input type="checkbox"/> Charlotte	<input type="checkbox"/> Citrus	<input type="checkbox"/> Desoto	<input type="checkbox"/> Hardee	<input type="checkbox"/> Hernando	<input type="checkbox"/> Highlands	<input type="checkbox"/> Hillsborough	<input type="checkbox"/> Lake
<input type="checkbox"/> Levy	<input type="checkbox"/> Manatee	<input type="checkbox"/> Marion	<input type="checkbox"/> Pasco	<input type="checkbox"/> Pinellas	<input type="checkbox"/> Sarasota	<input type="checkbox"/> Sumter	<input checked="" type="checkbox"/> Polk

Project Description/Benefit/Cost

Description:

Description: The Demand Management Plan Strategic Implementation project will enable the Polk Regional Water Cooperative (PRWC) to enhance its water conservation potential in two critical ways: it will provide the resources necessary for members to market and manage the conservation programs which will be implemented in FY 2020, improving participation rates; and it will provide the resources necessary to track and report on the programs, improving the PRWC's ability, in conjunction with their members, to refine program effectiveness and focus its resources on implementing those which are most effective. Specifically, this project involves retaining a 3rd party to provide up to 40 hours per week of technical support to the PRWC on behalf of its members to perform the following duties: Promoting and implementing conservation programs selected by the PRWC. This may involve distribution of conservation kits, rebate processing, and other related activities. This task will involve confirming participant eligibility. Documenting and tracking the participation of each program, including addresses and dates of implementations. Check for past participation in previous rebate programs for the same devices installed at the same water service address Estimating the amount of water saved by each program implemented using the general methods presented in the PRWC Demand Management Plan. Making recommendations for program improvements, including enhancements which are expected improve participation rates. Preparing and submitting invoices for the implementation of programs. Invoice management may require the coordination with each PRWC member government for reimbursement, and may require submittal to the SWFWMD where co-funding applies. Working with the PRWC members and SWFWMD to market the programs. This may involve working with SWFWMD and other PRWC consultants to prepare marketing materials, working with local businesses to distribute materials, and attending outreach events. Working with other PRWC consultants to maintain conservation elements on the PRWC website. Providing customer service. This may involve responding to inquiries from PRWC member customers on conservation programs, coordinating strategic program implementations with PRWC members, maintaining records, and supporting the program approval process. Attending monthly PRWC conservation meetings to report on progress. Providing quarterly reports to the PRWC members. Providing watering restriction enforcement support. This will involve working with the appropriate enforcement individuals or divisions to identify and track violators. Conducting commercial/industrial/institutional water conservation audits. This may require an appropriate audit certification. Working with PRWC members to facilitate public outreach and education programs. Other activities as outlined in the PRWC Demand Management Plan.

Benefit:

The PRWC has estimated through the development of its Demand Management Plan that the implementation of 13 programs has the potential to conserve between 2.1 and 17 MGD in 2040 throughout the PRWC. In order to achieve the upper range of conservation, the PRWC must be successful in increasing participation rates and in implementing those programs which achieve

the highest level of water savings. The PRWC can only be successful if resources are allocated to provide the level of effort necessary to implement such public outreach and tracking. Only by receiving co-funding to implement this DMP Implementation and Tracking project can the PRWC attempt to approach the upper range its conservation potential. In addition to the local benefits, this project will support the following strategic goals: SWFWMD Strategic Initiative: this project is consistent with SWFWMD's strategic initiative of enhancing conservation efforts. SWFWMD Heartland Regional Priority: this program supports the implementation of the Southern Water Use Caution Area (SWUCA) Recovery Strategy. Central Florida Water Initiative: this program will be critical to supporting the CFWI long-term conservation goals. Heartland Headwaters Protection Act: this program supports the regional importance of protecting the water resources of Polk County. The PRWC Interlocal Agreement includes in Section 1.04 the following statement: "Parties to recognize the need to consider, advance and develop an effective regional approach to the conservation of water [...] the protection of the environment, and the efficient, innovative, and cooperative use of valuable water resources".

Cost:

Technical support, manpower cost estimate, FY2021: \$156,000. Public outreach cost estimate, FY2021: \$144,000 Total Cost estimate, including technical support and public outreach, FY2021: \$250,000 Estimated quarterly spending, FY2021: \$62,500 District co-funding share, 50%: \$125,000

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

The individual PRWC members have made significant progress over the years to improve upon their conservation efforts both individually and jointly. By forming the PRWC in 2016 and streamlining the efforts of its Conservation Team, the PRWC has made a concerted effort to share lessons learned and resources with one another, for the benefit of the entire region. The team meets every month to share progress and discuss challenges, and in early 2019 began the development of a Demand Management Plan to assess available water conservation potential in Polk County and provide a strategy for identifying and implementing conservation projects.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share			125,000		125,000
Peace River			125,000		125,000
Total			250,000		250,000

Matching Fund Reduction

☐ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines

Hire technical support	12/31/2020
Develop memorandum identifying measures for improved participation	02/01/2021
Demonstrate expanded participation in marketing	07/01/2021
Initiate watering restrictions enforcement support in conjunction with PRWC	07/01/2021
Demonstrate improved record keeping and data collection	07/01/2021
Demonstrate increased participation of programs	07/01/2021
Initiate CII water conservation audits	09/30/2021
Provide quarterly reports on programs implemented, participation rates, savings	09/30/2021
Provide monthly updates of website content	09/30/2021

Data Collection Assessment:

☒ Other data collection: Conservation Program Data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name Crescent Lake Implementation of BMP's
Project Number Q188
Cooperator Polk County
Department Land Development Division
Contact Person Lawrence Updike
Address 3000 Sheffield Road
City State Zip Bartow, FL 33880
Phone # 863-535-2323 ext216
Email connerupdike@polk-county.net

Project Type:

☐ Water Supply
 ☒ Water Quality
 ☒ Flood Protection
 ☐ Natural Systems

Strategic Initiatives:

<input checked="" type="checkbox"/> Water Quality Maintenance and Improvement	<input type="checkbox"/> Water Quality Monitoring
<input type="checkbox"/> Alternative Water Supply	<input type="checkbox"/> Conservation
<input type="checkbox"/> Reclaimed Water	<input type="checkbox"/> Regional Water Supply Planning
<input type="checkbox"/> Emergency Flood Response	<input checked="" type="checkbox"/> Floodplain Management
<input type="checkbox"/> Minimum Flows and Level Establishment and Monitoring	<input type="checkbox"/> Minimum Flows and Levels Recovery
<input type="checkbox"/> Natural Systems Conservation and Restoration	<input type="checkbox"/> Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

<input type="checkbox"/> Charlotte	<input type="checkbox"/> Citrus	<input type="checkbox"/> Desoto	<input type="checkbox"/> Hardee	<input type="checkbox"/> Hernando	<input type="checkbox"/> Highlands	<input type="checkbox"/> Hillsborough	<input type="checkbox"/> Lake
<input type="checkbox"/> Levy	<input type="checkbox"/> Manatee	<input type="checkbox"/> Marion	<input type="checkbox"/> Pasco	<input type="checkbox"/> Pinellas	<input type="checkbox"/> Sarasota	<input type="checkbox"/> Sumter	<input checked="" type="checkbox"/> Polk

Project Description/Benefit/Cost

Description:

This CFA is to request funding for the implementation of Best Management Practice's (BMP) identified in the Crescent Lake Feasibility Study (Q095). The BMP's selected for implementation are intended to improve the flooding LOS along Crescent Lake Drive and other Water Quality BMP's within the Crescent Lakes Watershed. The County is requesting funds for design and engineering along with funds for property acquisition related to the identified alternatives.

Benefit:

As stated above, the implementation of BMP's identified by the feasibility study (Q905) will address flooding issues along Crescent Lakes Drive and other BMP's within the Crescent Lakes Drainage Basin. The BMP alternatives also provide opportunities for stormwater treatment within the basin. Crescent Lakes is a sub-basin within the upper reaches of the Alafia River and has been identified as being impaired for nutrients by FDEP. Information related to nutrient removal and cost benefits (BCA's) for the selected BMP's should be available by Spring 2020.

Cost:

This CFI application is for design services and property acquisition for BMP's identified in the Crescent Lakes Feasibility Study. The reimbursable elements of the proposed project are estimated to cost \$1,200,000. It is anticipated that based on this estimate the County would be responsible for \$600,000 and SWFWMD would contribute \$600,000. The following is an estimated breakdown of individual project components:

- Design/Engineering \$200,000
- Property Acquisition \$1,000,000

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

Polk County has numerous programs and ordinances that address water conservation, flood protection, stormwater management and related water resource issues. Many of these programs are made possible by a Municipal Service Taxing Unit that was adopted in 2013 specifically for water resources activities. Primary among these programs is the County's NPDES Municipal Separate Stormwater System (MS4) permit. Polk County's Comprehensive Plan (Comp Plan), Ord. #92-36, addresses Stormwater Management, Surface Water, Groundwater, Flood Plains, Wetlands and Ecological Communities while the Land Development

Code (LDC), Ord. #00-09, addresses Surface Water Protection, Wetlands Protection, Concurrency–Stormwater, Landscaping, including language for Florida Yards and Neighborhoods and Low Impact Development, and Stormwater Management. In 2013, the County adopted a fertilizer management ordinance (#13-005) that provides guidelines for fertilizer application quantities and timing and has implemented a street-sweeping program for monthly sweeping of paved roads, mainly in high priority TMDL watersheds. Active since 1985, our ambient water quality program takes quarterly samples from 134 lake and stream sites to assess nutrients, metals, and bacteria levels. The County has adopted Flood Plain Ord. #00-009 and participates in the National Flood Insurance Program administered through the Federal Emergency Management Act (FEMA). All development is required to receive the proper building and site alteration permits and new structures are required to be placed above the base flood elevation when the base flood elevation is known. We are also a participant in FEMA's Community Rating System and have received a class 8 rating. The Comp Plan requires water-conserving plumbing fixtures and landscape features to be included in the Building Code. The Building Division enforces the guidelines outlined in the 1994 Standard Plumbing Code. Polk County's Year Round Water Conservation Measures and Water Shortage Ord. #04-07 allows for improved enforcement of watering restrictions as set by the District and allows for localized limits on the use of reclaimed water to be the same as irrigation standards for potable water. Polk County Utilities' (PCU) Division Water Conservation Program Manual provides educational, regulatory, financial and operational measures for encouraging water conservation throughout our service areas. PCU's Reclaimed Water Program continues to be an integral part of the County's conservation efforts. Ord. #03-021 requires all new developments served by a wastewater treatment system that produce public access quality reclaimed water to install internal reuse distribution systems and to tie-in when reclaimed water becomes available. The Ordinance prohibits the use of potable water for irrigation once reclaimed water becomes available at a particular location. Polk County promotes Florida-Friendly landscaping and promotes the use of drought-tolerant native vegetation for landscape planting and buffer matrixes. Polk County remains an active member in both the Tampa Bay and Charlotte Harbor National Estuary Programs. The County is also a major cooperator and funding source to the Lake Action/ Education Drive, a non-profit public education group. We also work closely with the County Extension Service for public education and outreach activities, including funding of the Florida Friendly Yards program through IFAS. Our Circle B Bar Reserve hosts numerous educational events that inform the public about local natural resources. Polk County also organizes the annual 7 Rivers Water Festival, a public education event for all things related to water resources.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share		35,000	600,000	500,000	1,135,000
Peace River		35,000	600,000	500,000	1,135,000
Total		70,000	1,200,000	1,000,000	2,270,000

Matching Fund Reduction

☐ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines

Cooperative Funding Agreement

Milestone

Finalize and Execute by Respective Boards

Projected Date

11/01/2020

Engineering

Milestone

Complete Design, Engineering, Permitting

Projected Date

06/01/2021

Identify Projects from Study

Milestone

Finalize Projects from Q905

Projected Date

03/20/2020

Right-of-Way

Milestone

Complete Property Acquisition

Projected Date

03/01/2021

Data Collection Assessment:

☒ Land Survey ☒ Aerial Imagery

☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name Emergency Potable Water Interconnect Between Winter Haven and Eagle Lake
Project Number Q195
Cooperator Winter Haven
Department Winter Haven Water
Contact Person Mike Britt
Address P.O. Box 2277
City State Zip Winter Haven, FL 338802277
Phone # 863-291-5853 ext630
Email mbritt@mywinterhaven.com

Project Type:

☒ Water Supply
 ☐ Water Quality
 ☐ Flood Protection
 ☐ Natural Systems

Strategic Initiatives:

☐ Water Quality Maintenance and Improvement
 ☐ Water Quality Monitoring
☐ Alternative Water Supply
 ☐ Conservation
☐ Reclaimed Water
 ☒ Regional Water Supply Planning
☐ Emergency Flood Response
 ☐ Floodplain Management
☐ Minimum Flows and Level Establishment and Monitoring
 ☐ Minimum Flows and Levels Recovery
☐ Natural Systems Conservation and Restoration
 ☐ Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

☐ Charlotte
 ☐ Citrus
 ☐ Desoto
 ☐ Hardee
 ☐ Hernando
 ☐ Highlands
 ☐ Hillsborough
 ☐ Lake
☐ Levy
 ☐ Manatee
 ☐ Marion
 ☐ Pasco
 ☐ Pinellas
 ☐ Sarasota
 ☐ Sumter
 ☒ Polk

Project Description/Benefit/Cost

Description:

The water supply systems of the Cities of Winter Haven and Eagle Lake are located approximately 500 feet apart. A project to interconnect these systems will provide assurances that water supply will be available during emergency conditions. The City of Winter Haven will be designing and permitting this project, which is not subject to this funding request. The requested project will construct the interconnect project.

Benefit:

Assurance that water supplies will be available during emergency conditions.

Cost:

This funding request is only for construction, which is estimated to cost \$500,000.

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

The City of Winter Haven has adopted ordinances for emergency water restrictions and has a tiered water conservation rate structure. The City also has an ordinance for floodplain protection that is consistent with the National Flood Insurance Rate Program; The City also has a reuse distribution system that distributes 1MGD of alternative water supply and is expanding this system to include 4MGD of additional reuse capacity. The City has adopted a Sustainable Water Resource Management Plan and is undertaking an Integrated/One Water Master Plan.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share		200,000	50,000		250,000
Peace River		200,000	50,000		250,000
Total		400,000	100,000		500,000

Matching Fund Reduction

☐ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines

Construction Bids
Hire Contractor
Project Construction

01/31/2021
03/31/2021
06/30/2022

Data Collection Assessment:

☒ No data will be collected for this project

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name Pollard Road Regional Water Main
Project Number Q198
Cooperator Winter Haven
Department Winter Haven Water
Contact Person Mike Britt
Address P.O. Box 2277
City State Zip Winter Haven, FL 338802277
Phone # 863-291-5853 ext630
Email mbritt@mywinterhaven.com

Project Type:

☒ Water Supply
 ☐ Water Quality
 ☐ Flood Protection
 ☐ Natural Systems

Strategic Initiatives:

☐ Water Quality Maintenance and Improvement
 ☐ Water Quality Monitoring
☐ Alternative Water Supply
 ☐ Conservation
☐ Reclaimed Water
 ☒ Regional Water Supply Planning
☐ Emergency Flood Response
 ☐ Floodplain Management
☐ Minimum Flows and Level Establishment and Monitoring
 ☐ Minimum Flows and Levels Recovery
☐ Natural Systems Conservation and Restoration
 ☐ Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

☐ Charlotte
 ☐ Citrus
 ☐ Desoto
 ☐ Hardee
 ☐ Hernando
 ☐ Highlands
 ☐ Hillsborough
 ☐ Lake
☐ Levy
 ☐ Manatee
 ☐ Marion
 ☐ Pasco
 ☐ Pinellas
 ☐ Sarasota
 ☐ Sumter
 ☒ Polk

Project Description/Benefit/Cost

Description:

This project will construct approximately 6,700 feet new 16" Water Main from the location of a future water plant near the City's Wastewater Treatment Plant #3 property along Pollard road to interconnect with an existing water main located on Lake Eloise Loop Road. Extending this water line will increase the capacity to receive future alternative water supplies from the Polk Regional Water Cooperative. This project will also be a critical link to transmit alternative water supplies to other communities through Winter Haven's system. This project would be constructed in tandem with the reuse interconnect project, which is also being funded through a cooperative funding request, and is already under design and permitting.

Benefit:

Increased capabilities to receive and transmit alternative water supplies. Cost savings due to tandem construction with reuse interconnect project.

Cost:

An engineer's estimate indicated this project will cost approximately \$1,500,000.

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

The City of Winter has adopted ordinances for emergency water restrictions and a tiered water conservation rate structure. The City also has an ordinance for floodplain protection that is consistent with the National Flood Insurance Rate Program. The City also has a reuse distribution system that distributes 1MGD of alternative water supply and is expanding this system by an additional 4MGD. The City has adopted a Sustainable Water Resource Management Plan and is undertaking the development of an integrated/One Water master plan.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share		350,000	400,000		750,000
Peace River		350,000	400,000		750,000
Total		700,000	800,000		1,500,000

Matching Fund Reduction

☐ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines

Construction Bids	04/30/2021
Hire Contractor	06/30/2021
Project Construction	06/30/2022

Data Collection Assessment:

☒ No data will be collected for this project

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name Winter Haven Direct Potable Reuse Feasibility
Project Number Q200
Cooperator Winter Haven
Department Winter Haven Water
Contact Person Mike Britt
Address P.O. Box 2277
City State Zip Winter Haven, FL 338802277
Phone # 863-291-5853 ext630
Email mbritt@mywinterhaven.com

Project Type:

☒ Water Supply
 ☐ Water Quality
 ☐ Flood Protection
 ☐ Natural Systems

Strategic Initiatives:

<input type="checkbox"/> Water Quality Maintenance and Improvement	<input type="checkbox"/> Water Quality Monitoring
<input checked="" type="checkbox"/> Alternative Water Supply	<input type="checkbox"/> Conservation
<input type="checkbox"/> Reclaimed Water	<input type="checkbox"/> Regional Water Supply Planning
<input type="checkbox"/> Emergency Flood Response	<input type="checkbox"/> Floodplain Management
<input type="checkbox"/> Minimum Flows and Level Establishment and Monitoring	<input type="checkbox"/> Minimum Flows and Levels Recovery
<input type="checkbox"/> Natural Systems Conservation and Restoration	<input type="checkbox"/> Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

<input type="checkbox"/> Charlotte	<input type="checkbox"/> Citrus	<input type="checkbox"/> Desoto	<input type="checkbox"/> Hardee	<input type="checkbox"/> Hernando	<input type="checkbox"/> Highlands	<input type="checkbox"/> Hillsborough	<input type="checkbox"/> Lake
<input type="checkbox"/> Levy	<input type="checkbox"/> Manatee	<input type="checkbox"/> Marion	<input type="checkbox"/> Pasco	<input type="checkbox"/> Pinellas	<input type="checkbox"/> Sarasota	<input type="checkbox"/> Sumter	<input checked="" type="checkbox"/> Polk

Project Description/Benefit/Cost

Description:

The City of Winter Haven currently has 4MGD of highly treated reuse water available for beneficial use. This quantity is expected to increase in the future. This project will and evaluate the feasibility of treating reuse water to potable standards and determine the most beneficial uses of reuse water under various hydrologic conditions. This project will incorporate the following tasks: review current and future quantity of reuse water available; evaluate other sources of water that can be added to the reuse system (including Peace Creek); evaluate highest and best use of existing and future reuse water supplies under various hydrologic conditions (including Ridge Lakes, Chain of Lakes and Peace River); assess existing quality of reuse water; establish water quality treatment goals; evaluate public perception of incorporating potable reuse water into the potable system; recommend communication strategies to incorporate reuse into the potable system, if recommended; evaluate conceptual plans and cost estimates for treating reuse water to potable standards and options for managing treatment byproducts; make recommendations for pilot project(s); develop conceptual plans and cost estimates for pilot projects, if recommended; meet with FDEP to review treatment goals and monitoring plan for pilot project, if recommended; evaluate ability to incorporate potable reuse into available water supply systems; and evaluate cost and benefit of potable reuse.

Benefit:

Alternative water supplies and hydrologic restoration are a priority of the SWUCA management plan. If treating reuse water to potable standards is determined to be feasible, it could assist in meeting future demands, reduce dependency on stressed water resources, help restore natural systems and reduce reliance on fresh upper Floridan groundwater supplies. Potable reuse could provide natural system restoration by reducing the nutrient loading to surface and groundwaters. By working with the Polk Regional Cooperative, the project helps improve a regional water supply issue.

Cost:

Costs for this project are estimated as follows: Assessing Quantity and Quality of Reuse Water: \$25,000. Determine Highest and Best Use of Reuse Water: \$50,000. Develop Communications Plan - \$50,000; Conceptual Plans and Cost Estimates: \$75,000; Draft Report: \$25,000; Final Report: \$25,000;

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

The City of Winter Haven has adopted ordinances for emergency water restrictions, stormwater treatment exceeding state standards, and a tiered rate structure that discourages the overuse of potable water. The City has a reuse distribution system that distributes 1MGD of reuse with the capability of distributing 4 MGD of additional reuse; The City adopted a floodplain management

ordinance that requires consistency with the National Flood Insurance Program and has a Class 8 rating. The City has adopted a Sustainable Water Resource Management Plan and is undertaking a One Water Master Plan.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share		100,000	100,000		200,000
Peace River		100,000	100,000		200,000
Total		200,000	200,000		400,000

Matching Fund Reduction

☐ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines

April, 2021 - September, 2021

Milestone

Assess Quantity and Quality of Reuse

Projected Date

09/30/2021

March, 2022 - December, 2022

Milestone

Final Report

Projected Date

12/31/2022

October, 2020 - March 2021, 2022

Milestone

Hire Consultant

Projected Date

03/31/2021

September, 2021 - March, 2022

Milestone

Conceptual Plans

Projected Date

03/31/2022

Data Collection Assessment:

☒ Other data collection: Reuse Quality

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name Polk County Parks & Natural Resources Small-Scale Project Evaluations
Project Number Q201
Cooperator Polk County Natural Resources
Department Environmental Resources
Contact Person Tabitha Biehl
Address 4399 Winter Lake Road
City State Zip Lakeland, FL 33803
Phone # 863-668-4673 ext201
Email tabithabiehl@polk-county.net

Project Type:

☐ Water Supply
 ☒ Water Quality
 ☒ Flood Protection
 ☒ Natural Systems

Strategic Initiatives:

<input checked="" type="checkbox"/> Water Quality Maintenance and Improvement	<input type="checkbox"/> Water Quality Monitoring
<input type="checkbox"/> Alternative Water Supply	<input type="checkbox"/> Conservation
<input type="checkbox"/> Reclaimed Water	<input type="checkbox"/> Regional Water Supply Planning
<input type="checkbox"/> Emergency Flood Response	<input checked="" type="checkbox"/> Floodplain Management
<input type="checkbox"/> Minimum Flows and Level Establishment and Monitoring	<input type="checkbox"/> Minimum Flows and Levels Recovery
<input checked="" type="checkbox"/> Natural Systems Conservation and Restoration	<input type="checkbox"/> Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

<input type="checkbox"/> Charlotte	<input type="checkbox"/> Citrus	<input type="checkbox"/> Desoto	<input type="checkbox"/> Hardee	<input type="checkbox"/> Hernando	<input type="checkbox"/> Highlands	<input type="checkbox"/> Hillsborough	<input type="checkbox"/> Lake
<input type="checkbox"/> Levy	<input type="checkbox"/> Manatee	<input type="checkbox"/> Marion	<input type="checkbox"/> Pasco	<input type="checkbox"/> Pinellas	<input type="checkbox"/> Sarasota	<input type="checkbox"/> Sumter	<input checked="" type="checkbox"/> Polk

Project Description/Benefit/Cost

Description:

(A formatted version has been included in the Documents tab) In 2015, Polk County prioritized twelve (12) lakes and had consultants develop water quality master plans (WQMP) for each lake, which included the evaluation of water quality trends and provided project recommendations within the lake and surrounding watershed to help improve water quality. Recommended projects ranged from large-scale, complex, and costly (reverse osmosis purification and sediment removal) to non-structural public education and outreach. The purpose of this cooperative funding application is to conduct feasibility studies on potential small-scale project recommendations at these twelve (12) lakes, plus two (2) additional lakes added by staff, as well as lakes to be identified later that were included in the Ridge Lakes study completed by Wood. The twelve (12) WQMP lakes are: Crooked and Clinch (Kissimmee River watershed); Buckeye, Daisy, Deer, Eagle, Grassy, Lena, Mudd, Sears, Tennessee and Thomas (Peace River watershed). The two staff recommended lakes are Cannon and Gibson (Peace River watershed). Additional lakes will be added after staff has had an opportunity to review the Ridge Lakes study prepared by Wood. Small-scale projects are identified as shoreline habitat restoration, lakeshore planting buffer/bioswales, floating wetlands, rain gardens, vegetation management and replanting, pervious pavement, baffle boxes, catch basin inlet traps, and other low impact development (LID) best management practices (BMP). A thorough review of the lake studies' project recommendations was performed and, as shown above, not all studies provided specific projects and locations to be addressed, but did provide conceptual recommendations. County staff took the conceptual and specific project recommendations and compiled them into the five categories below. Shoreline Habitat Restoration: Eagle Lake, Grassy Lake, Lake Buckeye, Lake Daisy littoral areas, Lake Doll treatment and planting, Lake Tennessee, Lake Thomas, Lake Mudd, Lake Sears, Lake Gibson. Lakeshore Planting Buffer and Bioswale: Eagle Lake NE Ag Buffer, Lake Lena CSX, Lake Lena E- stella Way, Lake Lena - Lena Vista, Ramsgate Road, Lake Thomas, Lake Mudd, Lake Daisy/Doll, Lake Tennessee, Lake Sears, Lake Gibson. Floating Wetlands: Lake Clinch, Lake Daisy/Doll, Lake Tennessee, Lake Thomas, Lake Sears, Lake Gibson. Roads and Drainage: Lake Daisy roadside regrading, Lake Lena – Leo Drive and Drexel Blvd., Lake Sears, Lake Thomas, Lake Gibson. Rain Gardens: Lake Daisy, Lake Lena – Leo Drive and Drexel Blvd., Lake Sears, Lake Thomas, Lake Gibson. Ridge Lake Study: Additional lakes/projects will be added after staff has had an opportunity to review the Ridge Lakes study prepared by Wood.

Benefit:

Benefits of these projects include improved water quality (nutrients, sediments, and trash), Total Maximum Daily Load (TMDL) reductions, prevention of water quality degradation in lakes meeting Numeric Nutrient Criteria (NNC), ecosystem enhancement and restoration, and public outreach and education.

Cost:

The cost for the feasibility studies are estimated to be \$280,000 and the county is requesting from the SWFWMD in the amount of \$140,000.

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

(A formatted version has been included in the Documents tab) In 2013 the county adopted a fertilizer management ordinance (#13-005) that provides guidelines for fertilizer application quantities and timing. Since 2013 the county has implemented a street sweeping program that provides for monthly mechanical sweeping of 360 curb miles of paved roads, mainly in high priority TMDL watersheds. Active since 1985, our ambient water quality program takes quarterly samples from 108 lake and 26 stream sites. Nutrients, metals, typical wet chemistry, bacteria, and field parameters are assessed. All data are uploaded to the DEP database. The county also complies with the FDEP NPDES stormwater permit that requires implementing projects and management actions to protect and improve the county's surface water resources. The county remains an active member in both the Tampa Bay and Charlotte Harbor National Estuary Programs and sits on the Technical Advisory, Management, and/or Policy Committees of both organizations. The county's Circle B Bar Reserve hosts numerous educational events that inform children, students, and adults about local natural resources. Opportunities range from self-guided tours to large all-day events including 1,000 or more participants. The county is a major cooperator and funding source to the Lake Action / Education Drive, a non-profit public education group. County staff serve on the LE/AD Board of Directors. We also work closely with the County Extension Service for public education and outreach activities. The county organizes the annual "Seven Rivers Water Festival," a public education event that showcases all things water resource. The county also cooperates with, and funds, the Florida Friendly Yards program through IFAS's Extension Service. The county's Comprehensive Plan (Comp Plan) and Land Development Code (LDC) include numerous sections addressing water resource issues, including the following. Polk County Comp Plan (Ordinance 92-36) Section 3.104 Stormwater Management – recommends prioritizing flood and water quality problem areas. Section 2.305 Surface Water – compares pre-and post-development peak discharges and volumes. Section 2.306 Groundwater. Section 2.307 Floodplains. Section 2.308 Wetlands. Section 2.309 Ecological Communities. Polk County LDC (Ordinance 00-09): Section 610 Surface Water Protection. Section 620 Wetlands Protection. Section 703 Concurrence – Stormwater. Section 720 Landscaping - includes language for FYN and Low Impact Development. Section 740 Stormwater Management – reduces exemptions from regulations. The Polk County Comp Plan states that water conserving plumbing fixtures and landscape features should be included in the Building Code. Ordinance No. 03-021 requires all new developments served by a wastewater system that produces public access quality reclaimed water to install and use reuse distribution. Polk County's Year Round Water Conservation Measures and Water Shortage Ordinance (No. 04-07), allows for improved enforcement of watering restrictions and allows for limits on the use of reclaimed water. Finally, the county's Utilities Department Water Conservation Program Manual provides educational, regulatory, financial and operational measures for encouraging water conservation throughout our service areas.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share			280,000		280,000
Peace River			140,000		140,000
Total			420,000		420,000

Matching Fund Reduction

☐ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines

Feasibility Study

Milestone	Projected Date
Consultant Notice to Proceed	08/01/2022
Interim Report	02/01/2023
Final Report	08/01/2023

Data Collection Assessment:

☒ No data will be collected for this project

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name Lake Annie Surface Water Restoration
Project Number Q203
Cooperator Polk County Natural Resources
Department Natural Resources
Contact Person Hans Zarbock
Address 4177 Ben Durrance Rd
City State Zip Bartow, FL 33830
Phone # 863-534-7377 ext249
Email hanszarbock@polk-county.net

Project Type:

☒ Water Supply
 ☒ Water Quality
 ☐ Flood Protection
 ☒ Natural Systems

Strategic Initiatives:

<input checked="" type="checkbox"/> Water Quality Maintenance and Improvement	<input type="checkbox"/> Water Quality Monitoring
<input checked="" type="checkbox"/> Alternative Water Supply	<input type="checkbox"/> Conservation
<input type="checkbox"/> Reclaimed Water	<input type="checkbox"/> Regional Water Supply Planning
<input type="checkbox"/> Emergency Flood Response	<input type="checkbox"/> Floodplain Management
<input type="checkbox"/> Minimum Flows and Level Establishment and Monitoring	<input type="checkbox"/> Minimum Flows and Levels Recovery
<input checked="" type="checkbox"/> Natural Systems Conservation and Restoration	<input type="checkbox"/> Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

<input type="checkbox"/> Charlotte	<input type="checkbox"/> Citrus	<input type="checkbox"/> Desoto	<input type="checkbox"/> Hardee	<input type="checkbox"/> Hernando	<input type="checkbox"/> Highlands	<input type="checkbox"/> Hillsborough	<input type="checkbox"/> Lake
<input type="checkbox"/> Levy	<input type="checkbox"/> Manatee	<input type="checkbox"/> Marion	<input type="checkbox"/> Pasco	<input type="checkbox"/> Pinellas	<input type="checkbox"/> Sarasota	<input type="checkbox"/> Sumter	<input checked="" type="checkbox"/> Polk

Project Description/Benefit/Cost

Description:

This project site is located south of the town of Dundee in west-central Polk County. A watershed management study of the Peace Creek Canal (canal) (Winter Haven Chain of Lakes Structure Optimization Report) was completed for the SWFWMD by Atkins in July 2014. One of the study alternatives is to divert water from the Peace Creek Canal to a series of previously excavated areas and then to Lake Annie. The excavations could be turned into flow-through wetlands to enhance habitat and water quality treatment, water storage, raising Lake Annie's water level to help meet its regulatory Minimum Level, promoting aquifer recharge for enhanced water supply, and providing habitat restoration – all consistent with the District's Strategic Initiative for Water Quality and Regional Priorities and Objectives for the Heartland region. Land acquisition or conservation easements would allow the piped or channel flow to reach the excavations, with a connection to Lake Annie. In the event of extreme high water in Lake Annie. Cooperative funding will be sought from other agencies as feasible.

Based on the report The Hydrogeologic Evaluation of Water Management Storage Areas, PBS&J 2011, this site is suited for both surface water storage and ecological restoration. Also, given its proximity to Lake Annie, it presents any opportunity to combine the restoration and rehabilitation with the aquifer recharge potential that increased stages in Lake Annie can promote.

Based on the Proposed Minimum and Guidance Levels for Lakes Annie, Bonnie, Dinner Lee, Mabel, Starr and Venus in Polk County, Florida (SWFWMD 2009), Lake Annie has historically periodically met its adopted minimum water elevation of 112.8 NGVD 29. Water level records (POR 1983 - 2019) show that the minimum level is met only 23% of the time. Based on these records, the lake and aquifer could benefit from additional inflows.

Lake Hamilton, the headwaters of Peace Creek, is almost 7 times larger than Lake Annie, so that to raise Lake Annie by two feet would result in a 0.3 foot reduction in Lake Hamilton. To divert flows to Lake Annie would require adjusting the operating elevation of the P-8 structure to allow outflow at the rate at which water can be diverted into the created ecological restoration area. A structural control in Peace Creek would divert flows to the east across US27 through existing culverts and hydrate the site. Water will flow either by gravity or via pump to the restoration area and into Lake Annie (see Atkins study excerpts in Documents section). Further, in the event of elevated water levels in Lake Annie, the pump can be reversed to serve as a supplemental outlet for the lake back into Peace Creek. The pumping rate is limited by the ability to supply water to the pumping location, which requires discharges from Hamilton, diversions across US27 and through a series of created wetland areas, typically operating under low

head conditions. As such, a maximum of a 1 cfs pump has been recommended. As the system becomes operable, and stable conditions within the wetland are formed, it is anticipated that the stage in Lake Annie could be increased by two feet, if operated during the wet season, when water is most likely more available.

This funding request is to explore the feasibility of implementing this plan. It is possible that a pump station would not be required and flow would be by gravity only.

Benefit:

This proposal is for a structural Best Management Practice (BMP) project. Although benefits from the project will include providing flood storage for the Peace Creek Canal (canal), and enhancing aquifer recharge, the benefit quantified for this application is Natural Systems Restoration for the restoration/creation of up to 130 acres of wetland habitat.

It is proposed to divert water from the canal to east of US 27 to hydrate an area of undeveloped land. This would provide water storage, aquifer recharge, and create an environment for wetland habitat creation and enhancement. Water would then be channeled through a series of existing depressions (old peat farm) and then to Lake Annie. Previous study of this site resulted in recommending a pump for the water but this feasibility study would explore methods on using gravity flow.

The existing excavations would be contoured to create wide littoral zones and planted with native herbaceous vegetation. Some areas would be left with deeper water for fish and wildlife refuge. The land west of the pits would be excavated to create shallow impoundments and flooded. This will increase the extend of wetland habitat in the area and provide hydrological benefits as well.

Lake Annie will also benefit from the increased inflow, as it often times does not meet its minimum level. As described in the previous section, it would be possible to raise the lake level by two feet with only moderate alterations to the existing surface water features.

Passing the water through the restored vegetated pits will provide enhanced water quality treatment for water flowing to Lake Annie, which is a closed basin. The extent of water quality treatment has not been quantified. Thus, this project would provide benefits in all four Natural Systems Restoration ranking categories.

Cost:

No prior funds have been spent on the Crooked lake West project as presented here. However, work that was completed for the study SWFWMD "The Hydrogeologic Evaluation of Water Management Storage Areas" (PBS&J 2011) is incorporated into this proposal. The county intends to modify the original recommendations for the Lake Annie restoration. The feasibility study proposed herein is scheduled for FY 2022, with design and permitting in FY2023-4 and construction in FY25. Project costs have been estimated based in large on information developed for similar feasibility studies and engineering judgement. The total cost for the feasibility study is estimated to be \$268,000, so the county is requesting cooperative funding from SWFWMD in the amount of \$134,000. Design and permitting, and construction/CEI costs have also been estimated but at this early stage those estimates are subject to significant change and are not detailed here. The site is currently in private ownership so the potential for purchase of creating a conservation easement will be part of the feasibility study.

The total project cost (feasibility, design and permitting, construction/CEI cost is \$4,253,500. The projected benefit extends over approximately 130 acres for a per acre cost of 32,527, well within the SWFWMD ranking criteria for multiple benefit Natural Systems Restoration

Additional feasibility study cost breakdowns are available in the separate document attached to this application.

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

A formatted version of this is in the Document section.

Polk County has programs and ordinances that address water quality, stormwater management, and other water resource issues. Some programs are made possible by dedicated funding – a Stormwater Municipal Service Taxing Unit (MSTU) that was adopted in 2013. The County's NPDES Municipal Separate Stormwater System (MS4) permit requires the development and periodic evaluation of a surface water management plan, water quality monitoring, stormwater facilities inventory and inspection, illicit discharge and erosion control inspections and education, and annual reporting to DEP. In 2013 the county adopted a fertilizer management ordinance that provides guidelines for fertilizer application. Since 2013 the county has implemented a street sweeping program for monthly sweeping of 360 curb miles of paved. Since 1985 our ambient water quality program has taken quarterly samples from 108 lake and 26 stream sites. Nutrients, typical wet chemistry, bacteria, and field parameters are assessed. And results uploaded to the DEP database. The county is active in both the Tampa Bay and Charlotte National Estuary Programs and participates on committees in both organizations. The county's Circle B Bar Reserve hosts educational events that inform the public about local natural resources. Opportunities range from self-guided tours to large all-day events. The county is a major cooperator and funding source to the Lake Action / Education Drive, a non-profit public education group, with County staff on the LE/AD Board of Directors. We also work closely with the Extension Service for public education and outreach activities including the IFAS Florida Friendly Yards program. The county organizes the annual "Seven Rivers Water Festival," a public education event that showcases all things

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share			134,000		134,000

Peace River	134,000	134,000
Total	268,000	268,000

Matching Fund Reduction

☐ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines

Feasibility Study

Milestone	Projected Date
Cooperative Agreement Awarded	10/01/2020
Consultant Notice to Proceed	05/01/2021
Interim Report	12/01/2021
Final Report	06/01/2022

Data Collection Assessment:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Groundwater or Surface Water Level measurements | <input checked="" type="checkbox"/> Surface Water Flow (Discharge) measurements |
| <input checked="" type="checkbox"/> Groundwater or Surface Water Quality measurements | <input checked="" type="checkbox"/> Land Survey |
| <input checked="" type="checkbox"/> LIDAR/Elevation data | <input checked="" type="checkbox"/> Mapping/GIS data |

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SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2021 Cooperative Funding Initiative Application Form

Project Name Cherry Hill Source Water Augmentation
Project Number Q209
Cooperator Polk County Utilities
Department Utilities Technical Services
Contact Person Tania Mcmillan
Address 1011 Jim Keene Blvd
City State Zip Winter Haven, FL 33880
Phone # 863-298-4190
Email taniamcmillan@polk-county.net

Project Type:

☒ Water Supply
 ☐ Water Quality
 ☐ Flood Protection
 ☐ Natural Systems

Strategic Initiatives:

<input type="checkbox"/> Water Quality Maintenance and Improvement	<input type="checkbox"/> Water Quality Monitoring
<input checked="" type="checkbox"/> Alternative Water Supply	<input type="checkbox"/> Conservation
<input type="checkbox"/> Reclaimed Water	<input type="checkbox"/> Regional Water Supply Planning
<input type="checkbox"/> Emergency Flood Response	<input type="checkbox"/> Floodplain Management
<input type="checkbox"/> Minimum Flows and Level Establishment and Monitoring	<input type="checkbox"/> Minimum Flows and Levels Recovery
<input type="checkbox"/> Natural Systems Conservation and Restoration	<input type="checkbox"/> Natural Systems Identification and Monitoring

Indicate All Counties to Benefit From Project:

<input type="checkbox"/> Charlotte	<input type="checkbox"/> Citrus	<input type="checkbox"/> Desoto	<input type="checkbox"/> Hardee	<input type="checkbox"/> Hernando	<input type="checkbox"/> Highlands	<input type="checkbox"/> Hillsborough	<input type="checkbox"/> Lake
<input type="checkbox"/> Levy	<input type="checkbox"/> Manatee	<input type="checkbox"/> Marion	<input type="checkbox"/> Pasco	<input type="checkbox"/> Pinellas	<input type="checkbox"/> Sarasota	<input type="checkbox"/> Sumter	<input checked="" type="checkbox"/> Polk

Project Description/Benefit/Cost

Description:

This proposal is a feasibility and pilot study to develop a reclaimed water project concept to utilize up to 1.5 mgd of reclaimed water for innovative methods to supplement groundwater supplies in Polk County's Northwest Regional Utility Service Area (NWRUSA). The project will include pilot testing of full advanced treatment to investigate water quality and other necessary components of the engineered treatment system. More specifically, the project will include data collection, laboratory services, design, permitting, construction and demonstration testing involving a field scale investigation of the full advanced treatment (FAT) of reclaimed water to further develop sources of alternative water supply (AWS). This AWS will augment groundwater supplies and provide resiliency to the potable water supply.

Benefit:

The contractual Measurable Benefit will include the completion of a field scale feasibility study by Polk County to develop a reclaimed water project concept to utilize up to 1.5 mgd of reclaimed water to supplement groundwater supplies in the CFWI region, and the conceptual design and permitting of the selected project. Polk County currently withdraws UFA groundwater for the service area and supplies public access quality reclaimed water from the NWRWWTF for irrigation to residents and businesses with installed reclaimed water system infrastructure. The NWRWWTF was constructed as a 3.0 million gallons per day (MGD) facility and is currently permitted at 3.0 MGD. Up to 1.5 MGD of highly treated reclaimed water could be used to protect groundwater supplies within the Floridan aquifer from advancing or increasing saltwater intrusion, as well as to supplement groundwater supplies in the western Polk County/eastern Hillsborough area. This area is adjacent to the Most Impacted Area, the Dover/Plant City Water Use Caution Area and the Southern Water Use Caution Area. The project would enable the County to maximize reclaimed water usage to 100%, supplement water levels in the Upper Floridan aquifer, potentially obtain additional water supplies from the existing wellfield, and possibly slow or minimize the movement of saltwater intrusion along the coast. The County will continue to maximize activation of public access reuse along existing transmission lines and developments to achieve the current commitment in NWRUSA as documented in prior Cooperative Funding Agreements.

Cost:

Total project cost for feasibility study, and field-scale investigation/ pilot testing: \$1,735,000; Polk County share is \$867,500. This project was initiated under the Polk County Reclaimed Recharge Study in Dover/Plant City WUCA & Northwest Polk Areas (N899). Prior funding of \$145,000 included the surveying, geotechnical investigation, data collection and groundwater modeling made available through N899. The remaining District share \$795,000 is being requested in FY2021.

Describe your complementary efforts in developing, implementing and enforcing water conservation, water quality and flood protection ordinances.

Polk County has numerous programs and ordinances that address water conservation, flood protection, stormwater management and related water resource issues. Many of these programs are made possible by a Municipal Service Taxing Unit that was adopted in 2013 specifically for water resources activities. Primary among these programs is the County's NPDES Municipal Separate Stormwater System (MS4) permit. Polk County's Comprehensive Plan (Comp Plan), Ord. #92-36, addresses Stormwater Management, Surface Water, Groundwater, Flood Plains, Wetlands and Ecological Communities while the Land Development Code (LDC), Ord. #00-09, addresses Surface Water Protection, Wetlands Protection, Concurrency-Stormwater, Landscaping, including language for Florida Yards and Neighborhoods and Low Impact Development, and Stormwater Management. In 2013, the County adopted a fertilizer management ordinance (#13-005) that provides guidelines for fertilizer application quantities and timing and has implemented a street-sweeping program for monthly sweeping of paved roads, mainly in high priority TMDL watersheds. Active since 1985, our ambient water quality program takes quarterly samples from 134 lake and stream sites to assess nutrients, metals, and bacteria levels. The County has adopted Flood Plain Ord. #00-009 and participates in the National Flood Insurance Program administered through the Federal Emergency Management Act (FEMA). All development is required to receive the proper building and site alteration permits and new structures are required to be placed above the base flood elevation when the base flood elevation is known. We are also a participant in FEMA's Community Rating System and have received a class 8 rating. The Comp Plan requires water-conserving plumbing fixtures and landscape features to be included in the Building Code. The Building Division enforces the guidelines outlined in the 1994 Standard Plumbing Code. Polk County's Year Round Water Conservation Measures and Water Shortage Ord. #04-07 allows for improved enforcement of watering restrictions as set by the District and allows for localized limits on the use of reclaimed water to be the same as irrigation standards for potable water. Polk County Utilities' (PCU) Division Water Conservation Program Manual provides educational, regulatory, financial and operational measures for encouraging water conservation throughout our service areas. PCU's Reclaimed Water Program continues to be an integral part of the County's conservation efforts. Ord. #03-021 requires all new developments served by a wastewater treatment system that produce public access quality reclaimed water to install internal reuse distribution systems and to tie-in when reclaimed water becomes available. The Ordinance prohibits the use of potable water for irrigation once reclaimed water becomes available at a particular location. Polk County promotes Florida-Friendly landscaping and promotes the use of drought-tolerant native vegetation for landscape planting and buffer matrixes. Polk County remains an active member in both the Tampa Bay and Charlotte Harbor National Estuary Programs. The County is also a major cooperator and funding source to the Lake Action/ Education Drive, a non-profit public education group. We also work closely with the County Extension Service for public education and outreach activities, including funding of the Florida Friendly Yards program through IFAS. Our Circle B Bar Reserve hosts numerous educational events that inform the public about local natural resources. Polk County also organizes the annual 7 Rivers Water Festival, a public education event for all things related to water resources.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share	72,500		795,000		867,500
Hillsborough River	72,500		795,000		867,500
Total	145,000		1,590,000		1,735,000

Matching Fund Reduction

☐ Check here if requesting a reduction in matching funds requirement pursuant to s.288.06561, F.S.

Timelines

Commence

Milestone	Projected Date
Bidding and Contract Award	10/01/2020
Design and Permitting	10/01/2020
Construction Engineering and Inspection (CEI)	10/01/2020
Construction	01/01/2021
Demonstration Testing	04/01/2021

Complete

Milestone	Projected Date
Design and Permitting	12/31/2020
Bidding and Contract Award	12/31/2020
Construction	03/31/2021
Construction Engineering and Inspection (CEI)	03/31/2021
Demonstration Testing	09/30/2022

Data Collection Assessment:

☒ Other data collection: Water Quality Measurements from FAT Demonstration Testing

The Southwest Florida Water Management District (District) does not discriminate on the basis of disability. This nondiscrimination policy involves every aspect of the District's functions, including access to and participation in the District's programs and activities. Anyone requiring reasonable accommodation as provided for in the Americans with Disabilities Act should contact the District's Human Resources Director, 2379 Broad Street, Brooksville, Florida 34604-6899; 1-352-796-7211 or 1-800-423-1476 (Florida only), extension 4702; TDD (Florida only) 1-800-231-6103; or email to ADACoordinator@swfwmd.state.fl.us