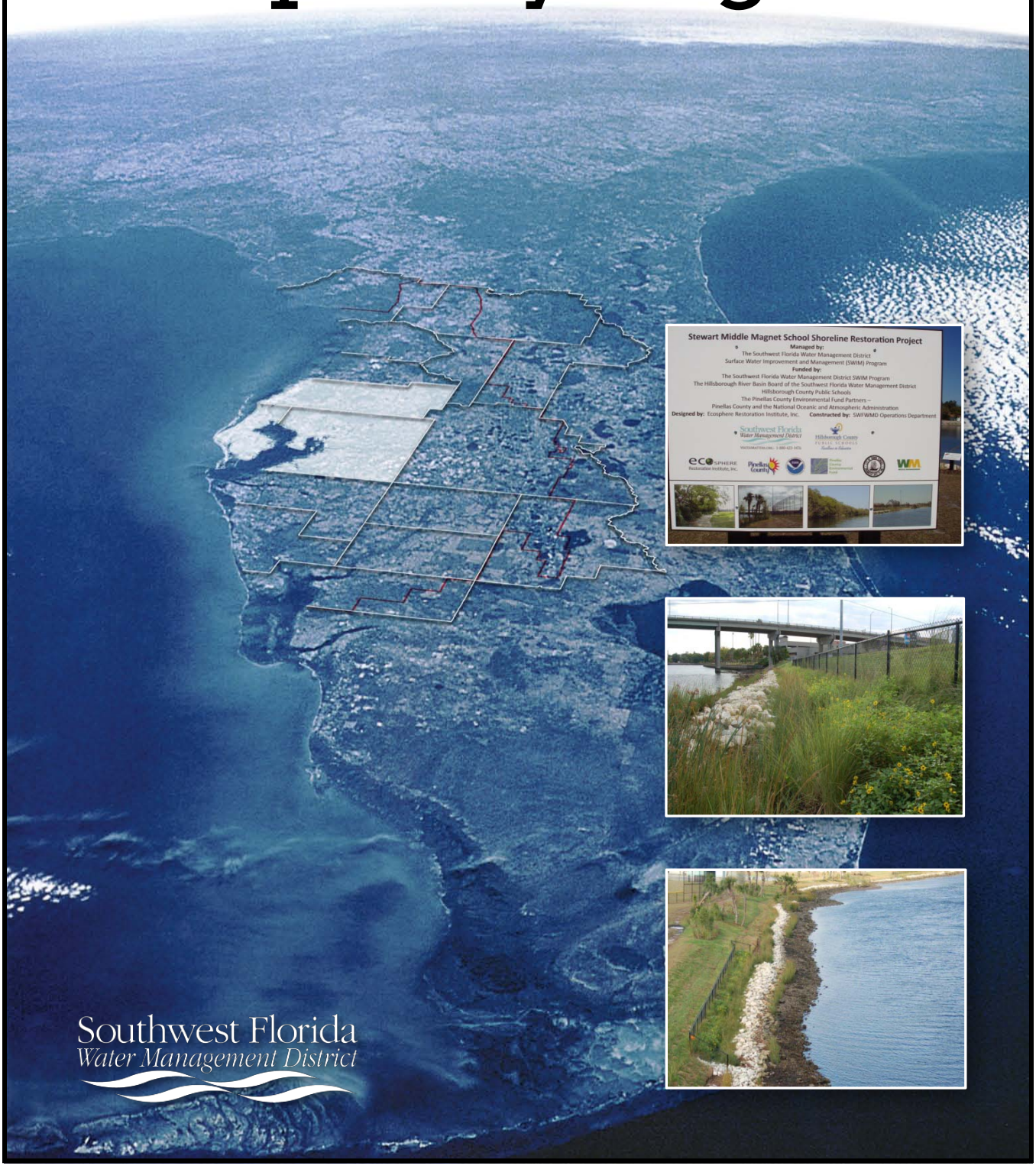
SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

Fiscal Year 2019

Cooperative Funding Initiative Applications

Tampa Bay Region



Southwest Florida
Water Management District

Coop Funding By Region For FY2019

Tampa Bay Region

Project	Project Name	Project Cost
N492	Lower Hillsborough River Dam Control Gate Facilities	$2,299,683
N665	DAR - Clearwater Groundwater Replenishment Project Phase 3	$32,716,000
N748	SW IMP - FP - Dale Mabry Henderson Trunkline - Upper Peninsula Watershed Drainage Improv.	$40,000,000
N773	SW IMP - Flood Protection - Cypress Street Outfall Regional Stormwater Improvements	$30,000,000
N791	Reclaimed Water - Pasco County Starkey Ranch Reclaimed Water Transmission Project - Project C	$913,600
N803	WMP - Anclote River Watershed Management Plan	$800,000
N836	SW IMP - Flood Protection - Zephyr Creek Drainage improvements: Units 1 & 2	$2,150,000
N837	Reclaimed Water - Pasco Co. Cypress Preserve Recl. Water Transmission Project Year 2 of 2	$350,000
N850	SW IMP - Flood Protection - Sea Pines Neighborhood Flood Abatement	$4,500,000
N855	DAR - South Hillsborough Aquifer Recharge Expansion (SHARE) - Phase 1	$10,500,000
N859	SW IMP - Flood Protection - Holiday Hill Subdivision Drainage Improvement	$1,100,000
N865	SW IMP - Flood Protection - Magnolia Valley Storage and Wetland Enhancement	$13,193,000
N867	SW IMP - Flood Protection - Palm Avenue Flooding Abatement	$499,958
N870	SW IMP - Flood Protection - Colonial Manor Drainage Improvement	$2,400,000
N901	SW IMP - Flood Protection - Port Richey Alternative Outfall	$3,250,000
N913	SW IMP - Flood Protection - Ironbark Flood Abatement	$4,110,000
N915	SW IMP - Flood Protection - Lower Spring Branch Conveyance Improvements	$3,320,000
N924	WMP - Lake Tarpon Watershed Management Plan - Flood Study	$300,000
N943	Restoration - Central Pasco Recharge Wetlands Facility Optimization	$14,951,806
N949	SW IMP - Flood Protection - Southeast Seminole Heights Flood Relief	$30,000,000
N953	SW IMP - Flood Protection - Salt Springs	$600,000
N954	Conservation-Florida Friendly Landscape Program- Public Education	$473,701
N955	Conservation - St. Petersburg Toilet Rebate Program, Phase 17	$5,340,807
N960	SW IMP - Flood Protection - Scenic Drive	$1,200,000
N961	Study-St. Petersburg Satellite Based Potable Water Leak Detection Study	$120,000
N965	AWS - Tampa Bay Water Tampa Bypass Canal Gates Automation	$1,032,000
N966	SW IMP - Flood Protection - Gibson Avenue Drainage Improvements	$1,800,000
N967	SW IMP - Flood Protection - Hidden Lake/Yellow Lake	$3,000,000
N968	Conservation - Hillsborough County Advanced Metering Infrastructure (AMI) Expansion	$600,000
N970	WMP - South Creek Watershed Management Plan	$750,000
N972	Conservation-Tampa Water Use Information Portal Implementation	$300,000
N975	SW IMP - Flood Protection - Town "N" Country/Hillsborough Avenue Regional Drainage Improvements	$45,750,000
N976	Study-Belleair Hydrogeologic Investigation for a Brackish Groundwater Water Supply	$1,019,972
N988	Study- IFAS Soil Moisture Sensor - Rain Shutoff Devise Study with Education	$50,001
N989	SW IMP - Water Quality - East Treasure Island Causeway BMPs	$1,800,000
N990	SW IMP - Flood Protection - Zephyr Creek Drainage Improvements: Units 3 and 4	$5,100,000
N993	WMP - Cypress Creek Watershed Management Plan Update	$3,600,000
N995	WMP - Plant City Watershed Management Plan	$1,300,000
N997	WMP - Kenneth City WMP and Stormwater Inventory	$125,000
N998	AWS- Tampa Bay Water Regional Facility Site Pump Station Expansion	$2,400,000
Q001	Study - Hillsborough County SCADA Long-Term Planning	$2,000,000
Q007	SW IMP - Flood Protection - Angus Valley	$5,100,000
Q010	Conservation- Tampa Advanced Metering Infrastructure Implementation	$30,000,000
Q011	WMP - Pithlachascotee/Bear Creek Watershed Management Plan Update	$1,600,000
Q012	SW IMP - Flood Protection - Buck/ Lanier	$620,000
Q013	WMP - Hammock Creek WMP	$1,800,000
Q014	Conservation-Pasco County - Toilet Rebate - Phase 12	$1,620,000
Q021	Recl. Water - Pasco Co. Cypress Preserve Recl. Water Trans. Main - Ph. 2 Grand Live Oak Blvd.	$413,000
Q026	SW IMP - Flood Protection - N Falkenburg Rd. Drainage Improvements	$1,300,000
Q027	SW IMP - Flood Protection - 56th St and Hanna Avenue Regional Drainage Improvements	$3,350,000

Q028	Reclaimed Water-Tampa Augmentation Project Implemention Phase I	$24,000,000
Q029	Study - Lake Tarpon Outfall Canal Feasibility Study	$400,000
Q033	Immediate Maintenance - Plantation Palms	$2,051,190
Q034	WMP - Brooker Creek Watershed Management Plan Update	$900,000
Q036	SW IMP - Flood Protection - Bartlett Park Park and 7th Street South Stormwater Improvements	$2,300,000
Q038	SW IMP - Flood Protection - Grand Boulevard Stormwater Improvement	$116,500
Q041	Conservation- New Port Richey Toilet Rebate - Phase 5	$329,160
Q042	SW IMP - Flood Protection - PHSC Berm/Boggy Creek	$3,250,000
Q045	SW IMP - Water Quality - Beach Street Stormwater System Improvements	$708,800
Q046	SW IMP - Water Quality - Town of Belleair Palmetto Rd. BMPs	$4,000,000
W024	FY2019 Tampa Bay Environmental Restoration Fund	$1,400,000
W214	Restoration - Roosevelt Creek Channel 5 Improvements	$715,142
W305	SW IMP - Water Quality - Roosevelt Stormwater Retrofit Project	$701,020
	Region Total	**$362,390,340**

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	Lower Hillsborough River Dam Control Gate Facilities
Project Number	N492
Cooperator	City of Tampa
Department	Water Department
Contact Person	Seung Park
Address	306 E. Jackson St., 5e
City Sate Zip	Tampa, FL 33602
Phone #	813-274-7095
Email	seung.park@tampagov.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:

A Lower Hillsborough River (LHR) minimum flow Rule and associated LHR Recovery Strategy have been adopted by the Southwest Florida Water Management District (SWFWMD). A key component of the LHR Recovery Strategy involves diversion of water from the Tampa Bypass Canal (TBC) to the LHR at the base of the Hillsborough River Dam. This requires permanent facilities be constructed at the Hillsborough River Dam. The City has completed a detailed alternatives analysis to determine the best infrastructure configuration at the Hillsborough River Dam. The City of Tampa (City) is dedicated to construct the Control Gate Facilities with SWFWMD as an ongoing cooperator. The City greatly appreciates its cooperative relationship with SWFWMD in implementing the LHR Recovery Strategy utilizing the most cost effective approach feasible.

Benefit:

The SWFWMD has determined the Lower Hillsborough River (LHR) Rule and Recovery Strategy will have measurable benefits towards promoting and restoring the natural characteristics and hydrologic functions of the LHR. This project is identified by the District's Regional Water Supply Plan and is consistent with the District's strategic initiatives.

Cost:

The total project cost is estimated to be $2,066,506 and should have a District share of $1,030,899 and City share of $1,035,607. Currently, the City has invested $1,268,774 and the District has committed to sharing $797,732. The City respectfully requests $233,167 from the District in FY2019 to ensure the cooperative efforts between the District and the City are preserved.

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

The City of Tampa has the following codes in place relating to water conservation: 1) Standard Plumbing Code (Ord. No. 92-67,2,5-7-92; Ord. No. 96-64,62,3-14-96; Ord. No.98-40,19 2-26-98), 2) Water Use Restrictions Code (Ord. No. 2003-316; Ord. No. 2000-69, 97, 3-16-00; Ord. No. 2000-43,97,9-14-00; Ord. No. 2001-87,97,3-29-01), 3) Increase in Water Restriction Violation Fines (Ord. NO. 2001-19,23,1-4-1), 4) Landscaping Code (Ord. No. 97-34,2,2-6-97), 5) Rain Sensor Requirement (part of Plumbing Code, Ord. NO 98-40,19,2-26-98), 6) Schedule of Water Rates (Ord. NO. 2001-0987,26-31,8-30-01). The city has adopted a Flood Damage Control Ordinance (Ord. NO. 92-67, 2, 5-7-92, ord. NO 92-134, 3, 4, 81-3-92; Ord. NO. 96-64, 73-75, 3-14-96) as required to participate in the National Flood Insurance Program administered through FEMA.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding

Applicant Share	1,268,774	10	1,268,784
General Fund-District Wide	797,732	233,167	1,030,899
Total	2,066,506	233,177	2,299,683

Matching Fund Reduction

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

Timelines

Construction Completion

Milestone	Projected Date
Construction Completion	09/30/2018

Data Collection Assessment:

☒ Surface Water Flow (Discharge) measurements

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	DAR - Clearwater Groundwater Replenishment Project Phase 3
Project Number	N665
Cooperator	City of Clearwater
Department	
Contact Person	Elliot Shoberg
Address	100 South Myrtle Ave.
City Sate Zip	Clearwter, FL 337585520
Phone #	727-562-4748
Email	elliot.shoberg@myclearwater.com

Project Type:

[X] Water Supply [X] Water Quality [ ] Flood Protection [ ] Natural Systems

Strategic Initiatives:

[X] Water Quality Maintenance and Improvement	[ ] Water Quality Monitoring
[X] Alternative Water Supply	[ ] Conservation
[X] 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	[X] Pinellas	[ ] Sarasota	[ ] Sumter	[ ] Polk

Project Description/Benefit/Cost Description:

This alternative water supply project includes analyses, design and installation of a salinity barrier and aquifer recharge system in effort to both protect and supplement groundwater supplies within the Upper Floridan aquifer and the City of Clearwater (City) service area. The salinity barrier concept is intended to reduce salt water intrusion from the Gulf of Mexico and/or Tampa Bay while any aquifer recharge will rely upon hydrogeological conditions between injection points and other permitted withdrawal points. The City's current expansion plans utilize treated groundwater withdrawn from the Upper Floridan aquifer as its primary source of potable drinking water.

The groundwater replenishment project will help extend the useful life of the City of Clearwater's current and future wellfield and may result in the ability to increase permitted withdrawal quantities in the future. A preliminary feasibility study was conducted and funded by the City; a formal feasibility study was cooperatively funded by the Southwest Florida Water Management District (District), followed by the Pilot and Testing Phase (also cooperatively funded with the District) completed in FY14.

Benefit:

This project will allow the City to beneficially utilize its reclaimed water in lieu of surface water discharge, reduce groundwater withdrawal impacts within the existing wellfields area, and potentially increase the City's future water supply.

Cost:

Total updated project cost $32,716,000; (Design, permitting, and construction)

City of Clearwater share $ 16,358,000; District $16,358,000, with $1,070,187.50 budgeted in FY2019. The District previously contributed $15,287,812.5(Total cost $30,575,625.00) for the preliminary design, third party review, and permitting of the full scale

facility, recharge well and monitoring system, injection well and monitoring system along with continuing public outreach efforts and construction.

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

The City of Clearwater has a proven track record of developing, implementing and enforcing water conservation measures. The City has met the requirements of the Northern Tampa Bay Water Use Caution Area stipulations included in its Water Use Permit. The 2016 Water Year compliance per capita water consumption for the City of Clearwater was 76 gpcd. This is well below the required 130 gpcd requirement established during the 2001 Water Use Caution Area regulations. The City has also implemented a consumptive use rate structure in October 2006 to ensure efficient use of reclaimed water which reduces the use of potable water for irrigation needs

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share	3,685,600	11,602,212	1,070,188		16,358,000
Pinellas Anclote	3,685,600	11,602,213	1,070,187		16,358,000
Total	7,371,200	23,204,425	2,140,375		32,716,000

Matching Fund Reduction

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

Timelines

Plant design and permitting Complete	12/31/2017
Palnt and Injection well system construction compete	12/31/2021

Data Collection Assessment:

- ☒ No data will be collected for this project
- ☒ Rainfall or Other Meteorological measurements
- ☒ Land Survey
- ☒ Aerial Imagery
- ☒ Sediment
- ☒ Surface Water Flow (Discharge) measurements
- ☒ Lithologic/Geophysical data
- ☒ LIDAR/Elevation data
- ☒ Biological (vegetation, benthic, fish, etc.)

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - FP - Dale Mabry Henderson Trunkline - Upper Peninsula Watershed Drainage Improv.
Project Number	N748
Cooperator	City of Tampa
Department	Stormwater
Contact Person	Ben Allushuski
Address	306 E Jackson St, 6n
City Sate Zip	Tampa, FL 33602
Phone #	813-274-3257
Email	ben.allushuski@tampagov.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 project consists of the design and construction of approximately 8,100 linear feet of box culvert and associated utility construction, commencing at the intersection of Dale Mabry Highway and Henderson Boulevard and outfalling to a canal at the Estrella Street terminus. Construction of this high capacity box culvert provides a primary conveyance system to relieve chronic flooding along Dale Mabry Highway, which serves as the main evacuation route for South Tampa. As demonstrated by hydraulic modeling for this watershed provided in a 2012 Alternatives Analysis, the depth of flooding along Dale Mabry is approximately 18 inches during the mean annual rainfall event. There is also significant neighborhood flooding occurring along collectors and neighborhood collectors that are served by the existing surface water management facilities. The City is funding and constructing the entire trunkline from Dale Mabry Highway to the outfall on Estrella. The Florida Department of Transportation is separately funding a box culvert along Dale Mabry Highway with an estimated cost $3,000,000 that will connect to the City's trunkline. The coordinated effort will provide regional flooding relief by constructing a conveyance system with sufficient capacity to reduce flood stages along a critical arterial roadway and serve future lateral connections to adjacent neighborhoods that experience frequent flooding. The anticipated FY 2019 phase of the project consists of the construction of a new outfall and box culvert along Estrella Avenue from Old Tampa Bay to Lois Avenue. Construction of the outfall includes dredging of the canal. A feasibility study and corridor analysis was previously submitted for this project, with representative cost estimates provided.

Benefit:

The primary benefit of the project is that it provides a new major outfall to Old Tampa Bay to relieve frequent flooding on Dale Mabry Highway. Dale Mabry is the main evacuation route from South Tampa with an average daily traffic count of approximately 40,000 between Henderson and Neptune. High intensity, short duration rainfall events often overwhelm the existing stormwater system, causing dangerous driving conditions. Attachment B of the previously submitted "Dale Mabry: Henderson to Neptune Flooding Relief Report" documents the depth of flooding during a recent rainfall. Hydraulic modeling of proposed conditions with a new box culvert outfall predicts that the hydraulic grade line does not stage above inlets on Dale Mabry, effectively eliminating flooding during the mean annual event. A map based of the modeled conditions shows flood stage reduction of greater than 2 feet at fifteen (15) locations on Dale Mabry, Morrison, and Watrous Avenue. Six (6) other locations exhibit flood stage reduction greater than 12 inches (see Page 11 of previously submitted Alternatives Analysis). Residential areas immediately upstream of the new system along Morrison, Himes, and Almeria Avenues see a substantial reduction in flooding as a result of the new trunkline. Flood stage reduction also occurs downstream in the Culbreath Bayou neighborhood by diverting flow from Neptune box culvert. A Benefit-Cost Ratio of 0.94 was calculated using the Federal Emergency Management Agency (FEMA) Benefit-Cost Analysis Tool.

Cost:

The FY 2019 portion of the project is estimated at $10 million, with a total project cost of approximately $40,000,000. This includes construction of the box culvert, new sanitary gravity pipe, water main and re-use relocation and offsets, utility lateral connections, and right-of-way restoration. A full cost estimate is provided in the attached Feasibility Study.

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

The City of Tampa has the following codes in place relating to water conservation: 1) Standard Plumbing Code (Ord. No. 92-67,2,5-7-92; Ord. No. 96-64,62,3-14-96; Ord. No.98-40,19 2-26-98), 2) Water Use Restrictions Code (Ord. No. 2003-316; Ord. No. 2000-69, 97, 3-16-00; Ord. No. 2000-43,97,9-14-00; Ord. No. 2001-87,97,3-29-01), 3) Increase in Water Restriction Violation Fines (Ord. NO. 2001-19,23,1-4-1), 4) Landscaping Code (Ord. No. 97-34,2,2-6-97), 5) Rain Sensor Requirement (part of Plumbing Code, Ord. NO 98-40,19,2-26-98), 6) Schedule of Water Rates (Ord. NO. 2001-0987,26-31,8-30-01). The city has adopted a Flood Damage Control Ordinance (Ord. NO. 92-67, 2, 5-7-92, ord. NO 92-134, 3, 4, 81-3-92; Ord. NO. 96-64, 73-75, 3-14-96) as required to participate in the National Flood Insurance Program administered through FEMA.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share	1,000,000	4,000,000	5,000,000	10,000,000	20,000,000
Hillsborough River	1,000,000	4,000,000	5,000,000	10,000,000	20,000,000
Total	2,000,000	8,000,000	10,000,000	20,000,000	40,000,000

Matching Fund Reduction

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

Timelines

Permitting	12/31/2017
30 Percent Design	12/31/2017
Third Party Review	12/31/2017
Construction	01/31/2020

Data Collection Assessment:

☒ No data will be collected for this project

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Flood Protection - Cypress Street Outfall Regional Stormwater Improvements
Project Number	N773
Cooperator	City of Tampa
Department	Stormwater
Contact Person	Ben Allushuski
Address	306 E Jackson St, 6n
City Sate Zip	Tampa, FL 33602
Phone #	813-274-3257
Email	ben.allushuski@tampagov.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:

The project consists of the construction of regional stormwater improvements to serve an area of approximately 700 acres in the West Riverfront and North Hyde Park areas of Tampa. The project is a multi-year project that provides a primary stormwater conveyance trunk line for areas affected by severe, chronic flooding. Construction of a box culvert system providing a new stormwater outfall serving future regional improvements was approved under ERP No. 43041855.000 and is now complete. Construction will also include a dual 8' x 8' and dual 6' x 5' box culvert system extending from the outfall at North Boulevard and Cass Street west along Cass Street, and thence south along Rome Avenue to Kennedy Boulevard. The Fiscal Year 2019 portion of the construction is anticipated to commence at the North Boulevard junction box and terminate at Rome, as shown on the included conceptual drawings. This system will serve the affected areas along the corridor and provide capacity for future lateral connections within the watershed. A corridor analysis, feasibility study, and cost-benefit ratio of the proposed trunk line is included in this application.

Benefit:

A regional XP-SWMM model of the area was developed and approved under ERP 43041855.000. The model was utilized to show the net benefit of the proposed box culvert system. The proposed improvements show a reduction in flooding at approximately 40 locations. The benefit is derived from the reduction of structural and roadway flooding. The attached Benefit Cost Ratio memo shows the improvement in Level of Service (LOS) for roadways in the affected areas as well as LOS for structures impacted by flooding. A Benefit-Cost Ratio of 1.25 was calculated using the Federal Emergency Management Agency (FEMA) Benefit-Cost Analysis Tool.

Cost:

The total project cost for construction is estimated at $27 million. Project costs are inclusive of utility relocations, roadway restoration, and the box culvert system. The estimated Fiscal Year 2019 expenditure for construction is $10 million. Construction of additional lateral connections to the Cass/Rome trunk line system is estimated at $17 million.

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

The City of Tampa has the following codes in place relating to water conservation: 1) Standard Plumbing Code (Ord. No. 92-67,2,5-7-92; Ord. No. 96-64,62,3-14-96; Ord. No.98-40,19 2-26-98), 2) Water Use Restrictions Code (Ord. No. 2003-316; Ord. No. 2000-69, 97, 3-16-00; Ord. No. 2000-43,97,9-14-00; Ord. No. 2001-87,97,3-29-01), 3) Increase in Water Restriction Violation Fines (Ord. NO. 2001-19,23,1-4-1), 4) Landscaping Code (Ord. No. 97-34,2,2-6-97), 5) Rain Sensor Requirement (part of Plumbing

Code, Ord. NO 98-40,19,2-26-98), 6) Schedule of Water Rates (Ord. NO. 2001-0987,26-31,8-30-01). The city has adopted a Flood Damage Control Ordinance (Ord. NO. 92-67, 2, 5-7-92, ord. NO 92-134, 3, 4, 81-3-92; Ord. NO. 96-64, 73-75, 3-14-96) as required to participate in the National Flood Insurance Program administered through FEMA.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share	500,000	1,000,000	5,000,000	8,500,000	15,000,000
Hillsborough River	500,000	1,000,000	5,000,000	8,500,000	15,000,000
Total	1,000,000	2,000,000	10,000,000	17,000,000	30,000,000

Matching Fund Reduction

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

Timelines

Scope of Work	12/31/2017
30 Percent Design	04/30/2018
Permitting	04/30/2018
Third Party Review	04/30/2018
Construction	06/30/2020

Data Collection Assessment:

☒ No data will be collected for this project

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	Reclaimed Water - Pasco County Starkey Ranch Reclaimed Water Transmission Project - Project C
Project Number	N791
Cooperator	Pasco County
Department	Utilities
Contact Person	Pamela Lynch
Address	19420 Central Blvd.
City Sate Zip	Land O'Lakes, FL 34637
Phone #	813-235-6191
Email	plynch@pascocountyfl.net

Project Type:

[X] Water Supply [ ] Water Quality [ ] Flood Protection [ ] Natural Systems

Strategic Initiatives:

[ ] Water Quality Maintenance and Improvement	[ ] Water Quality Monitoring
[X] Alternative Water Supply	[ ] Conservation
[X] 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	[X] Pasco	[ ] Pinellas	[ ] Sarasota	[ ] Sumter	[ ] Polk

Project Description/Benefit/Cost

Description:

In May 2014, the District's Governing Board approved an out-of-cycle funding request for a total project cost of $1,221,660 to construct the first phase (Project A) of the Starkey Ranch reclaimed water transmission main. This phase of the project is complete. Project B in the amount of $1,910,000 was approved by the Governing Board for Fiscal Year 2016 funding and will be completed by the end of Fiscal Year (FY) 2018. The third phase of the project was completed by the developer without any funding assistance from the District. Project C is the construction of additional reclaimed water transmission main to provide up to 0.43 million gallons per day (mgd) of reclaimed water to mixed use irrigation customers. Funding for the first two phases of Project C was approved by the Governing Board for FY 2017 and 2018 in the amount of $673,322 and $22,532, respectively. The third and final phase of Project C has a project cost of approximately $217,746. The total project cost for Project C is $913,600 (District share = $456,800, County share = $456,800).

Benefit:

The annual average flow offset of potable water used for irrigation at build out for Project C is approximately 186 million gallons per year or 0.56 mgd. Initial customers to be served by Project C are anticipated to be receiving project benefits by 12/2023. The project has been designed to provide an initial benefit of approximately 0.43 mgd of reclaimed water, which will offset approximately 0.29 mgd of potable water. An additional benefit of 0.33 mgd of reclaimed water to offset 0.22 mgd of potable water will be provided upon build out of this section of Starkey Ranch. The project will enable the continuation of concurrent reclaimed water construction with roads and other utilities. Since the Starkey Ranch development is located in the Northern Tampa Bay Water Use Caution Area, this project will serve to further implement the District's Regional Water Supply Plan by greatly reducing the need for utilizing ground water for irrigation purposes.

Cost:

The cost of Project C is estimated to Be $913,600; $456,800 District share - $456,800 County share. The requested share for FY '19 is $217,746; $108,873 District share - $108,873 County share. This phase will complete Project C.

The estimated cost benefit is $3.20/1,000 gallons of initial water resource benefit, which is within the average cost range for reuse projects which typically range from a low of $0.15/1,000 gallons for golf course projects up to approximately $10.00/1,000 gallons for residential projects.

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental

benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water; curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed water is $0.32 per 1,000 gallons for customers that have storage capability. All other bulk customers that feed directly off of the system will be charged $0.63 per thousand gallons used. Residential irrigation customers will be billed a flat rate of $14.72 per month. Pasco County's potable water rates are applied in a water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share	336,661	11,266	108,873		456,800
General Fund-District Wide	336,661	11,266	108,873		456,800
Total	673,322	22,532	217,746		913,600

Matching Fund Reduction

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

Timelines

September 2020

Milestone	Projected Date
Complete Construction	09/30/2020

Data Collection Assessment:

☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name WMP - Anclote River Watershed Management Plan
Project Number N803
Cooperator Pinellas County
Department Environmental Management
Contact Person Robert Mcwilliams
Address 22211 Us Hwy 19 N, Bldg 10
City Sate Zip Clearwater, FL 33756
Phone # 727-464-4012
Email rmcwilli@pinellascounty.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:

The Anclote River Watershed within Pinellas County has a watershed of approximately 9000 acres and is the largest river system in Pinellas County. In recent years, the watershed and its associated natural resources have begun to exhibit signs of ecological stress. The watershed is now listed on the State's verified impaired waters list for Dissolved Oxygen and Nutrients (historic Trophic State Index). The request involves the development of a comprehensive watershed management plan that results in recommendations for water quality, drainage, and natural system improvement projects. SWFWMD and Pasco County are currently working on an update to the watershed management plan for the part of the river located in Pasco County. The timing of the Pinellas County project would coincide with Pasco/SWFWMD update.

Benefit:

This project will provide County and District staff with information and BMP analysis for improving water quality, reducing flood issues, infrastructure improvements and restoration of habitat in the contributing watershed.

Cost:

This request is for the third, and final, year of a three year project whose total project amount is estimated to be $800,000.00.

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

The Surface Water Element of the County's Comprehensive Plan (CP) obligates the County to protect, enhance, and improve water quality through water quality monitoring, watershed management plan development, and environmental enforcement. Pinellas County is dedicated to improving flood protection as documented in the CP. The County has a fertilizer ordinance which restricts using products containing nitrogen or phosphorus during the wet season with a related sales ban, a pet waste ordinance, and street sweeping program all designed to reduce nutrient pollution to receiving waters. The County also recently adopted a stormwater utility that collects fees to fund surface water programs which includes stormwater maintenance and related public outreach and education programs.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share	150,000	150,000	100,000		400,000
Pinellas Anclote	150,000	150,000	100,000		400,000

Total	300,000	300,000	200,000		800,000

Matching Fund Reduction

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

Timelines

Watershed Evaluation	07/31/2018
Floodplain Analysis	09/30/2019
WMP- FPLOS BMP Alternative Analysis	10/31/2019
SWRA & BMPs of Water Quality	12/02/2019

Data Collection Assessment:

☒ Groundwater or Surface Water Level measurements	☒ Surface Water Flow (Discharge) measurements
☒ Groundwater or Surface Water Quality measurements	☒ Rainfall or Other Meteorological measurements
☒ Land Survey	☒ LIDAR/Elevation data
☒ Mapping/GIS data	☒ Biological (vegetation, benthic, fish, etc.)

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Flood Protection - Zephyr Creek Drainage improvements: Units 1 & 2
Project Number	N836
Cooperator	Pasco County
Department	Design Stormwater Management
Contact Person	Pasco County Public Works Department
Address	7536 State Street, Suite 140
City Sate Zip	New Port Richey, FL 34654
Phone #	727-847-8143
Email	mgarrett@pascocountyfl.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 is a multi-year (previously funded) project to perform the Implementation of Best Management Practices (BMPs) element of the District's Watershed Management Program (WMP) for Units 1 and 2 of the 8,000-acre Lake Zephyr watershed. The SWMMP for the six-unit Lake Zephyr Watershed was completed in 1989 and updated in 2009. Through cooperative funding and HUD grant funds, Unit 5 (Geiger Pond) has been completed and has been shown to be effective. In order to complete the lower two units of the Lake Zephyr Watershed Management Plan, additional funding is being requested. Units 1 and 2 have been designed with an eye toward reduced acquisition/construction costs. Some Community Development Block Grant money along with some FEMA money has been used for the design and to install box culverts under US 301 and Dean Dairy Road (portions of Units 2 and 4). FY 2007 funding was used to redesign Units 1 and 2. Unit 1 involves the acquisition of floodplain easements south of Chancey Road to account for the increased flood staging from proposed upstream conveyance improvements. Unit 2 consists of road crossing improvements from C Avenue south to US Highway 301 in Zephyrhills. FY 18 funding is being used to re-permit both sections. Fy 19 funding will be utilized for acquisition and construction.

Benefit:

The overall proposed project promises to reduce expected flood levels so that hundreds of structures can be reclassified as lying above the FEMA floodplain. These units represent the downstream three-miles of Zephyr Creek, and would serve to alleviate flooding throughout the entire watershed.

The anticipated benefit/cost ratio is approximately 1.23

Cost:

Construction cost - $2,150,000 This includes $130,000 for acquisition Parcel ID 23 26 21 0000 00800 0030
FY18 Funds ($300,000) are being used for design/permitting and identifying property needs
FY 19 funds (1,850,000) will be used for acquisition and construction

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water; curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed water is $0.32 per 1,000 gallons and $14.72 per month for residential irrigation. Pasco County's potable water rates are applied in a water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share		150,000	925,000		1,075,000
Hillsborough River		150,000	925,000		1,075,000
Total		300,000	1,850,000		2,150,000

Matching Fund Reduction

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

Timelines

Zephyr 1 & 2

Milestone	Projected Date
Begin Construction	03/01/2019

Zephyr 1&2

Milestone	Projected Date
Bid project	12/01/2018

Zepyhr 1 & 2

Milestone	Projected Date
Complete Construction	09/01/2019

Data Collection Assessment:

☒ Land Survey

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	Reclaimed Water - Pasco Co. Cypress Preserve Recl. Water Transmission Project Year 2 of 2
Project Number	N837
Cooperator	Pasco County
Department	Utilities
Contact Person	Pamela Lynch
Address	19420 Central Blvd.
City Sate Zip	Land O'Lakes, FL 34637
Phone #	813-235-6191
Email	plynch@pascocountyfl.net

Project Type:

[X] Water Supply [ ] Water Quality [ ] Flood Protection [ ] Natural Systems

Strategic Initiatives:

[ ] Water Quality Maintenance and Improvement	[ ] Water Quality Monitoring
[X] Alternative Water Supply	[ ] Conservation
[X] 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	[X] Pasco	[ ] Pinellas	[ ] Sarasota	[ ] Sumter	[ ] Polk

Project Description/Benefit/Cost

Description:

This is the second year for the construction of approximately 3,000 linear feet of 16-inch reclaimed water transmission main along U.S. Highway 41 north from Asbel Road to the Cypress Preserve community. The line will eventually continue into the community on Mossey Timber Blvd. and terminate at Phase 2A - Hawks Landing Drive. The first year of this project was for the design of the reclaimed water transmission main which was cooperatively funded with the District ($17,500-District share and $17,500-County share) in Fiscal Year 2018 for a total project cost of $35,000. Pasco County has existing District co-funded reclaimed water infrastructure in the vicinity of Asbel Road where the connection will be made.

Cypress Preserve is an approved MPUD located on U.S. Highway 41 just south of State Road 52. Construction of the Cypress Preserve community began in 2017. This community provides Pasco County with the opportunity to add another reclaimed water customer to the Pasco County Master Reuse System. The community will eventually consist of 557 single family homes, 284 multi-family homes, and approximately 15 acres of common areas. Furthermore, future development to the west of the project is anticipated to be significant - up to 10,000 single family homes. The community's distribution system will advance the utilization of reclaimed water for irrigation of homes and businesses and will eliminate the need to utilize potable water for this purpose.

This is a multi-year funded project.

Benefit:

The annual average flow offset of potable water used for irrigation at build out of the Cypress Preserve community is approximately 70 million gallons per year or .192 million gallons per day (mgd). Customers to be served are anticipated to be receiving project benefits by 2019. The project will be designed to provide a benefit of approximately .192 mgd of reclaimed water. This project will enable the continuation of concurrent reclaimed water construction with roads and other utilities. Cypress Preserve is located in the Northern Tampa Bay Water Use Caution Area. It will serve to further implement the District's Regional Water Supply Plan by greatly reducing the need for utilizing ground water for irrigation purposes.

Cost:

The total project cost is $350,000. District Share = $175,000 - County Share = $175,000

The first year total cost is $35,000. District Share = $17,500 - County Share = $17,500

The second year total cost is $315,000. District Share = $157,500 - County Share = $157,500

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water; curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed water is $0.32 per 1,000 gallons for customers that have storage capability. All other bulk customers that feed directly off of the system will be charged $0.63 per thousand gallons used. Residential irrigation customers will be billed a flat rate of $14.72 per month. Pasco County's potable water rates are applied in a water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share		17,500	157,500		175,000
General Fund-District Wide		17,500	157,500		175,000
Total		35,000	315,000		350,000

Matching Fund Reduction

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

Timelines

Commence Construction

Milestone	Projected Date
Commence Construction	10/01/2018

Complete Construction

Milestone	Projected Date
Complete Construction	10/31/2019

Data Collection Assessment:

☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Flood Protection - Sea Pines Neighborhood Flood Abatement
Project Number	N850
Cooperator	Pasco County
Department	Design Stormwater Management
Contact Person	Pasco County Public Works Department
Address	7536 State Street, Suite 140
City Sate Zip	New Port Richey, FL 34654
Phone #	727-847-8143
Email	mgarrett@pascocountyfl.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:

The Sea Pines neighborhood lies east of Old Dixie Hwy, west of Hwy 19, and north of Gulf Way. The project covers 750 acres, including 125 offsite acres. The neighborhood suffers from insufficient conveyance, storage, and topographical relief. The project would consist of design, permitting, construction, and real estate acquisition, encompassing increased storage and treatment, increased conveyance, and easement acquisition.

Benefit:

There are currently 24 residential structures at risk of flooding in a 100-year flooding event. The project, upon completion, would be expected to result in all but three (21 of the 24) of those structures' being removed from the flood hazard zone. Given the proposed storage/increased storage, the storm-water runoff currently being discharged from the site would undergo further treatment before being discharged directly or indirectly into the Gulf.

The anticipated benefit/cost ratio is approximately 1.0

Cost:

The total project expected cost is $4.5M.

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water; curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also

provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed water is $0.32 per 1,000 gallons and $14.72 per month for residential irrigation. Pasco County's potable water rates are applied in a water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share		300,000	1,950,000		2,250,000
Coastal Rivers		300,000	1,950,000		2,250,000
Total		600,000	3,900,000		4,500,000

Matching Fund Reduction

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

Timelines

Sea Pines

Milestone	Projected Date
Begin Construction	12/01/2018
End Construction	09/01/2019

Data Collection Assessment:

☒ Land Survey ☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	DAR - South Hillsborough Aquifer Recharge Expansion (SHARE) - Phase 1
Project Number	N855
Cooperator	Hillsborough County
Department	Public Utilities
Contact Person	Nicholas Lopresti
Address	925 E. Twiggs Street
City Sate Zip	Tampa, FL 33602
Phone #	813-272-5977 ext43358
Email	loprestin@hillsboroughcounty.org

Project Type:

[X] Water Supply [ ] Water Quality [ ] Flood Protection [ ] Natural Systems

Strategic Initiatives:

[ ] Water Quality Maintenance and Improvement	[ ] Water Quality Monitoring
[X] Alternative Water Supply	[X] Conservation
[X] Reclaimed Water	[X] 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	[X] Hillsborough	[ ] Lake
[ ] Levy	[ ] Manatee	[ ] Marion	[ ] Pasco	[ ] Pinellas	[ ] Sarasota	[ ] Sumter	[ ] Polk

Project Description/Benefit/Cost

Description:

Third Party Review (TPR) of the County's 30% design, completion of design and permitting, and initiation of construction for Phase 1 of the South Hillsborough Aquifer Recharge Expansion (SHARE) project is expected to occur prior to FY2019. Moving forward in FY2019, the Phase 1 project will construct interconnecting transmission mains; design, permit, and construct two recharge wells (2 mgd each) and eight monitoring wells; and install associated appurtenances. The SHARE project expands upon of the County's current recharge project (N287) and upon completion will consist of up to seven recharge wells with a total recharge flow of up to 14 mgd in Southern Hillsborough. TPR of the County's 30% design will be required per the District's CFI guidelines, as this project has a conceptual cost greater than $5 million

In 2009, Hillsborough County's Public Utilities Department (PUD) began evaluating the feasibility of using highly-treated wastewater from its existing Advanced Water Reclamation Facilities to provide environmental improvements, a barrier to salt water intrusion, a path to the restoration of MIA water levels, and support a long-term and sustainable solution to water management challenges in the southern portion of its service area. The County's goal of 100% reuse capability is the driver behind the development of the first reclaimed water direct aquifer recharge pilot project in the state of Florida. The County's South Hillsborough Aquifer Recharge Project (SHARP) located at the Port Redwing Outfall became the first reclaimed water direct aquifer recharge project in the region. This project includes a Class V, Group 2, 3 million gallons per day (MGD) recharge well and associated monitoring wells, which started operation in July 2015. Operational data collected at the SHARP pilot well since 2015 provides the groundwork for the expansion of the aquifer recharge system. As a result of the successful implementation and operation of the SHARP system, PUD is now seeking to install additional Class V recharge wells in the Wolf Branch Creek area as part of the South Hillsborough Aquifer Recharge Expansion (SHARE) project. The County's aquifer recharge expansion vision includes a regional recharge system to mitigate saltwater intrusion in costal Hillsborough County, provide a level of mitigation to the SWUCA, MIA, and to allow for additional groundwater development in an area that has had historical adverse water level impacts to the aquifer. It is anticipated that at least seven (7) aquifer recharge wells will be constructed as part of SHARE in several phases over the next 10 -15 years. Each well is anticipated to operate at 2 MGD AADF with peak flows of approximately 3 MGD. This project, Phase 1 of SHARE consists of Design, Permitting and Construction of reclaimed water transmission mains (RWTMs); Two (2) recharge wells and approximately eight (8) monitoring wells; Two (2) recharge well wellheads and appurtenances; Monitoring wells and appurtenances, including remotely powered sample pumps and purge water discharge facilities for all wells; Electrical service to all monitoring wells for controls; SCADA, instrumentation and control, including automation so that the system can be remotely operated with all necessary monitoring systems in place to meet FDEP permit reporting requirements.

Benefit:

The County’s aquifer recharge expansion vision includes a regional recharge system to mitigate saltwater intrusion in costal Hillsborough County, provide a level of mitigation to the SWUCA, MIA, and to allow for additional groundwater development in an area that has had historical adverse water level impacts to the aquifer. This project, Phase 1 of SHARE (Two (2) Wells), is anticipated to recharge approximately 4 MGD AADF with peak flows of approximately 6 MGD. The total anticipated recharge quantity of the proposed seven (7) aquifer recharge wells (SHARE) plus the existing SHARP well is 14 MGD AADF with peak flows of approximately 24 MGD.

Cost:

Total Phase 1 Project Cost: $10,500,000; Total District share: $5,000,000; Hillsborough County share: $5,500,000

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

Hillsborough County was the premier local government to decriminalize the violation of water use restrictions, and to adopt a civil citation process for the enforcement of the same in July 1993. A fulltime Water Conservation Manager assures that the County stays abreast of conservation issues. This facilitates amendments to the County's Water Conservation Ordinance (HCO 03-07) as needed to quickly address changing conditions in the regulatory environment and as deemed appropriate by the County's administration. Enforcement of water conservation issues is done through Code Enforcement and Construction Services (Plumbing and Building Departments) in areas of their respective responsibilities. Reclaimed Water Master Plans have been developed to determine how reclaimed water throughout the County will be utilized for the primary goal of offsetting potable water use and meeting regulatory compliance. Additionally, the County has established a Reclaimed Water Improvement Unit (RWIU) ordinance to retrofit existing subdivisions with reclaimed water distribution systems. Hillsborough County has adopted a flood plain ordinance (County Ordinance 01-33) as required to participate as a community in the National Flood Insurance Program (NFIP) administered through the Federal Emergency Management Agency (FEMA). The county has developed land development regulations (LDR 96-35) to enforce the ordinance. All development is required to receive the proper building and site alteration permits. At this time flood plain issues are addressed to ensure compliance with the flood plain ordinance. Finished floor elevations are compared to the 100 year flood elevation. The County is also a participant in FEMA's Community Rating System and received a Class 6 rating. The Hillsborough County Reuse Program includes metering and an incentive based reuse rate structure for high volume water users and has proactive reclaimed water expansion policies which maximize utilization, water resource benefits and environmental benefits.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Alafia River		2,265,000	2,735,000		5,000,000
Applicant Share	1,000,000	2,765,000	1,735,000		5,500,000
Total	1,000,000	5,030,000	4,470,000		10,500,000

Matching Fund Reduction

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

Timelines

1 Design

Milestone	Projected Date
End Design	05/01/2018

2 Permitting

Milestone	Projected Date
End Permitting	09/30/2018

3 Advertise, Bid,Award

Milestone	Projected Date
Bid Process End	08/31/2018

4 Construction

Milestone	Projected Date
Construction Start	02/01/2019

5 Construction

Milestone	Projected Date
Construction End	09/30/2019

6 Construction

Milestone	Projected Date
Final Closeout	03/31/2020

Data Collection Assessment:

☒ Groundwater or Surface Water Level measurements ☒ Monitor Well Installation

☒ Aquifer Testing

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Flood Protection - Holiday Hill Subdivision Drainage Improvement
Project Number	N859
Cooperator	Pasco County
Department	Design Stormwater Management
Contact Person	Pasco County Public Works Department
Address	7536 State Street, Suite 140
City Sate Zip	New Port Richey, FL 34654
Phone #	727-847-8143
Email	mgarrett@pascocountyfl.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:

The Holiday Hills Subdivision is located east of U.S. 19 in the west central area of Pasco County (Section 21, Township 25 South, Range 16 East). The subdivision experiences flooding of both streets and homes on a relatively frequent basis. The most severe flooding within the subdivision is in the southwest corner of the subdivision in the vicinity of the intersections of Gainsboro Drive, Hyperion Drive and holiday Hills Boulevard with Pegasus Avenue. The flooding experienced within the subdivision is attributable to two main factors: Limited discharge capacity of the existing pump station and a small amount of existing storage available within the existing retention pond.

Benefit:

The proposed project to improve conditions by reducing the duration of flooding in the subdivision is:
1. Addition of a pump station that will convey water from the retention pond to the drainage ditch/canal at the northern border of the subdivision. This would require the installation of piping from the existing retention pond to the north. This system would propose a control structure at the boundary between the north and south basins to prevent inflows from the northern basin to the southern basin and then a number of new ditch bottom inlets would be placed primarily along Pegasus Avenue to gather the localized ponding and direct it to the northern drainage ditch/canal. This will also involve some utility relocation.
2. Acquire the parcels/structures adjacent to the retention pond if they become available.
3. Expand the retention pond

Cost:

$1,100,000 total project cost. FY 18 funds ($200,000) will be used for design and permitting. FY 19 funds ($900,000)will be used for acquisition and construction

Parcels to be aquired

Parcel ID 21 25 16 0540 00000 0910 - $45,000
Parcel ID 21 25 16 0540 00000 0900 - $47,500
Parcel ID 21 25 16 0540 00000 0890 - Previously acquired by Pasco County

Parcel ID 21 25 16 0540 00000 0880 - Previously acquired by Pasco County

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water; curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed water is $0.32 per 1,000 gallons and $14.72 per month for residential irrigation. Pasco County's potable water rates are applied in a water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share		100,000	450,000		550,000
Coastal Rivers		100,000	450,000		550,000
Total		200,000	900,000		1,100,000

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
Begin Construction	02/01/2019
end construction	09/01/2019

Data Collection Assessment:

☒ Land Survey ☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Flood Protection - Magnolia Valley Storage and Wetland Enhancement
Project Number	N865
Cooperator	Pasco County
Department	Design Stormwater Management
Contact Person	Pasco County Public Works Department
Address	7536 State Street, Suite 140
City Sate Zip	New Port Richey, FL 34654
Phone #	727-847-8143
Email	mgarrett@pascocountyfl.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 is a project to implement best management practices, which include design, permitting, construction of the Magnolia Valley Storage and Wetland Enhancement Area, and construction engineering and inspection. This project will occur on parcels the County purchased on 9/14/2016 and will consist of excavation to provide stormwater storage and wetland enhancement. The additional storage and wetland enhancement will provide water quality, flood protection and natural system benefits for the watershed. The projected cost for budgeting proposes is $13,000,000. The project will be implemented as a multi-year project with a conceptual design, 30% design, third party review, final design and permitting, and construction phases. The Magnolia Valley area is within the Port Richey Watershed in Pasco County and is part of a 960-acre sub-watershed that has experienced repeated structure and street flooding. The County also began in to operate the pumping facility (May 2016) to protect the citizens within the contributing area.The County applied for and obtained a District ERP permit (No 49004413.005) on June 1 2016 that allows the County to legally operate the pumps consistent with their historic operation. A District Cooperative Funding Project for FY 2017, funded for a total project cost $1,900,000. Project Number N835 funded the purchase of the Magnolia Valley Golf Course Parcels and repair of the Pumping Facility. The District and County also cooperatively funded ($637,000) the New Port Richey Watershed Management Plan that developed a GIS database, a watershed model, peer reviewed and Governing Board approved floodplain results, and a BMP Alternative Analysis. The County further refined the BMP Alternative Analysis to evaluate the benefits of ownership of the golf course parcels. The County applied for and obtained an EPR Conceptual approval (Permit No. 49004413.004) for storage and conveyance elements in the Magnolia Valley Area, which is included in the applicants share for prior funding of this project.

Benefit:

The project will enhance water quality and natural systems while providing flood protection. The added storage will impact upstream and downstream flood elevations by providing additional storage. It will also replace a golf course with a water feature that includes enhanced wetlands and extended retention times for smaller storm events in the deep water cells. The change in land use from a golf course also eliminates the non-point source pollution from fertilizers and chemicals to maintain the turf. The flood protection preliminary benefit/cost ratio is 0.60, calculated using Stormwater Improvement Flood Protection (SIFP) Benefit Cost

Analysis Tool (attached as a document). This benefit/cost ratio will be further refined during the conceptual design phase. FY 18 funds will design thru 30% plans and FY19 funds will complete design and permitting

Cost:

The projected cost for budgeting is $13,193,000, which includes $193,000 of prior County funding.

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water; curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed water is $0.32 per 1,000 gallons and $14.72 per month for residential irrigation. Pasco County's potable water rates are applied in a water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share	193,000	300,000	200,000	6,000,000	6,693,000
Coastal Rivers		300,000	200,000	6,000,000	6,500,000
Total	193,000	600,000	400,000	12,000,000	13,193,000

Matching Fund Reduction

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

Timelines

Magnolia Valley

Milestone	Projected Date
NTP to Consultant	12/01/2017
30% design Plans	08/01/2018
3rd Party Review	09/01/2018
Final Design/permit	08/01/2019

Data Collection Assessment:

☒ Groundwater or Surface Water Level measurements ☒ Monitor Well Installation

☒ Land Survey ☒ Mapping/GIS data

☒ Biological (vegetation, benthic, fish, etc.)

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Flood Protection - Palm Avenue Flooding Abatement
Project Number	N867
Cooperator	Tarpon Springs
Department	Public Services
Contact Person	Anthony Mannello
Address	324 E. Pine Street
City Sate Zip	Tarpon Springs, FL 34689
Phone #	727-942-5610
Email	amannello@ctsfl.us

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 project is located within the City of Tarpon Springs, FL. Stormwater runoff from the project discharges into Anclote River Bayou Complex (Spring Bayou), WBID #1440A. Primary land use for the contributing basin area is urban/residential. There are two (2) areas of historical flooding that comprise this project, none of the areas having storm sewer infrastructure or a stormwater management facility. In 1992 the City had a Master Drainage Study completed which identified these two (2) locations as “Flood Prone Areas”. In 2010 the City prepared a Stormwater master plan, known as the Stormwater Action Plan (SAP), which assessed and ranked flooding conditions, developed conceptual solutions to abate the flooding conditions, and provided a prioritized capital improvement plan for implementation in efforts to provide flood control and water quality improvements utilizing treatment systems and best management practices. As stated, this project consists of two (2) project areas that have each been assessed and described below. Map ID No. 21 – Palm Avenue between Tarpon Drive and Glades Avenue: Roadway and private property (728 Palm Avenue) flooding with no stormwater infrastructure. Resident has installed a concrete barrier in front of garage to prevent stormwater from entering garage/residence. Resident also maintains a swale along the east side of the residential property to convey the runoff through the property. Flood waters stage up until it drains south towards Gulf Rd. Flooding problem primarily due to depressional area with no stormwater infrastructure to collect and convey the stormwater runoff. Map ID No. 22 – Palm Avenue between Tarpon Drive and Gulf Road: Roadway and private property (721 Palm Avenue) flooding with no stormwater infrastructure. Flood waters stage up until it drains south towards Gulf Rd. Flooding problem primarily due to depressional area with no stormwater infrastructure to collect and convey the stormwater runoff. The project would be a local system flood protection project with a water quality component. The project involves installing a storm sewer collection system along Palm Avenue and Tarpon Drive, utilizing property at the southeast corner of the intersection of Gulf Road/Tarpon Drive for a stormwater management facility (SMF). Property acquisition would be required for the proposed SMF; positive negotiations are on-going between property owner (American Legion Post 46) and the City of Tarpon Springs.

Benefit:

The project would provide direct flooding abatement (duration and flood frequency) for the 25-yr./24-hr. storm event for up to 3 residential properties, 2 structures, and 1 roadway. Project would also provide a net improvement to water quality discharge to Anclote River Bayou Complex (Spring Bayou), WBID #1440A. During development of City’s Stormwater Action Plan (SAP) each of these locations were analyzed on the following criteria: traffic safety, emergency access/route, property impacts, environmental, problem documentation, maintenance, and City score. Using these criteria a SAP Score was developed for each of the stormwater focus areas. Following development of two conceptual solutions for each problem location, preliminary cost estimates (including survey, geotechnical, final design services, permitting, estimated property costs, construction, a twenty-five percent (25%)

contingency, and materials) were then prepared in order to perform a cost/benefit analysis for each alternative. This analysis was used to assist with determining which conceptual alternative provided the best solution to the problem for the least cost while also assisting with development of the Stormwater Capital Improvement Program being implemented today by the City.

Cost:

$499,958

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

The coastal community of the City of Tarpon Springs has a Streets and Stormwater Division which is a division of the Public Works Department. This Division is responsible for maintaining the City streets and stormwater infrastructure. The Division performs any required repairs and performs specific preventative maintenance tasks to all City stormwater BMPs to ensure compliance with FDEP NPDES permitting as well as SWFWMD permitting, thereby providing water quality and flood protection for the City. The City of Tarpon Springs Streets and Stormwater Division staff are trained to identify and properly report illicit stormwater discharges within the City. City conservation efforts, including inverted rate structures (ordinance attached), an extensive and popular reclaimed water program, and former toilet rebate program through Pinellas County Utilities have resulted in a measurable reduction in our per capita water consumption to less than 110 gal/capita/day. City leadership remains committed to water conservation and has maintained watering restrictions that are more stringent than currently required by the District. The City's stormwater program is operated as a utility with monthly user fees as established by Ordinance. The City has also provided and maintains a BMP for water quality by passing Ordinance Ch. 4:4(f) which requires removal of animal waste from City rights of way. In FY 2015, the City Commission voted to increase the stormwater utility rate to in efforts to further the City's commitment to provide flood abatement and water quality improvement projects in efforts to implement the City's Stormwater Action Plan (the City's stormwater Capital Improvement Plan).

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share		49,387	200,592		249,979
Pinellas Anclote		49,387	200,592		249,979
Total		98,774	401,184		499,958

Matching Fund Reduction

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

Timelines

DESIGN PERMITTING

Milestone	Projected Date
BEGIN DESIGN/PERMITTING	10/16/2017
END DESIGN/PERMITTING	07/13/2018
BEGIN CONSTRUCTION	09/11/2018
END CONSTRUCTION	03/11/2019
PROJ CLOSEOUT & CONTRACT TERMINATION	08/08/2019

Data Collection Assessment:

☒ No data will be collected for this project

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Flood Protection - Colonial Manor Drainage Improvement
Project Number	N870
Cooperator	Pasco County
Department	Design Stormwater Management
Contact Person	Pasco County Public Works Department
Address	7536 State Street, Suite 140
City Sate Zip	New Port Richey, FL 34654
Phone #	727-847-8143
Email	mgarrett@pascocountyfl.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:

Colonial Manor subdivision is located south of Moog Road between US 19 and Grand Boulevard in Holiday Florida. The area experiences flooding, both structure and street, which is most severe along sections of Jarvis Street, Valimor Drive, Cape Code Drive, and Stardale Lane which have the lowest elevations. Flooding is also experienced in the vicinity of a stormwater pump station that is located between Colonial Manor and the adjacent Tanglewood Mobile Home Park.

Benefit:

The proposed project, to reduce both structure and street flooding, is:1. Intercept and re-route runoff from about 15 acres of highly impervious drainage area north of Moog Road to an existing channel west of Tanglewood MHP;2. By intercepting/re-routing the runoff from north of Moog Road, the existing culvert (36-inch) through the Tanglewood MHP will be able to handle some of the runoff from Jarvis Street;3. The proposed north-south grass swale will add even more capacity to the overall system.

Cost:

$2,400,000 total project cost. FY 18 funds ($268,000) will be used to design and permit the project and FY 19 ($2,132,000) funds will be used for acquisition and construction

Parcel ID 20 26 16 0520 00000 0130 will be acquired for $60,000

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water; curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of

reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed water is $0.32 per 1,000 gallons and $14.72 per month for residential irrigation. Pasco County's potable water rates are applied in a water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share		134,000	1,066,000		1,200,000
Coastal Rivers		134,000	1,066,000		1,200,000
Total		268,000	2,132,000		2,400,000

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
Begin Construction	01/01/2019
End Construction	09/01/2019

Data Collection Assessment:

☒ Land Survey

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name SW IMP - Flood Protection - Port Richey Alternative Outfall
Project Number N901
Cooperator Pasco County
Department Design Stormwater Management
Contact Person Pasco County Public Works Department
Address 7536 State Street, Suite 140
City Sate Zip New Port Richey, FL 34654
Phone # 727-847-8143
Email mgarrett@pascocountyfl.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 is a project to Implement Best Management Practices (BMPs) in the Port Richey Watershed to address flood protection issues. The project will provide an alternative outfall for the Salt Springs Slough, and Port Richey Slough, intermediate scale conveyance ways. Land development and mosquito control measures have alerted the configuration, storage and conveyance characteristics of the sloughs. This project will connect to an existing outfall to the Gulf of Mexico that passes through existing culverts at US 19. The project will include acquisition of property rights for the outfall. This will be a multi-year funded project implemented in phases, Conceptual Design, Property Right Acquisition, Design, Permitting, and Construction with Construction Engineering and Inspection.

Benefit:

To address Flood Protection issues in the Port Richey Watershed. The flood protection preliminary benefit/cost ratio is 1.03, calculated using Stormwater Improvement Flood Protection (SIFP) Benefit Cost Analysis Tool (attached as a document). This benefit/cost ratio will be further refined during the design phase

Cost:

Total projected cost for budgeting $3,250,000

Acquisition of some parcels or portion thereof along the route is probable

Parcel ID 28 25 16 0010 05600 0051 - $50,000
Parcel ID 28 25 16 0010 05600 0020 - $50,000

Others also

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water; curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed water is $0.32 per 1,000 gallons and $14.72 per month for residential irrigation. Pasco County's potable water rates are applied in a water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share		225,000	1,400,000		1,625,000
Coastal Rivers		225,000	1,400,000		1,625,000
Total		450,000	2,800,000		3,250,000

Matching Fund Reduction

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

Timelines

Port Richey Alternative Outfall

Milestone	Projected Date
NTP to Consultant	12/01/2017
30% Plans	05/01/2018
final design/permitting	09/01/2018
aquisition	03/01/2019
construction	09/01/2019

Data Collection Assessment:

☒ Groundwater or Surface Water Level measurements ☒ Land Survey

☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Flood Protection - Ironbark Flood Abatement
Project Number	N913
Cooperator	Pasco County
Department	Design Stormwater Management
Contact Person	Pasco County Public Works Department
Address	7536 State Street, Suite 140
City Sate Zip	New Port Richey, FL 34654
Phone #	727-847-8143
Email	mgarrett@pascocountyfl.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 Stormwater Improvement - Flood Protection project is an Implementation of the Best Management Practices (BMPs) element of the DISTRICT'S Watershed Management Program (WMP) in the Gulf Highlands subdivision, located within the Double Hammock Watershed in Pasco County. The PROJECT consists of design, land acquisition, and construction of interconnected wet pond areas to a dry storage basin for flood abatement as well as an emergency outfall connection for recovery following major storm events. Construction of BMPs within the 111 acre closed basin will relieve flooding impacts to residential properties and reduce street flooding.

Benefit:

Based on the Ironbark Drive Neighborhood Flood Abatement Project report , completed by Singhofen & Associates, Inc, dated September 2016, the PROJECT will remove approximately 39 homes from the 100-year, 24-hour floodplain and reduce 89% of roadway flooding during the 25-year, 24-hour storm event.

Cost:

Total project cost for land acquisition, design, construction is estimated at $4,110,000. FY 18 funds ($15000) will be used for final design and permitting and FY 19 funds ($3,960,000) will be used for acquisition and constructionParcels to be acquiredParcel ID 10 25 16 053F 00000 9560 - $72,000Parcel ID 10 25 16 053F 00000 9550 - $77,000Parcel ID 10 25 16 053F 00000 9540 - $65,000Parcel ID 10 25 16 053F 00000 9530 - $70,000Parcel ID 10 25 16 053F 00000 9190 - $72,000Parcel ID 10 25 16 053F 00000 9200 - $61,000Parcel ID 10 25 16 053F 00000 9210 - $55,000Parcel ID 10 25 16 053F 00000 9220 - $74,000Parcel ID 10 25 16 053F 00001 0570 - $41,000Parcel ID 10 25 16 053F 00001 0580 - $33,000Parcel ID 10 25 16 053F 00001 0590 - $47,000Parcel ID 10 25 16 053F 00001 0600 - $40,000Parcel ID 10 25 16 053F 00001 0610 - $45,000 Parcel ID 10 25 16 053F 00001 0210 - $46,000Parcel ID 10 25 16 053F 00000 9920 - $50,000 Parcel ID 10 25 16 053F 00000 8880 - $84,000 Parcel ID 10 25 16 053F 00000 8490 - $94,000

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water; curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles

only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed water is $0.32 per 1,000 gallons and $14.72 per month for residential irrigation. Pasco County's potable water rates are applied in a water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share		75,000	1,980,000		2,055,000
Coastal Rivers		75,000	1,980,000		2,055,000
Total		150,000	3,960,000		4,110,000

Matching Fund Reduction

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

Timelines

Ironbark

Milestone	Projected Date
Begin Aquisition	12/01/2018
Complete Aquisition	06/01/2019
Begin Construction	06/02/2019
end construction	09/30/2019

Data Collection Assessment:

☒ Land Survey ☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name SW IMP - Flood Protection - Lower Spring Branch Conveyance Improvements
Project Number N915
Cooperator City of Clearwater
Department
Contact Person Elliot Shoberg
Address 100 South Myrtle Ave.
City Sate Zip Clearwter, FL 337585520
Phone # 727-562-4748
Email elliot.shoberg@myclearwater.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:

Design, permitting, and construction of conveyance improvements along the Lower Spring Branch of Stevenson Creek in Pinellas County. FY2019 funding will be used for construction of Douglas Avenue, Springtime Avenue and Overbrook Avenue crossings.

Benefit:

The contractual Measurable Benefit will be the conveyance improvements at the Douglas Avenue, Springtime Avenue, Overbrook Avenue and Sunset Point Road crossings of the Lower Spring Branch system. This project will provide flood relief for 11 homes adjacent to Spring Branch

Cost:

This project is estimated to have a total project cost of $3,320,000. This includes, design, permitting and construction. The City of Clearwater is requesting the Southwest Florida Water Management District provide $1,042,633 from its FY2019 budget for the construction of the crossings at Douglas Avenue, Springtime Avenue and Overbrook Avenue.

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

The City of Clearwater has an impressive track record of developing, implementing and enforcing water conservation measures. The City has met the requirements of the Northern Tampa bay Water Use Caution Area stipulations included in its Water Use Permit. The 2015 Water Year compliance per capita water consumption for the City of Clearwater was 76 gpcd. This is well below the required 130 gpcd for Year 2001 required in the Water Use Caution Area regulations. The City has also implemented a consumptive use rate structure in October 2006 to ensure efficient use of reclaimed water which reduces the use of potable water for irrigation needs.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share		125,000	1,035,000		1,160,000
Pinellas Anclote		625,000	1,035,000		1,660,000
Pinellas County		500,000			500,000
Total		1,250,000	2,070,000		3,320,000

Matching Fund Reduction

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

Timelines

Begin Design	10/01/2017
30% Design Complete	01/31/2018
60% Design Complete	05/01/2018
90% design complete	09/01/2018
Complete Design and Permiting	12/01/2018
Solicit Bids for Construction	12/27/2018
Bidding and Contractor Selection Complete	02/15/2019
Begin Construction	03/15/2019
Complete Construction	09/01/2020
Record Drawings Complete	12/01/2020

Data Collection Assessment:

☒ Groundwater or Surface Water Level measurements

☒ Surface Water Flow (Discharge) measurements

☒ Groundwater or Surface Water Quality measurements

☒ Land Survey

☒ LIDAR/Elevation data

☒ Aerial Imagery

☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	WMP - Lake Tarpon Watershed Management Plan - Flood Study
Project Number	N924
Cooperator	Pinellas County
Department	Public Works
Contact Person	Paul Miselis
Address	22211 Us Highway 19 North
City Sate Zip	Clearwater, FL 33765
Phone #	727-646-8921
Email	pmiselis@pinellascounty.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:

The Lake Tarpon Watershed is composed of Lake Tarpon and the contributing area around Lake Tarpon. Lake Tarpon is the largest lake in Pinellas County with a surface area of four square miles. Its watershed encompasses 52 square miles, including its two largest tributaries, South Creek and Brooker Creek. The lake is a valuable recreational destination and is renowned for its largemouth bass fishing. Pinellas County and the Southwest Florida Water Management District (SWFWMD) share jurisdiction in maintaining and improving the health of Lake Tarpon. In 1998, the Lake Tarpon Drainage Basin Management Plan was completed and outlined a series of initiatives to protect the lake from water quality degradation. Many initiatives from the plan have been implemented; however, Lake Tarpon's water quality has continued to decline. The Lake is now on the State's verified impaired waters list and the remaining capital improvements are not feasible. A recent effort, the Lake Tarpon Water Quality Management Plan was completed in August 2016. The goal of this effort was to understand the current status of water quality within the lake and to develop strategies to decrease nutrient loadings to the lake and restore and protect the lake's natural resources.

This project will assist decisions makers with understanding and reducing flooding impacts in the watershed. This will be accomplished by evaluating existing 10-year, 25-year, 50-year and 100-year flood elevations, conducting a diagnostic evaluation of the watershed, creating an appropriate hydraulic/hydrologic model that ban be approved by the National Flood Insurance Program, the County and SWFWMD, conducting a detailed floodplain analysis of the watershed and developing a report that provides flood management information for the watershed.

Benefit:

This project will provide much needed flood information on the Lake Tarpon watershed. This information will aid government agencies and citizens to make knowledge-based decisions regarding potential flooding in the watershed.

Cost:

This request is for the second year of a two year project whose total project amount is estimated to be $300,000.

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

The Surface Water Element of the County's Comprehensive Plan (CP) obligates the County to protect, enhance, and improve water quality through water quality monitoring, watershed management plan development, and environmental enforcement.

Pinellas County is dedicated to improving flood protection as documented in the CP. The County has a fertilizer ordinance which restricts using products containing nitrogen or phosphorus during the wet season with a related sales ban, a pet waste ordinance, and street sweeping program all designed to reduce nutrient pollution to receiving waters. The County also recently adopted a stormwater utility that collects fees to fund surface water programs which includes stormwater maintenance and related public outreach and education programs.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share		50,000	100,000		150,000
Pinellas Anclote		50,000	100,000		150,000
Total		100,000	200,000		300,000

Matching Fund Reduction

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

Timelines

Phase I Watershed Assessment Completion

Milestone	Projected Date
Watershed Evaluation	08/31/2018

Phase II - Flood Model & Report Completion

Milestone	Projected Date
Watershed Model, Floodplain LOS and BMP Alternatives Assessment	08/31/2019

Data Collection Assessment:

☒ Groundwater or Surface Water Level measurements ☒ Surface Water Flow (Discharge) measurements

☒ Rainfall or Other Meteorological measurements ☒ LIDAR/Elevation data

☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	Restoration - Central Pasco Recharge Wetlands Facility Optimization
Project Number	N943
Cooperator	Pasco County
Department	Utilities
Contact Person	Pamela Lynch
Address	19420 Central Blvd.
City Sate Zip	Land O'Lakes, FL 34637
Phone #	813-235-6191
Email	plynch@pascocountyfl.net

Project Type:

[X] Water Supply [ ] Water Quality [ ] Flood Protection [ ] Natural Systems

Strategic Initiatives:

[ ] Water Quality Maintenance and Improvement	[ ] Water Quality Monitoring
[X] Alternative Water Supply	[ ] Conservation
[X] 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	[X] Pasco	[ ] Pinellas	[ ] Sarasota	[ ] Sumter	[ ] Polk

Project Description/Benefit/Cost

Description:

The County in partnership with the Southwest Florida Water Management District (SWFWMD) has constructed a system of groundwater recharge wetlands on the 4G Ranch in Central Pasco County called the 4G Ranch Wetlands to receive reclaimed water for groundwater recharge. The facility consists of 175 acres of constructed wetlands divided into fifteen (15) cells planted with native wetland vegetation. Each cell is operated independently through a valve manifold that includes flow control valves and flow meters and operated based on water elevation setpoints. These water level setpoints should change monthly based on recommendations defined in the Operation and Maintenance Manual to achieve a wetland hydroperiod that mimics natural Florida wetlands, with high levels in the summer wet season and lower levels in the winter dry season. Furthermore, it is expected that the infiltration that can be achieved is a function of the water level in each cell which provides driving hydraulic head for infiltration into the groundwater. The need for recharge together with the need to maintain healthy wetland vegetative communities must be balanced and optimized to ensure project success and achieve the most benefit out of this facility. An effort to optimize water level setpoints was conducted during Year 1 of operation and included re-calibration of the groundwater model and an assessment of vegetation in each wetland cell.

A consultant will be hired to compile and review available applicable operational data to evaluate impacts to the local groundwater system, optimize system performance, and estimate future operational trends. An operational groundwater model of the site will be developed using the information from the consultant combined with the data that County staff is currently collecting. This operational groundwater model will be used to estimate potential future system infiltration rates, impacts and benefits to the Upper Floridan aquifer, and future operational conditions. Consultant scientists will perform biannual vegetation surveys of the 15 cells constructed on the 4G Ranch to assess the performance of the wetlands against the setpoints. The surveys will be completed through photo-interpretation of low-altitude, high resolution photography obtained by the County to determine wetland vegetation cover of each cell. A technical memorandum that includes the results of both the hydrogeologic review and the vegetation hydroperiod review will be provided. This technical memorandum will include recommendations for changes to the monthly water elevation setpoints that will both maximize groundwater recharge while maintaining healthy wetland vegetative communities.

Benefit:

This project will summarize the activities, assumptions, requirements, and associated estimated effort for this work. This project will help staff to better understand the operational scheme and setpoints to optimize system operation in terms of maximizing recharge while maintaining ecologically vibrant vegetative communities.

Cost:

The total cost of this project is $100,000.00

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water; curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed water is $0.32 per 1,000 gallons for customers that have storage capability. All other bulk customers that feed directly off of the system will be charged $0.63 per thousand gallons used. Residential irrigation customers will be billed a flat rate of $14.72 per month. Pasco County's potable water rates are applied in a water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share	7,365,903	60,000	50,000		7,475,903
General Fund-District Wide	7,365,903	60,000	50,000		7,475,903
Total	14,731,806	120,000	100,000		14,951,806

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
Commence	10/01/2018

Complete

Milestone	Projected Date
Complete	09/30/2019

Data Collection Assessment:

☒ Groundwater or Surface Water Level measurements ☒ Aerial Imagery

☒ Biological (vegetation, benthic, fish, etc.)

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Flood Protection - Southeast Seminole Heights Flood Relief
Project Number	N949
Cooperator	City of Tampa
Department	Stormwater
Contact Person	Ben Allushuski
Address	306 E Jackson St, 6n
City Sate Zip	Tampa, FL 33602
Phone #	813-274-3257
Email	ben.allushuski@tampagov.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 project will consist of the construction of regional stormwater improvements to serve an area of approximately 780 acres of urban environment discharging into the Hillsborough River south of the Hillsborough River Dam in the Southeast Seminole Heights area of the City of Tampa. Surface drainage generally flows east to west towards the river, but is hindered by the higher elevations of Interstate 275. Observed flooding problems in the basin are the result of an undersized storm sewer system and limited surface drainage infrastructure due to lack of topographic relief in the study area. The drainage basin is highly urbanized and consists mainly of residential neighborhoods with commercial strips extending the length of the main highways. Chronic flooding occurs in the watershed due to high intensity, short duration rainfall events that overwhelm the existing stormwater system causing dangerous driving conditions. The attached project map shows the extent of flooding issues in the area. The City's intent is to construct and implement several flood relief efforts in the watershed to alleviate frequent and dangerous flooding on critical evacuation routes and in residential neighborhoods. These flood relief efforts include upsizing existing pipes, installing higher capacity trunklines, and constructing new stormwater ponds for water quality and quantity purposes. The City will be coordinating these efforts with FDOT as they have jurisdiction over many of the critical roads in the watershed. These flood relief efforts can be viewed in detail in the attachments section. The City has already purchased three lots in the watershed that frequently flood and intends to construct a stormwater pond on the site. This project will ultimately decrease the 5-year/8-hour (critical storm duration) floodplain in the project area on critical evacuation routes and in residential neighborhoods, as well as provide structural protection for the 100-year/24-hour storm event in the project area. The Fiscal Year 2019 portion of the project will fund the Third Party Review and Thirty Percent Design portions of the project. The total cost of the project is approximately $30 million. A detailed feasibility study and corridor analysis of the proposed stormwater improvements is currently underway.

Benefit:

The primary benefit of the project is that it provides an upsized stormwater system to relieve frequent flooding on critical roads in the Southeast Seminole Heights neighborhood. Hillsborough and Nebraska Avenues, including Interstate 275, are the main evacuation routes for the Southeast Seminole Heights area and often experience dangerous flooding. High intensity, short duration rainfall events overwhelm the existing stormwater system, causing treacherous driving conditions on evacuation routes and in residential areas. The Resource Benefit of this project will be to decrease the 5-year/8-hour floodplain in the area, as well as provide structural protection from the 100-year/24-hour storm event in the area. The Measurable Benefit of this project will be the construction of upsized stormwater infrastructure including, but not limited to, pipes, box culverts, and retention ponds.

Cost:

The total project cost is estimated at approximately $30,000,000 based on an engineer's opinion of probable cost. The City of Tampa is requesting $1,000,000 total in FY 2019 which will cover the third party review and 30% design components of the project. A more detailed cost estimate and benefit-cost analysis will be forthcoming as the City completes the feasibility and corridor analysis.

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

The City of Tampa has the following codes in place relating to water conservation: 1) Standard Plumbing Code (Ord. No. 92-67,2,5-7-92; Ord. No. 96-64,62,3-14-96; Ord. No.98-40,19 2-26-98), 2) Water Use Restrictions Code (Ord. No. 2003-316; Ord. No. 2000-69, 97, 3-16-00; Ord. No. 2000-43,97,9-14-00; Ord. No. 2001-87,97,3-29-01), 3) Increase in Water Restriction Violation Fines (Ord. NO. 2001-19,23,1-4-1), 4) Landscaping Code (Ord. No. 97-34,2,2-6-97), 5) Rain Sensor Requirement (part of Plumbing Code, Ord. NO 98-40,19,2-26-98), 6) Schedule of Water Rates (Ord. NO. 2001-0987,26-31,8-30-01). The city has adopted a Flood Damage Control Ordinance (Ord. NO. 92-67, 2, 5-7-92, ord. NO 92-134, 3, 4, 81-3-92; Ord. NO. 96-64, 73-75, 3-14-96) as required to participate in the National Flood Insurance Program administered through FEMA.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			500,000	14,500,000	15,000,000
Hillsborough River			500,000	14,500,000	15,000,000
Total			1,000,000	29,000,000	30,000,000

Matching Fund Reduction

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

Timelines

Feasibility and Corridor Analysis	12/01/2017
Permitting	06/30/2018
Third Party Review and 30% Design	06/30/2018
Construction	06/30/2020

Data Collection Assessment:

☒ No data will be collected for this project

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Flood Protection - Salt Springs
Project Number	N953
Cooperator	Pasco County
Department	Design Stormwater Management
Contact Person	Pasco County Public Works Department
Address	7536 State Street, Suite 140
City Sate Zip	New Port Richey, FL 34654
Phone #	727-847-8143
Email	mgarrett@pascocountyfl.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:

The Holiday Hills neighborhood has historically flooded during even minor events, due in part to insufficient conveyance, both for minor and major rainfall events. The existing pipe crossing Salt Springs Road, as well as the existing twin box culverts crossing US 19 are undersized for major events. To address neighborhood flooding in significant events, both sets of culverts must be upsized or, an alternate means of conveyance must be provided.The project is located in the Double Hammock Watershed.

Benefit:

Proposed project would provide flood relief to properties immediately after completion. Upsizing Salt Springs Road culverts would provide a permanent benefit to areas upstream of US 19 after box culverts under US 19 are upgraded. Emergency pumping is done before and after certain storm events (Including IRMA); the County pumps water from the Holiday Hills Subdivision. This water is bottlenecked at the US19 box culverts, and the subject Salt Springs Road culverts. If the Salt Springs Road culvert capacity were to be increased, the County would then supplement flow under US 19 with a temporary pump to offset the additional flow from emergency pumping.

Cost:

Construction Only: $600,000

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water; curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed water is $0.32 per 1,000 gallons and $14.72 per month for residential irrigation. Pasco County's potable water rates are applied in a

water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			300,000		300,000
Coastal Rivers			300,000		300,000
Total			600,000		600,000

Matching Fund Reduction

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

Timelines

Salts Springs

Milestone	Projected Date
Begin Construction	10/01/2018
Complete Construction	02/01/2019

Data Collection Assessment:

☒ Land Survey

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	Conservation-Florida Friendly Landscape Program- Public Education
Project Number	N954
Cooperator	Tampa Bay Water
Department	Engineering Support
Contact Person	Maribel Medina
Address	2575 Enterprise Rd
City Sate Zip	Clearwater, FL 337631102
Phone #	727-791-2378
Email	mmedina@tampabaywater.org

Project Type:

[X] Water Supply [ ] Water Quality [ ] Flood Protection [ ] Natural Systems

Strategic Initiatives:

[ ] Water Quality Maintenance and Improvement	[ ] Water Quality Monitoring
[ ] Alternative Water Supply	[X] 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	[X] Hillsborough	[ ] Lake
[ ] Levy	[ ] Manatee	[ ] Marion	[X] Pasco	[X] Pinellas	[ ] Sarasota	[ ] Sumter	[ ] Polk

Project Description/Benefit/Cost

Description:

This program element combines the use of landscape and irrigation technology on new and existing landscapes (primarily single-family homes) with landscape and irrigation modification on existing landscapes. Based on water year 2016 results and a projection for similar results in 2019, (300 irrigation evaluations and installation of about 430 soil moisture sensors, FFL workshops and rainwater harvesting workshop water savings), the program could save at least 300,000 gallons per day in 2019. Savings rates for irrigation evaluations are based on actual report recommendations. FFL workshop savings are based on default savings rates developed by Dr. Michael Dukes, University of Florida. This program provides for Florida Friendly Program education coordinators to work with:

- The building community to ensure that alternative landscape and irrigation water efficient technologies, such as soil moisture sensors and evapotranspiration controllers (155 gpad saved- 10-year life, Tampa Bay Water Demand Management Plan, 2013), are installed correctly,
- New landscape plant water establishment guidelines created by UF IFAS are followed by builders and new home buyers and are considered during landscape and irrigation modifications,
- Tampa Bay Water member governments to address high water users and other outdoor water use efficiency programs such as soil moisture sensor rebates and will conduct irrigation evaluations (both landscape and irrigation modification and technology),
- Homeowner Associations, Community Development Districts to conduct landscape and irrigation evaluations, make specific recommendations on modification and to follow-up through modifications,
- UF IFAS recommendations on savings rates for alternative irrigation technologies (soil moisture sensors, evapotranspiration controllers) and for irrigation modifications due to irrigation evaluations,
- UF IFAS Plant establishment guidelines for new landscape and irrigation systems.

Funding of the Florida Friendly Landscape program has occurred since 1994 for the Agency and its predecessor. The program is consistent with the Agency's goal of planning and coordinating conservation efforts in the region. The increased installation of landscape and irrigation technology is consistent with its existing long-term demand management plan and all members existing conservation plans. Land development codes dealing with irrigation are in place in each members service area (4 out of 6 members have them). These codes specify how landscape and irrigation technologies are allowed in their area or create specific incentives to increase their use. Tampa Bay Water is currently evaluating Member landscape and irrigation codes and making recommendations to its Board of Directors on how members can incent increased use of landscape and irrigation technologies to lower future water use in the region through modifications to their land development codes.

Benefit:

This project is designed to reduce new home irrigation system usage by at least 300,000 gallons/day in Tampa Bay Water member high growth areas through correct use and tracking of irrigation technologies, creating a structure that would allow water efficient technology rebates to be evaluated if the region or any members implement such a program, creating hands on evaluation of irrigation systems and alternative technologies, changing builder/developer perspectives on use of water efficient technologies in the landscape, and increasing water use efficiency in existing development throughout the tri-county region. Incrementally, savings will occur and increase as new and existing homes are either installing water efficient irrigation technologies or are accepting

modifications to irrigation system usage frequency. Common areas within multi-family and large single family developments are also targeted with the goal of modifying both landscape and irrigation system water use. Increased outdoor water use efficiency will also assist the region in lowering peaks during extended drought and water shortages to the benefit of natural environmental systems .

Cost:

The total cost for this project in 2019 is $473,701 with Tampa Bay Water requesting funding for the public education coordinator portions of the total (approximately 50%).

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

Tampa Bay Water has supported the Florida Friendly Landscaping (FFL) Program and its former namesake (Florida Yards and Neighborhoods Program) for more than two decades. This support is part of the Agency's water conservation coordination program. Due to this and Member Government activity overall per capita demand in the region served by our members is about 100 gallons/capita/day. The FFL Program (formerly titled Florida Yards and Neighborhoods) is a multi-curriculum water conservation program that accentuates existing Member Government programs and focuses on increases in water use efficiency. The Program goal is to foster a sense of environmental stewardship among citizens by increasing awareness and understanding of natural systems and resources, and how they relate to ecology, economy and quality of life. This is accomplished through a coordinated hands-on environmental education program promoting responsible actions by homeowners, builders, businesses, homeowners' associations and others to conserve water and improve water quality by reducing polluted runoff from yards and other landscaped areas. The greatest emphasis of the program is placed on designing, installing and retrofitting existing landscapes to more Florida friendly landscapes that lead to increases in water use efficiency. Materials developed for the FFL Program promote the concepts of water conservation, environmental enhancement, and pollution prevention. The program is well received by the public throughout the region and state. The Agreement requires overall coordination and oversight from a county and regional advisory committee, Extension Service horticulture agents, annual report generation, plan-of-work and expenditure approvals, specific coordination meetings with member governments, and identification of the effectiveness of the overall program and the public education component specifically. The county-wide advisory committee is required to enhance program focus with member governments, other local governments and specific private sector entities. Tampa Bay Water developed an updated Demand Management Plan in 2013. The Plan identifies that outdoor efficiency programs, specifically evapotranspiration or soil moisture sensor irrigation controls can last at least 10 years with a savings in the single-family sector of about 155 gpad on average. Working with new construction to insure this type of technology is installed, or rebated and installed correctly, will effectively reduce existing and future average and peak demand. Funding for specific elements of the FFL program is also provided by Hillsborough, Pinellas and Pasco counties, along with specific work efforts by the cities of St. Petersburg and Tampa.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			236,851		236,851
General Fund-District Wide			236,850		236,850
Total			473,701		473,701

Matching Fund Reduction

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

Timelines

A-Agreements with Counties Developed

Milestone	Projected Date
Tampa Bay Water Board Approval	08/20/2018

B-Cooperatively funded program begins

Milestone	Projected Date
Water Year 2019 Begins	10/01/2018

C-End of existing FFL agreement fieldwork

Milestone	Projected Date
Water Year 2020 Begins	10/01/2019

D-Annual Report Completion

Milestone	Projected Date
Reporting	01/15/2020

Data Collection Assessment:

☒ No data will be collected for this project

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	Conservation - St. Petersburg Toilet Rebate Program, Phase 17
Project Number	N955
Cooperator	City of St. Petersburg
Department	Engineering
Contact Person	Chris Claus
Address	1650 Third Ave. No.
City Sate Zip	St. Petersburg, FL 33713
Phone #	727-892-5688
Email	chris.claus@stpete.org

Project Type:

[X] Water Supply [ ] Water Quality [ ] Flood Protection [X] Natural Systems

Strategic Initiatives:

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

Indicate All Counties to Benefit From Project:

[ ] Charlotte	[ ] Citrus	[ ] Desoto	[ ] Hardee	[ ] Hernando	[ ] Highlands	[X] Hillsborough	[ ] Lake
[ ] Levy	[ ] Manatee	[ ] Marion	[X] Pasco	[X] Pinellas	[ ] Sarasota	[ ] Sumter	[ ] Polk

Project Description/Benefit/Cost
Description:

The City of St. Petersburg is proposing the continuance of a water conservation project offering financial incentives to customers for the replacement of conventional high flush toilets with EPA WaterSense labeled, high efficiency toilets (HETs) that use 1.28 gallons per flush (gpf) or less. The 2019 project will be the twenty-second year of this ongoing effort and is expected to provide rebates for the replacement of approximately 275 high flush toilets. A consultant will be utilized to assist with program administration. During 2019, efforts will again be made to target audiences who have not participated by utilizing GIS mapping and alternative marketing methods. Educational materials on indoor and outdoor water conservation techniques will be disseminated. Providing participants educational materials on leak detection and proper replacement flapper selection and installation ensures that low flush toilets remain water conservative fixtures.

Benefit:

In 1997, the City initiated Phase I of this program, which has since resulted in the replacement of 34,000 conventional toilets with more efficient models and conservation of over 275 million gallons of potable water. Interest in the program and the range of program participants has continued. The 2019 project is expected to provide rebates for the replacement of approximately 275 high flow toilets. Because most of St. Petersburg's original buildings were constructed prior to 1980, and the CFI Guidelines' Table 1 "Acceptable Data for Estimating Conservation Savings" does not provide estimated savings for fixtures manufactured prior to 1980, another method of calculating savings for this project was employed. Utilizing 30 gal./location/day from Tampa Bay Water's BMP's, 8,250 gallons of water per day will be conserved - an additional three million gallons each year. The resultant reduction of pumping from source waters protects natural systems in the Tampa Bay region and fosters sustainable use of the water supply.

Cost:

Cost estimates are based on estimated future expenses for advertising, educational items, and program administration. These costs have increased over the last few years, which resulted in requests for alteration of budget lines during previous program years. Utilizing the District's methodology, the overall cost effectiveness of this program is $1.69 per thousand gallons saved. It is expected that this phase of the program will save more than 60 million gallons of water over the next 20 years, affecting the entire tri-county area since water savings in St. Petersburg has a positive effect on regional water supplies and assists in protection of natural systems.

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

St. Petersburg City Administration has been proactive in the development of ordinances vital to achieving the desired objectives of protecting water quality and management of water resources and flood protection. The City's Comprehensive Plan includes policies that require the Water Resources Department to develop and implement water conservation initiatives. Since 1989, these initiatives have helped reduce the City's average yearly water demand from a high of 41 mgd to a low of 28 mgd in 2015 (a thirty-two percent reduction).

Watering restrictions for the use of potable, well and surface waters have been established through City Ordinance. A Water Efficient Landscape Ordinance (Chapter 16) was adopted by City Council in 2002. In 1985, the City established a water-conserving rate structure, as required by the City's Comprehensive Plan. This rate structure triggers the cost of water to become increasingly more expensive during months of increased demand. As an additional conservation incentive, sanitary sewer rates are based on water usage with no outdoor water use cutoff. In 2009, a fifth tier was added to the water-conserving block rate structure for single family residential customers using over 20,000 gallons of water per month; this highest tier is intended to send a price signal to customers who use potable water for more than the typical domestic uses. In 1994, the St. Petersburg Stormwater Management Master Plan was completed and SWFWMD conceptual permits were obtained for the proposed projects. The St. Petersburg Stormwater Management Master Plan also addresses level of service criteria and serves as the guide document for City ordinances and pending drainage improvements within the City. Ordinance No. 2017-F and 147-G regulates the control and management of drainage and surface waters in harmony with the City Comprehensive Plan and SWFWMD regulations. Water pollution protection is provided by Chapter 11, Section 2 of City Code, which identifies unlawful discharges into the public drainage system and provides for prosecution of violators. The City participates in the National Flood Insurance Program (NFIP). In order to qualify for the program, the City adopted and enforces Article VII Flood Damage Prevention (City Code 16.30.040 through 16.40.060.4.5), to regulate development in the flood hazard areas.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share	2,648,307		25,000		2,673,307
Pinellas Anclote	2,642,500		25,000		2,667,500
Total	5,290,807		50,000		5,340,807

Matching Fund Reduction

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

Timelines

Agreement with the SWFWMD

Milestone	Projected Date
Agreement with the SWFWMD	06/01/2018

Final Report

Milestone	Projected Date
Final Report	10/01/2020

Program Implementation Ends

Milestone	Projected Date
Program Implementation - End	10/01/2019

Program Implementation Starts

Milestone	Projected Date
Program Implementation - Start	10/01/2018

Data Collection Assessment:

☒ No data will be collected for this project

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Flood Protection - Scenic Drive
Project Number	N960
Cooperator	Pasco County
Department	Design Stormwater Management
Contact Person	Pasco County Public Works Department
Address	7536 State Street, Suite 140
City Sate Zip	New Port Richey, FL 34654
Phone #	727-847-8143
Email	mgarrett@pascocountyfl.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:

The Jasmine Lakes neighborhood, and downstream commercial properties have historically flooded during even minor events, due in part to insufficient conveyance, both for minor and major rainfall events. The existing triple pipes crossing Scenic Drive as well as the existing triple box culverts crossing US 19 are undersized for major events for the flows passing through Double Hammock Creek. To address neighborhood flooding in significant events, both sets of culverts must be upsized or, an alternate means of conveyance must be provided .The project is located in the Double Hammock Watershed.

Benefit:

Proposed project would provide flood relief to commercial properties including their parking lots immediately after completion. Upsizing Scenic Drive culverts would provide a permanent benefit to areas upstream of US 19 after box culverts under US 19 are upgraded. Emergency pumping is done before and after certain storm events (Including IRMA); the County pumps Yellow Lake, and other areas just east of Little Road into conveyances leading into Double Hammock Creek. This water is bottlenecked at the US19 box culverts, and the subject Scenic Drive Culverts. If the Scenic Drive culvert capacity were to be increased, the County would then supplement flow under US 19 with a temporary pump to offset the addition flow from Yellow Lake pumping during the emergency.

Cost:

Total Cost: $1,200,000

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water; curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015,

100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed water is $0.32 per 1,000 gallons and $14.72 per month for residential irrigation. Pasco County's potable water rates are applied in a water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			600,000		600,000
Coastal Rivers			600,000		600,000
Total			1,200,000		1,200,000

Matching Fund Reduction

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

Timelines

Scenic Drive Culvert

Milestone	Projected Date
Begin Planning, Design, Engineering, and Env. Permitting	10/01/2018
Complete Planning, Design, Engineering, and Env. Permitting	02/01/2019
Begin Construction	06/01/2019
Complete Construction	11/01/2019

Data Collection Assessment:

☒ Land Survey ☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	Study-St. Petersburg Satellite Based Potable Water Leak Detection Study
Project Number	N961
Cooperator	City of St. Petersburg
Department	Water Resources
Contact Person	John Parks
Address	1650 3rd Ave. N.
City Sate Zip	St. Petersburg, FL 33713
Phone #	727-892-5629
Email	john.parks@stpete.org

Project Type:

[X] Water Supply [ ] Water Quality [ ] Flood Protection [ ] Natural Systems

Strategic Initiatives:

[ ] Water Quality Maintenance and Improvement	[ ] Water Quality Monitoring
[ ] Alternative Water Supply	[X] 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	[X] Pinellas	[ ] Sarasota	[ ] Sumter	[ ] Polk

Project Description/Benefit/Cost

Description:

This pilot project will include contracting with a satellite based water leak detection company to collect multispectral images from satellite based sensors. The company will analyze and search the images for the freshwater spectral signature corresponding to water pipe leaks. The identified leak data will be geo-referenced and displayed on the City's GIS water pipe maps. Accuracy of the leak data are within a 300 feet buffer. Individual "leak sheets" are provided to the city to facility ground based leak crews using acoustic leak detection equipment to pinpoint the leak location. The repair will be scheduled and performed by a city repair crew or private contractors.

Benefit:

An October 2017 Water Audit Report concluded that average flushing losses were 5.2% and customer metering inaccuracies were 4.2% of the city's gross water use. Accordingly, water system leaks could total up to 7.3% of the gross water used, or 1.9 million gallons per day. In 2016, the city reactively repaired 317 below grade pipe and valve leaks. These leaks were detected from above ground indicators such as holes in the ground and/or water flowing from the ground. In FY 18, the city will create a new crew focused on water pipe leak detection, equipped with acoustical leak detection equipment. This crew will begin listening for pipe leaks one small area at a time, a method that will take several years to investigate the city's 1600 miles of pipe. The satellite based leak detection pilot project in FY19 is expected to significantly increase the number of leaks located and repaired by satellite surveying the entire water system in a single screening and allowing the ground based leak detection crew to start their investigations within 150 ft. of detected leaks.

Cost:

Cost for satellite based leak detection is $75/mile, with a minimum project size of 600 miles of pipe. Based on the City's nearly 1,600 miles of water distribution and transmission pipes, the estimated cost for this pilot project is $120,000. The city will self fund the acoustical leak detection and leak repair crews.

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

St. Petersburg City Administration has been proactive in the development of ordinances vital to achieving the desired objectives of protecting water quality and management of water resources and flood protection. The City’s Comprehensive Plan includes policies that require the Water Resources Department to develop and implement water conservation initiatives. Since 1989, these initiatives have helped reduce the City’s average yearly water demand from a high of 41 mgd to a low of 28 mgd in 2015 (a thirty-two percent

reduction). Watering restrictions for the use of potable, well and surface waters have been established through City Ordinance. A Water Efficient Landscape Ordinance (Chapter 16) was adopted by City Council in 2002. In 1985, the City established a water-conserving rate structure, as required by the City's Comprehensive Plan. This rate structure triggers the cost of water to become increasingly more expensive during months of increased demand. As an additional conservation incentive, sanitary sewer rates are based on water usage with no outdoor water use cutoff. In 2009, a fifth tier was added to the water-conserving block rate structure for single family residential customers using over 20,000 gallons of water per month; this highest tier is intended to send a price signal to customers who use potable water for more than the typical domestic uses. In 1994, the St. Petersburg Stormwater Management Master Plan was completed and SWFWMD conceptual permits were obtained for the proposed projects. The St. Petersburg Stormwater Management Master Plan also addresses level of service criteria and serves as the guide document for City ordinances and pending drainage improvements within the City. Ordinance No. 2017-F and 147-G regulates the control and management of drainage and surface waters in harmony with the City Comprehensive Plan and SWFWMD regulations. Water pollution protection is provided by Chapter 11, Section 2 of City Code, which identifies unlawful discharges into the public drainage system and provides for prosecution of violators. The City participates in the National Flood Insurance Program (NFIP). In order to qualify for the program, the City adopted and enforces Article VII Flood Damage Prevention (City Code 16.30.040 through 16.40.060.4.5), to regulate development in the flood hazard areas.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			60,000		60,000
Pinellas Anclote			60,000		60,000
Total			120,000		120,000

Matching Fund Reduction

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

Timelines

Agreement with the SWFWMD

Milestone	Projected Date
Agreement with the SWFWMD	06/01/2018

Milestone	Projected Date
Program Implementation	10/02/2018
Program End	10/01/2019
Final Report	04/01/2020

Data Collection Assessment:

☒ Aerial Imagery ☒ Other data collection: normalized imagery displayed on a GIS application

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	AWS - Tampa Bay Water Tampa Bypass Canal Gates Automation
Project Number	N965
Cooperator	Tampa Bay Water
Department	Engineering Support
Contact Person	Maribel Medina
Address	2575 Enterprise Rd
City Sate Zip	Clearwater, FL 337631102
Phone #	727-791-2378
Email	mmedina@tampabaywater.org

Project Type:

[X] Water Supply [X] Water Quality [ ] Flood Protection [ ] Natural Systems

Strategic Initiatives:

[X] Water Quality Maintenance and Improvement	[ ] Water Quality Monitoring
[X] 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	[X] Hillsborough	[ ] Lake
[ ] Levy	[ ] Manatee	[ ] Marion	[X] Pasco	[X] Pinellas	[ ] Sarasota	[ ] Sumter	[ ] Polk

Project Description/Benefit/Cost

Description:

This project will equip the existing manual slide gates located on top of the larger flood control gates with remote-controlled motorized gate actuators at the Tampa Bypass Canal Structures 160, 161, and 162. The structures are owned by the Army Corps of Engineers, the flood control gates are operated by the Southwest Florida Water Management District (SWFWMD), and the slide gates are operated by Tampa Bay Water. There are a total of 15 flood control gates, 14 of which have slide gates at the top. Five of the top-mounted slide gates already have automation installed. This project includes the installation of automation on the remaining nine slide gates.

Benefit:

This project will allow a more controlled release of water from pool to pool at the Tampa Bypass Canal, and reduce water loss due to flood management. Additionally, automating the slide gates will improve the water quality of the surface water supply at the Tampa Bypass Canal pumping facility by better controlling the use of the larger flood gates which stirs up sediment from the bottom of the canal thereby impairing water quality. Finally, this project will reduce the District's frequency of having to manually operate the larger flood control gates. Regional demands are projected to increase from water year 2017 demands of 251 MGD, to water year 2040 demands of 280-320 MGD.

Cost:

The total capital cost for this project is $1,032,000 including the following project elements:

- Design-Build $825,600
- Contingency $206,400

Expected annual operating and maintenance (not part of this funding request) includes:

- Operations $18,000
- Maintenance $5,000

Expected Renewal and Replacement cost (not part of this funding request) at the end of the project's useful life (15 years) is $1.5 Million.
Notes:

- $200,000 Funding has already been allocated in the SWFWMD FY 2018 budget to begin this project, which is being shown as prior funding on the funding table.
- As noted in the project's timeline, this project is scheduled to begin in FY 2018 with SWFWMD funds that have already been budgeted.

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

Conservation is an important element of the region's water supply. Tampa Bay Water plans and coordinates conservation programming in the Tampa Bay region. Our member governments are responsible for implementing programs that quantifiably reduce water demand. Due to the successful conservation planning and implementation efforts by Tampa Bay Water and its members, the per capita use rate of approximately 100 gpcpd in the Tampa Bay region is significantly lower than the State average and exceeds District goals. Tampa Bay Water supports local government conservation programs by funding programs quantifying water conservation potential and cost, providing region-wide educational and marketing programs, and various research and development-based programs. Tampa Bay Water worked with its member governments in creating model irrigation and landscape ordinance language that was adopted by most of our members, has evaluated implementation of those ordinances, and is working with members to increase ease and effectiveness of implementation. Tampa Bay Water is a wholesale drinking water provider to our member governments and has no regulatory purview of any kind. Flood protection ordinances fall under the purview of the members and are implemented by them.

Tampa Bay Water continues to seek better ways of serving its customers and protecting the environment. In addition to comprehensive hydrologic and environmental monitoring at Tampa Bay Water facilities, technologies employed include the OROP, short-term and long-term demand forecasting, and surface water forecasting methods to ensure that we keep pace with our member government demands, react quickly to changed conditions, and manage our facilities for the protection of the environment and the benefit of our customers.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			260,700	255,300	516,000
Hillsborough River	200,000		160,700	155,300	516,000
Total	200,000		421,400	410,600	1,032,000

Matching Fund Reduction

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

Timelines

A-Design-Build Selection

Milestone	Projected Date
Design-Build Contract Approval	06/18/2018

B-Design-Build

Milestone	Projected Date
Design and Construction	04/20/2020

C-Close-Out

Milestone	Projected Date
Final Project Close-Out Approval	08/17/2020

Data Collection Assessment:

☒ No data will be collected for this project

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Flood Protection - Gibson Avenue Drainage Improvements
Project Number	N966
Cooperator	Hillsborough County
Department	Public Works
Contact Person	Jie Tong
Address	601 E Kennedy Blvd 22nd Floor
City Sate Zip	Tampa, FL 33602
Phone #	813-307-1818
Email	TongJ@hillsboroughcounty.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:

1. Final construction plan design 2. two (2) acres property acquisition 3. Retention pond construction & retrofit of existing pump station

Benefit:

Benefit cost ratio is higher than one (1). Repetitive flooding with existing pump station because of lack of retention volume for runoff attenuation. Land acquisition and 30%-final construction plan design and permit is in process and will be ready for construction in FY19.

Cost:

The estimated cost is $1,800,000.

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

Water Conservation: Hillsborough County was the premier local government to decriminalize the violation of water use restrictions, and to adopt a civil citation process for the enforcement of the same in July 1993. A fulltime Water Conservation Manager assures that the County stays abreast of conservation issues. This facilitates amendments to the County's Water Conservation Ordinance (HCO 03-07) as needed to quickly address changing conditions in the regulatory environment and as deemed appropriate by the County's administration. Flood Protection: The principal purpose of Hillsborough County's floodplain management program is to protect residents and business owners from flooding risks. Flooding disasters are the leading recurring hazard within the County and have the potential of affecting greater than one-quarter of the population at a value that is greater than five billion dollars in personal property. Construction standards and planning concepts are implemented through the County's Land Development Code. Floodplain Management Plan and Local Mitigation Strategy.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share		1,000,000	400,000		1,400,000
General Fund-District Wide			400,000		400,000
Total		1,000,000	800,000		1,800,000

Matching Fund Reduction

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

Timelines

Design	11/30/2017
Land / ROW ACQ.	09/30/2018
Construction	09/30/2019

Data Collection Assessment:

☒ No data will be collected for this project

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Flood Protection - Hidden Lake/Yellow Lake
Project Number	N967
Cooperator	Pasco County
Department	Design Stormwater Management
Contact Person	Pasco County Public Works Department
Address	7536 State Street, Suite 140
City Sate Zip	New Port Richey, FL 34654
Phone #	727-847-8143
Email	mgarrett@pascocountyfl.net

Project Type:

[X] Water Supply [X] Water Quality [X] Flood Protection [ ] Natural Systems

Strategic Initiatives:

[X] Water Quality Maintenance and Improvement	[ ] Water Quality Monitoring
[ ] Alternative Water Supply	[X] Conservation
[ ] Reclaimed Water	[ ] Regional Water Supply Planning
[ ] Emergency Flood Response	[X] 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	[X] Pasco	[ ] Pinellas	[ ] Sarasota	[ ] Sumter	[ ] Polk

Project Description/Benefit/Cost

Description:

Historically, certain areas downstream of Hidden Lake have flooded during the 100YR/24HR Storm Event, as well as from less intense events. Areas most impacted by flooding from this watershed include residences near Bass Lake, Yellow Lake, and Scout Lake. The project would provide flood relief to downstream properties immediately after completion. The project consists of constructing berms around Hidden Lake with a control structure. The berms would allow the lake property to retain more water, then discharge at a controlled/ reduced rate. In the current condition, Pasco County runs multiple emergency pumping operations to provide additional capacity in the surrounding lakes to protect the homes and roads; this has been done prior to and after major storm events. This project is intended to relieve the need for pumping. This project will, in addition, serve to provide aquifer recharge and water quality benefits.

This regional stormwater improvement - flood protection project is an implementation of the Best Management Practices (BMPs) element of the DISTRICT'S Watershed Management Program (WMP) for the Yellow Lake and Lake Worrell (STUDY AREA) basins in Pasco County FL (5.4 sq. mi. - 3,468 acres), located in the Pithlachascotee River and Bear Creek (BearCotee) watershed (201.1 sq. mi. - 128,704 acres) BMP conceptual design has been performed under the BearCotee WMP Update and BMP Analysis (N509) TWA #15TW-275 and will, with this requested funding, be completed through the first phase of the project including land acquisition as well as final design and permitting of drainage improvements designed to reduce home flooding from 22 homes under existing conditions to 0 homes after the project and the length of roadway flooding by as much as 4,432 feet.

The study area is historically flood-prone and has been the subject of several past studies including development and implementation of facilities that provide increased conveyance capacity in the vicinity of Rocky Sink to the south of Lake Worrell. Analysis of the watershed and those facilities were the subjects of several previous studies including:

B*ear Creek Stormwater Management Master Plan* , *Final Report* (Ghioto & Associates, Inc., 1993),
The Pithlachascotee River Flood Plain Analysis (Ghioto & Associates, Inc., 1997) and Hydraulic Design Evaluation, Rocky Sink/Boggy Creek Watershed Improvement Project (Ardaman & Associates, Inc., 2002).

The regional system project includes detailed modeling and design, permitting, land acquisition, and construction/CEI for improvements in the Hidden Lake area that will create flood storage and provide flood mitigation in the Yellow Lake and Lake

Worrell sub-watersheds. The project includes construction of berms to impound stormwater at Hidden Lake and structures to ultimately divert this stormwater away from Yellow Lake and Lake Worrell through Boggy Creek and on to the Pithlachascotee River. Construction of the proposed BMPs will relieve flooding impacts to residential properties and reduce street flooding.

Benefit:

Proposed project would provide flood relief to downstream properties immediately after completion. The project consists of constructing berms around Hidden Lake with a control structure. The berms would allow the lake property to retain more water, then discharge at a controlled/ reduced rate to properties in the Bass Lake area (Lake Worrell), Yellow Lake Area, Cranes Roost, and Tanglewood East Subdivision. The project is estimated to prevent 22 homes from flooding during the 100YR/24HR storm event. Because more water is being retained in the post condition than in the pre-condition, the project includes a water quality component as well. This project will, in addition, serve to provide aquifer recharge and water quality benefits.

Cost:

Total Cost: $3,000,000. This cost estimate includes an $1,000,000 land acquisition of the Hidden Lake Parcel currently owned by the district, which is 589 AC MOL; parcel numbers:

30-25-17-0000-00100-0011
19-25-17-0000-00100-0000

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water; curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed water is $0.32 per 1,000 gallons and $14.72 per month for residential irrigation. Pasco County's potable water rates are applied in a water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			600,000	900,000	1,500,000
Pinellas Anclote			600,000	900,000	1,500,000
Total			1,200,000	1,800,000	3,000,000

Matching Fund Reduction

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

Timelines

Hidden Lake

Milestone	Projected Date
Begin Property Acquisition	10/01/2018
Begin Engineering and Permitting	10/01/2018
Complete Property Acquisition	01/01/2019
Complete Engineering and Permitting	06/01/2019
Begin Construction	10/01/2019
Complete Construction	07/01/2020

Data Collection Assessment:

☒ Groundwater or Surface Water Quality measurements ☒ Land Survey

☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	Conservation - Hillsborough County Advanced Metering Infrastructure (AMI) Expansion
Project Number	N968
Cooperator	Hillsborough County
Department	Public Utilities
Contact Person	Nicholas Lopresti
Address	925 E. Twiggs Street
City Sate Zip	Tampa, FL 33602
Phone #	813-272-5977 ext43358
Email	loprestin@hillsboroughcounty.org

Project Type:

[X] Water Supply [ ] Water Quality [ ] Flood Protection [ ] Natural Systems

Strategic Initiatives:

[ ] Water Quality Maintenance and Improvement
[ ] Water Quality Monitoring
[ ] Alternative Water Supply
[X] 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 [X] Hillsborough [ ] Lake
[ ] Levy [ ] Manatee [ ] Marion [ ] Pasco [ ] Pinellas [ ] Sarasota [ ] Sumter [ ] Polk

Project Description/Benefit/Cost

Description:

Purchase and install of 2,000 AMI meter registers in the Most Impacted Area (MIA) at $300 per register. The proposal anticipates 5 gallons per home per day savings, but this will be tested as a part of a pilot of 1,400 homes that will be implemented in FY18.

Benefit:

The current savings estimate is 10,000 gallons per day for the 2,000 units (5 gallons per home) in the MIA.

Cost:

Total Project Cost: $600,000; District share: $300,000 in FY2019; Hillsborough County share: $300,000

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

Hillsborough County was the premier local government to decriminalize the violation of water use restrictions, and to adopt a civil citation process for the enforcement of the same in July 1993. A fulltime Water Conservation Manager assures that the County stays abreast of conservation issues. This facilitates amendments to the County's Water Conservation Ordinance (HCO 03-07) as needed to quickly address changing conditions in the regulatory environment and as deemed appropriate by the County's administration. Enforcement of water conservation issues is done through Code Enforcement and Construction Services (Plumbing and Building Departments) in areas of their respective responsibilities. Reclaimed Water Master Plans have been developed to determine how reclaimed water throughout the County will be utilized for the primary goal of offsetting potable water use and meeting regulatory compliance. Additionally, the County has established a Reclaimed Water Improvement Unit (RWIU) ordinance to retrofit existing subdivisions with reclaimed water distribution systems. Hillsborough County has adopted a flood plain ordinance (County Ordinance 01-33) as required to participate as a community in the National Flood Insurance Program (NFIP) administered through the Federal Emergency Management Agency (FEMA). The county has developed land development regulations (LDR 96-35) to enforce the ordinance. All development is required to receive the proper building and site alteration permits. At this time flood plain issues are addressed to ensure compliance with the flood plain ordinance. Finished floor elevations are compared to the 100 year flood elevation. The County is also a participant in FEMA's Community Rating System and received a Class 6 rating. The Hillsborough County Reuse Program includes metering and an incentive based reuse rate structure for high volume water users and has proactive reclaimed water expansion policies which maximize utilization, water resource benefits and environmental benefits.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Alafia River			300,000		300,000
Applicant Share			300,000		300,000
Total			600,000		600,000

Matching Fund Reduction

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

Timelines

1. Installation

Milestone	Projected Date
Installation Begin	10/01/2018

2. Installation

Milestone	Projected Date
Installation Complete	04/01/2019

3. Closeout

Milestone	Projected Date
Closeout	09/30/2019

Data Collection Assessment:

☒ Other data collection: Home water use

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name WMP - South Creek Watershed Management Plan
Project Number N970
Cooperator Pinellas County
Department Public Works
Contact Person Paul Miselis
Address 22211 Us Highway 19 North
City Sate Zip Clearwater, FL 33765
Phone # 727-646-8921
Email pmiselis@pinellascounty.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:

The project involves the development of a comprehensive watershed management plan (WMP) that results in recommendations for drainage, water quality and natural systems improvement projects in the South Creek watershed.

The South Creek watershed covers approximately 2,913 acres in northern Pinellas County. The majority of current land use within the South Creek Watershed is urban. The watershed contains a number of interconnected urban lakes and four main stream channels. A number of flooding and conveyance issues have been identified in the watershed. Lake St. George, the largest lake in the watershed at 65 acres, is impaired for nutrients according to the State of Florida's Impaired Waters Rule (IWR). The ultimate discharge point for the watershed is Lake Tarpon and the Lake Tarpon outfall canal, a SWIM priority water body. No WMP presently exists for South Creek. This project would develop a new WMP for South Creek.

Benefit:

This project involves the development of a comprehensive watershed management plan that results in BMP recommendations for flood protection, water quality, and natural system improvement projects in the contributing watershed.

Cost:

This request is for the first year of a three-year project whose total project amount is estimated to be $750,000.

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

The Surface Water Element of the County's Comprehensive Plan (CP) obligates the County to protect, enhance, and improve water quality through water quality monitoring, watershed management plan development, and environmental enforcement.

Pinellas County is dedicated to improving flood protection as documented in the CP. The County has a fertilizer ordinance which restricts using products containing nitrogen or phosphorus during the wet season with a related sales ban, a pet waste ordinance, and street sweeping program all designed to reduce nutrient pollution to receiving waters. The County also recently adopted a stormwater utility that collects fees to fund surface water programs which includes stormwater maintenance and related public outreach and education programs.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			75,000	300,000	375,000
Pinellas Anclote			75,000	300,000	375,000
Total			150,000	600,000	750,000

Matching Fund Reduction

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

Timelines

Procurement	01/31/2019
Project Development	03/31/2019
Watershed Evaluation	09/01/2019
Floodplain Analysis	05/01/2020
FPLOS and BMP Alternatives Analysis	11/01/2020
SWRA and BMPs for Water Quality	06/01/2021

Data Collection Assessment:

☒ Groundwater or Surface Water Level measurements
☒ Surface Water Flow (Discharge) measurements
☒ Groundwater or Surface Water Quality measurements
☒ Rainfall or Other Meteorological measurements
☒ Land Survey
☒ LIDAR/Elevation data
☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	Conservation-Tampa Water Use Information Portal Implementation
Project Number	N972
Cooperator	City of Tampa
Department	Water Department
Contact Person	Seung Park
Address	306 E. Jackson St., 5e
City Sate Zip	Tampa, FL 33602
Phone #	813-274-7095
Email	seung.park@tampagov.net

Project Type:

[X] Water Supply [ ] Water Quality [ ] Flood Protection [ ] Natural Systems

Strategic Initiatives:

[ ] Water Quality Maintenance and Improvement	[ ] Water Quality Monitoring
[ ] Alternative Water Supply	[X] 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	[X] Hillsborough	[ ] Lake
[ ] Levy	[ ] Manatee	[ ] Marion	[ ] Pasco	[ ] Pinellas	[ ] Sarasota	[ ] Sumter	[ ] Polk

Project Description/Benefit/Cost

Description:

This project will provide a web based platform with an easy-to-use interface for City of Tampa Water Department customers to gain greater visibility, insight and control with respect to their water consumption at the individual customer level.

Benefit:

The following list provides the benefits of implementing Water Use Information Portal: 1. Advanced leak alert algorithm detects and alerts customers about potential leaks in their home and helps them identify the source of the leak, 2. Customers get notification when their water use is higher than normal, helping them avoid billing surprises, 3. Customers can set their My Use Notification to trigger between 1X and 5X of normal use, 4. Customers can choose to receive alerts and notifications by email, text, and voice, 5. Customers can see exactly where water use occurs in the home or business, 6. Interactive money-saving recommendation library, customized for each meter-class profile, 7. Personalized action plan of pledged savings, 8. Dynamic estimates of savings potential in gallons per day (GPD) and dollars per year, 9. Long-term trend and performance metric tracking, 10. Enables a mass customized outreach for local programs, events, and reminders, 11. Program performance reporting, 12. Customer segmentation and geospatial analytics on water consumption, and 13. Enhanced Customer Relationship Management (CRM) capabilities.

Cost:

City anticipates $300,000 to be the project cost. City will commit $150,000 in its FY 2019 budget. City requests funding from the District to be $150,000 in FY 2019.

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

The City of Tampa has the following codes in place relating to water conservation: 1) Standard Plumbing Code (Ord. No. 92-67,2,5-7-92; Ord. No. 96-64,62,3-14-96; Ord. No.98-40,19 2-26-98), 2) Water Use Restrictions Code (Ord. No. 2003-316; Ord. No. 2000-69, 97, 3-16-00; Ord. No. 2000-43,97,9-14-00; Ord. No. 2001-87,97,3-29-01), 3) Increase in Water Restriction Violation Fines (Ord. NO. 2001-19,23,1-4-1), 4) Landscaping Code (Ord. No. 97-34,2,2-6-97), 5) Rain Sensor Requirement (part of Plumbing Code, Ord. NO 98-40,19,2-26-98), 6) Schedule of Water Rates (Ord. NO. 2001-0987,26-31,8-30-01). The city has adopted a Flood Damage Control Ordinance (Ord. NO. 92-67, 2, 5-7-92, ord. NO 92-134, 3, 4, 81-3-92; Ord. NO. 96-64, 73-75, 3-14-96) as required to participate in the National Flood Insurance Program administered through FEMA.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding

Applicant Share	150,000	150,000
Hillsborough River	150,000	150,000
Total	300,000	300,000

Matching Fund Reduction

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

Timelines

Contract Execution

Milestone	Projected Date
Contract Execution	11/30/2018

Implementation

Milestone	Projected Date
Complete Implementation	09/30/2019

Implementation Testing

Milestone	Projected Date
Customer Testing	04/01/2019

System Configuration and Testing

Milestone	Projected Date
System Configuration and Testing	01/31/2019

Data Collection Assessment:

☒ Other data collection: Water Consumption Data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Flood Protection - Town "N" Country/Hillsborough Avenue Regional Drainage Improvements
Project Number	N975
Cooperator	Hillsborough County
Department	Public Works
Contact Person	Jie Tong
Address	601 E Kennedy Blvd 22nd Floor
City Sate Zip	Tampa, FL 33602
Phone #	813-307-1818
Email	TongJ@hillsboroughcounty.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:

The Town N Country Regional Stormwater Improvements Project will include the identification of deficiencies related to flood control and water quality, assess flooding risk and property damage, provide an alternatives analysis, and design plans. The project will include:
• A 20 acre regional pond for both runoff attenuation and water quality enhancements.
• Local drainage system improvements and diversion structures.
• Bypass conveyance system consistsing of conduit and open channel.

Benefit:

Recommended in the NW 5 Watershed Master Plan Study which was co-funded by SWFWMD. The proposed project has great benefit to a significant area around Tampa International Airport, Town 'N' Country, and Hillsborough Ave. which serves as a major evacuation route.

Cost:

The estimated cost is $45,750,000

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

Water Conservation: Hillsborough County was the premier local government to decriminalize the violation of water use restrictions, and to adopt a civil citation process for the enforcement of the same in July 1993. A fulltime Water Conservation Manager assures that the County stays abreast of conservation issues. This facilitates amendments to the County's Water Conservation Ordinance (HCO 03-07) as needed to quickly address changing conditions in the regulatory environment and as deemed appropriate by the County's administration. Flood Protection: The principal purpose of Hillsborough County's floodplain management program is to protect residents and business owners from flooding risks. Flooding disasters are the leading recurring hazard within the County and have the potential of affecting greater than one-quarter of the population at a value that is greater than five billion dollars in

personal property. Construction standards and planning concepts are implemented through the County's Land Development Code. Floodplain Management Plan and Local Mitigation Strategy.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share		150,000	150,000	22,575,000	22,875,000
General Fund-District Wide			300,000	22,575,000	22,875,000
Total		150,000	450,000	45,150,000	45,750,000

Matching Fund Reduction

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

Timelines

Alternative Analysis	05/31/2018
Design	05/31/2019
Land / ROW AcQ.	09/30/2019

Data Collection Assessment:

☒ Land Survey ☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	Study-Belleair Hydrogeologic Investigation for a Brackish Groundwater Water Supply
Project Number	N976
Cooperator	Town of Belleair
Department	Public Works
Contact Person	Gregg Jones
Address	3905 Crescent Park Drive
City Sate Zip	Riverview, FL 33578
Phone #	813-625-3510
Email	gregg.jones@cardno.com

Project Type:

[X] Water Supply [ ] Water Quality [ ] Flood Protection [ ] Natural Systems

Strategic Initiatives:

[ ] Water Quality Maintenance and Improvement	[ ] Water Quality Monitoring
[X] 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	[X] Hillsborough	[ ] Lake
[ ] Levy	[ ] Manatee	[ ] Marion	[X] Pasco	[X] Pinellas	[ ] Sarasota	[ ] Sumter	[ ] Polk

Project Description/Benefit/Cost

Description:

The Town of Belleair (Town) is requesting SWFWMD cooperative funding for a hydrogeologic investigation to determine the feasibility of developing a brackish groundwater wellfield and deep injection well in the Upper FLoridan aquifer (Project). The Project is the first phase of developing a brackish groundwater reverse osmosis (RO) desalination system. Currently the Town's water demand is met through it's potable-quality wellfield and water treatment plant. The wellfield includes 8 Upper Floridan aquifer wells that are permitted for an annual average and peak month withdrawals of 1.16 mgd and 1.45 mgd, respectively. The Town's wellfield is located near the Gulf of Mexico and the associated saltwater interface in the Floridan aquifer. As a result, chloride concentrations in the wells have risen significantly since the 1970s and the rate of increase has accelerated in recent years, even as withdrawal rates have declined. Chloride concentrations have exceeded or are approaching the drinking water standard in production wells. Blending of water from the wells is currently producing a finished water supply that meets the chloride standard. However, givn the rate of chloride increase, the Town may be unable to meet wate-quality standards within the next five to ten years. In requesting cooperative funding for the Project, the Town is following the precedent set by the nearby utilities of Oldsmar, Tarpon Springs, and Clearwater, that developed small-scale brackish groundwater RO systems with cooperative funding from the SWFWMD. Each of these municipalities began the development of their brackish groundwater systems with a hydrogeologic investigation co-funded by the SWFWMD. Project Objective - The Project will have two objectives. The first is to identify a zone in the Upper Floridan aquifer that will produce significant quantities of brackish groundwater and conduct tests to determine its productivity, water quality, and long-term stability. The second objective is to identify and test a zone below the production zone that will be suitable for injection of brine concentrate from the RO treatment process. Project Components - Both objectives will be accomplished through the construction of test production and monitor wells. aquifer performance and water-quality testing, and solute transport modeling to predict the water-quality stability of the production zone and the potential for upward migration of brine concentrate in the disposal zone. Regional Nature of Project - The regional aspects of the Project include the use of the extensive hydrogeologic data that will be collected to enhance regional groundwater flow models, regional saltwater intrusion monitoring, and potential aquifer recharge projects to create saltwater intrusion barriers. How the Project furthers the Implementation of the Regional Water Supply Plan (RWSP) - The Project supports the goals of the RWSP by developing a source of potable supply from an aquifer that is not stressed and contains low-quality water. The brackish groundwater desalination system that will be supported by the Project has been included in the 2015 RWSP (page 120).

Benefit:

The hydrogeologic information generated from the Project will be extensive and will complement SWFWMD’s efforts to gather regional hydrogeologic data through its Regional Observation and Monitoring Program. Data obtained from the Project can be used

to enhance the management of groundwater resources throughout the Tampa Bay Region in the following ways: improve regional groundwater flow and solute transport models to better manage groundwater withdrawals in Pinellas, Pasco and Hillsborough Counties, provide data to assist with the evaluation of water use permits, assist with the monitoring of saltwater intrusion, and assist with development of reclaimed water aquifer recharge/aquifer storage and recovery projects that will decrease groundwater and surface water withdrawals in Pasco and Hillsborough Counties. In addition, the Project is the first step to enabling the Town to continue meeting its demands with its own water supply. The only alternative is for the Town to be supplied by Pinellas County through Tampa Bay Water. This would have the negative effect of increasing stress on ground and surface water sources in Pasco and Hillsborough Counties.

Cost:

Cost estimates were obtained from drilling companies currently working in the Tampa Bay Area. An itemized scope and costs for all Project components is included in the attachment section. Total Project Cost is $1,019,975. The Town's share is $509,987.50. Funds Requested in FY 19 will be $339,991.66. Funds Requested in FY 20 will be $169,995.83.

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

Water Conservation - The Town has adopted water conservation rate structures, promoted water conservation through education, and adopted SWFWMD's water shortage language. The Town's water use permit is being renewed and it annual average groundwater allocation is likely to be reduced because of decreased demand largely resulting from the Town's water conservation efforts. Reclaimed Water Use - The Town contracts with Pinellas County to treat its wastewater then recieves reclaimed water back from the county to irrigate its two golf courses. Options for additional use of reclaimed water within the town are limited because there is no distribution system. Developing a distribution system in the Town's urbanized environment would be cost prohibitive. Wellfield Management - New production wells have been drilled in areas having lower chloride levels and existing high chloride wells have been abandoned. Although it is likely that this has dispersed the withdrawal footprint and slowed the overall rate of chloride increase, it has not halted it. Investigation of Alternative Water Sources. a) Potential to Connect to an Adjacent Water Supply - The Town has explored connecting to a nearby water supply system from Pinellas County or the City of Clearwater. It was determined that the cost of this option would be prohibitive because the adjacent utilities would require costly upgrades to the Town's aging water infrastructure. Other negative aspects of this option include the fact that the Town would have no control over water pricing and would lose water supply independence. b) Development of a Brackish Groundwater RO Facility - The Town conducted a feasibility study (see attachment section) to retrofit their existing wellfield and water treatment plant to function as a brackish groundwater desalination system using membrane treatment (RO). Results of the study indicated that this would be the most cost effective and sustainable alternative, especially if funds could be obtained from SWFWMD or the state to offset the Town's cost of developing the system. Freshkeeper Investigation - The Town investigated the application of the Freshkeeper concept to improve the sustainability of their wellfield. This involves intercepting the intruding brackish or saline groundwater with a dedicated interception well, thereby preventing salinization of the wells. The withdrawn brackish water could be used as an additional water source after reverse osmosis treatment. This option was determined to not to be practical because an RO treatment facility would need to be built to use the intercepted brackish groundwater and a deep injection well would be needed to dispose of the waste concentrate. This was not considered beneficial because it would essentially be the same as developing a brackish groundwater RO water supply system.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			339,991	169,995	509,986
Pinellas Anclote			339,991	169,995	509,986
Total			679,982	339,990	1,019,972

Matching Fund Reduction

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

Timelines

Release Date of RFP	12/21/2018
Selection of Consultant	01/11/2019
Well Construction Documents to District for Review	02/01/2019
Bid List of Well Contractors to District with Recommendation	05/11/2019
Selection of Well Construction Contractor	05/17/2019
Notice to Proceed to Well Construction Contractor	06/21/2019
Completion of Well Construction and Testing	01/31/2020
Well Construction Completion Certification	02/14/2020
Final Report	04/03/2020
Final Invoice to District	05/01/2020

Data Collection Assessment:

☒ Groundwater or Surface Water Level measurements
☒ Groundwater or Surface Water Quality measurements
☒ Monitor Well Installation
☒ Lithologic/Geophysical data
☒ Aquifer Testing
☒ Other data collection: Aquifer Hydraulic Properties from aquifer performance and injection tests and geophysical logging

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	Study- IFAS Soil Moisture Sensor - Rain Shutoff Devise Study with Education
Project Number	N988
Cooperator	UF/Florida Cooperative Extension Service (IFAS)
Department	Ifas Hillsborough County
Contact Person	Paula Staples
Address	5339 Cr 579
City Sate Zip	Seffner, FL 33584
Phone #	813-744-5519 ext54142
Email	staplesp@HCFLgov.net

Project Type:

[X] Water Supply [ ] Water Quality [ ] Flood Protection [ ] Natural Systems

Strategic Initiatives:

[ ] Water Quality Maintenance and Improvement	[ ] Water Quality Monitoring
[ ] Alternative Water Supply	[X] 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	[X] Hillsborough	[ ] Lake
[ ] Levy	[ ] Manatee	[ ] Marion	[ ] Pasco	[ ] Pinellas	[ ] Sarasota	[ ] Sumter	[ ] Polk

Project Description/Benefit/Cost

Description:

1. Landscape and Irrigation Modification: The project/study objective is to target existing irrigation water use in residential communities in the Most Impacted Area (MIA) in Hillsborough County. This study compares gallons saved for Soil Moisture Sensor and Rain Sensor devises. Project description: Install soil moisture sensors (SMS) in two different areas of Hillsborough County's Most Impacted Area (MIA). Install a representative amount of rain sensors to compare each type of equipment's efficiency in the same weather locale. Water use at all addresses will be monitored by recording monthly readings from Hillsborough County water meters. At the onset of the project education will be provided to homeowners, instructing them on irrigation controller and SMS operation. Currently, soil moisture sensors have a life estimate of 7 – 8 years. Description of services: Installation of soil moisture sensors. Irrigation system efficiency will be addressed in a PowerPoint presentation that will include "Dos and Don'ts" of Soil Moisture Sensors. Creation of a site map with SMS location and ft2 under irrigation. Data collection of water consumed at each site by recording monthly water use from each Hillsborough County water customer account receiving a SMS and rain sensor. Tabulation of gallons saved in Excel spreadsheet. Description of devices: 1. Soil Moisture Sensor. (SMS), 2. Extra wire for sensor site placement 3. Rain Sensor Description of marketing plan to target high water users in the five zip code areas. 1. Contact customers that have had an irrigation evaluation in those communities in the 5 zip codes. 2. Utilize previous irrigation evaluation customer goodwill from those communities that are located in the MIA to outreach to their high-water use neighbors. 3. Contact property managers, HOA presidents in MIA area. Ask for assistance in communicating with high water use homeowners who might be receptive to participating in the study. Neighborhood outreach, door to door, if HOA approved. 4. Continue to place the free irrigation evaluation message on Hillsborough County Public Utilities water bill. Search neighborhood addresses of high water users that respond and utilize water bill accounts to locate other high water users in the neighborhood.

Benefit:

This study will benefit two CFI funding strategies: 1. Promote water conservation through public engagement programs 2. Support research and implementation of conservation techniques and practicesGallons saved benefit: The criteria used to estimate water savings is from the Florida Extension Initiative 2: Enhancing and Protecting Water Quality, Quantity, And Supply Statewide Educational Programs in Water Conservation. Savings of 11,118-22,872 gallons per 1000 square feet a year is the benchmark. Site square footage will be measured using the Hillsborough County Property Appraiser's website. The Hillsborough County Utility water public water supply, a mix of groundwater, de-salinated and reservoir (surface) water, is the potable water source conserved. 15,000 gallons per month is the targeted high-water user. At an average of 500 gallons a day, using UF/IFAS Florida Extension Initiative 2: The lowest savings found in past studies was: 0.35 (lowest expected savings) x 500 gallons per day = 175 gallons of water conserved each day per SMS site. Replaced-repaired rain sensor savings from Florida Initiative 2: Calculation: A conservative estimate of irrigation savings is 8%: 500 gallons X 0.08 = 40 gallons per day.Benefits of Study:1. Contribute to the SWUCA Recovery strategy to achieve the saltwater intrusion minimum aquifer level by reduction in gallons of water used to irrigate turfgrass. 2. The cumulative impact analysis evaluates changes in permitted and used groundwater quantities and water resource development projects benefiting the Upper Floridan aquifer in and around the Most Impacted Area (MIA). 3. Protects investments of Hillsborough County, the existing water use permit holder. Benefit to both Water Conservation Plans. The UF Water Institute is assisting UF/IFAS Extension Hillsborough County in implementing the statewide plan for water education programming. The

programming plan is called “Shaping Solutions for Florida’s Future: The UF/IFAS Extension Roadmap”. This water conservation study we are submitting meets two of the three priorities. Priority 1 – Water Conservation which educates others to conserve Florida’s finite freshwater resources by teaching rural, suburban and urban audiences how to use less water and Priority 3 - Public Awareness of Water Issues that strives to improve Floridians’ knowledge about water allocation, use, quality, and conservation through public education. Hillsborough County utilizes the services of the Cooperative Extension Service to augment its water conservation staff to conduct irrigation and landscape evaluations. In preparation of the budget for FY16/FY17, the Department included a measure to incentivize the installation of soil moisture sensors in irrigation systems. High-water user information in the five zip codes (33572, 33534, 33573, 33579,33570) that are experiencing growth in the MIA area were collected in 2016. This study/project is the next phase. SMS installations, with an educational component to reduce water use in Hillsborough County's MIA areas experiencing rapid growth, will meet objectives in both plans.

Cost:

COSTS: SWFWMD and Hillsborough County Public Utilities Department: $25,000 Hillsborough County ; 25,000 SWFWMD CFI Cost-Share. Breakdown of individual component costs. 1. (SMS) $100.00 2. Extra wire for soil moisture sensor location placement $20 3. Rain Sensor replacement (includes installation and purchase) - $80 if necessary. The UF/IFAS Extension Hillsborough County Public Education Program Coordinator anticipates there will be some functioning rain sensors near installed SMS sites to reduce costs of rain sensor installation. SMS installation estimate $350.

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

1. This project will lay the groundwork to change local codes/regulations to require new technologies be installed in new landscapes. This project will provide scientific based reasoning to support development of a rebate program to avoid grandfathering in of existing irrigation systems. Current Hillsborough County Codes/Ordinances that will benefit from this study are Chapter 111 Water Conservation, Sec. 111-8. - Automatic rain-sensing shutoff devices or switches of the Hillsborough County. The following codes support the ordinance. Sec. 111-8 Ord. No. 03-07, § 4, 6-10-2003. 2. Florida-Friendly Landscaping™ principles are presented during irrigation evaluations, further decreasing water use. 2. High water users with learn the water conservation benefit of Florida-Friendly Landscaping 3. Rain sensors near SMS locations in communities selected for the study will be checked and upgraded. Rain sensors that had not been working will now be repaired or replaced.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			25,000		25,000
General Fund-District Wide	25,000		1		25,001
Total	25,000		25,001		50,001

Matching Fund Reduction

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

Timelines

Phase 1

Milestone	Projected Date
List of high water users in zip codes. Received 500 water meter accounts.	10/06/2017
Use message outreach through Hillsborough County water bill to target high water	09/30/2018
Review all past irrigation evaluations performed and determine those in the MIA	09/30/2018

Phase 2

Milestone	Projected Date
Participants identified and confirmed.	10/30/2018
SMS locations identified and SMS installed with education and surveys	03/31/2019
PPT presentation to community participants with survey	03/31/2019
Rain sensors locations identified, rain sensors identified,repaired or replaced	03/31/2019

Phase 3

Milestone	Projected Date
Data collection begins for SMS and rain sensors	04/01/2019
Study data collection ends	04/01/2020
Ending study survey sent	04/10/2020

Phase 4

Milestone	Projected Date
Final report	06/30/2020

Data Collection Assessment:

☒ Other data collection: monthly Irrigation gallons saved from participant's water meter

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Water Quality - East Treasure Island Causeway BMPs
Project Number	N989
Cooperator	City of Treasure Island
Department	
Contact Person	Michael Helfrich
Address	120 108th Ave.
City Sate Zip	Treasure Island, FL 33706
Phone #	727-547-4575
Email	mhelfrich@mytreasureisland.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:

The City of Treasure Island is a coastal municipality located in southwest Pinellas County. Approximately 58,000 LF (11 miles) of storm sewer piping is maintained by the City of Treasure Island's Public Works Department. Due to the fact that the City is an island community, approx. 161 stormwater outfalls discharge to Boca Ciega Bay (a FDEP-recognized Aquatic Preserve). These stormwater outfalls often convey floatables, sediments, oils and greases to receiving State Waters. The lack of available lands for stormwater detention/retention facilities results in the inability to remove the aforementioned pollutants through "conventional" pond systems. It is for this reason prior stormwater improvements have incorporated stormwater treatment structures as a component of the work. The City is pursuing the development of a multimodal corridor for the East Treasure Island Causeway; the main roadway segment entering the barrier island community. In order to accommodate the array of transportation options the corridor would support, re-alignment of the existing roadway is proposed. This re-alignment effort is proposed to be coupled with stormwater improvements. Preliminary regulation review finds that the proposed improvements may be exempt from SWFWMD permitting under the multi-use recreational path and minor roadway safety exemptions contained within Rule 62-330.051, F.A.C. Even if the corridor improvements are found to be exempt, the City wishes to incorporate stormwater quality improvement as part of the project's scope. Stormwater collection structures and piping are proposed to collect runoff from the corridor and route said flows to two (2) new stormwater treatment structures. Baffle boxes, which serve to remove floatables and sediment from stormwater, have been preliminary identified as the preferred treatment approach for system uniformity purposes (multiple baffle boxes have been installed as part of prior CFI-funded projects). Once treated, collected stormwater flows would be discharged to Boca Ciega Bay through newly constructed outfalls. Existing roadway segments disturbed during stormwater piping / structure installation would be restored. The project is currently in the pre-design stage. A state appropriation is the predominant funding source for this project. These funds will cover the construction costs associated with the development of the corridor, less the stormwater improvements. The City is proposing to allocate funding in future years for the work identified in the application attachments. With the work proposed within the jurisdictional limits of an adjacent municipality, some degree of cost-sharing for the stormwater improvements is possible. However, no such agreement is in place at this time.

Benefit:

The City is aware that implementation of BMPs is vital to improving water quality within the FDEP-recognized Aquatic Preserve. For this reason, the City felt it would be prudent to incorporate water quality improvement measures into the project's scope. The baffle box is effective in removing large floatables and small sediment from the flow stream. Greases and oils can also be removed through the incorporation of an absorbent boom and a skimmer. The SWFWMD's Strategic Plan identifies water quality maintenance and improvement as a strategic goal. Further, with the Tampa Bay Regional Priorities to improve water bodies, this

project assists the District in meeting its objectives. The water quality benefit for this project is as follows:2,153 lbs / year of TSS Removed; 7.99 lbs. / year of TP Removed; 69.70 lbs. / year of TN Removed

Cost:

The cost benefit for this project is as follows:TSS Removal @ $13.93/lb.TP Removal @ $3,754.69/lb.TN Removal @ $430.42/lb.These cost calculations assumed a duration of 20 years.

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

The City of Treasure Island is actively involved with maintaining clean water through yearly NPDES evaluations. The City has aggressively pursued ways to control erosion, minimize street and structural flooding all while improving water quality. Ordinances have been developed to maintain State and Federal requirements.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			500	299,500	300,000
Pinellas Anclote			500	299,500	300,000
State Appropriation				1,200,000	1,200,000
Total			1,000	1,799,000	1,800,000

Matching Fund Reduction

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

Timelines

Begin Final Design	01/02/2018
Complete Design & Permitting / Public Advertisement for Bids	10/05/2018
Contract Award	01/04/2019
Construction Commencement	02/04/2019
Construction Completion	02/07/2020

Data Collection Assessment:

☒ Groundwater or Surface Water Level measurements ☒ Land Survey

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Flood Protection - Zephyr Creek Drainage Improvements: Units 3 and 4
Project Number	N990
Cooperator	Pasco County
Department	Design Stormwater Management
Contact Person	Pasco County Public Works Department
Address	7536 State Street, Suite 140
City Sate Zip	New Port Richey, FL 34654
Phone #	727-847-8143
Email	mgarrett@pascocountyfl.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 is a multi-year, regional-scale stormwater improvement project to perform the implementation of Best Management Practices (BMPs) element of the District's Watershed Management Program (WMP) for Units 3 & 4 of the 8,000 acre Lake Zephyr Watershed. Flooding problems north of C Avenue, near Old S.R. 54, south of 8th Avenue, west of Plant Street and west of Dean Dairy Road are the most severe with respect to both flood depth and extent of inundation within the watershed. The SWMMP for the six-unit Lake Zephyr Watershed was completed in 1989, with Units 1 and 2 being updated in 2009. Through cooperative funding and HUD grant funds, Unit 5 (Geiger Pond) has been completed and has been shown to be effective. Furthermore, upgraded cross-culverts have been designed and installed under US 301 and Dean Dairy Road (portions of Units 2 and 5, respectively) via Community Development Block Grant and FEMA monies. In order to complete the middle two (2) units of the Lake Zephyr Watershed Management Plan, additional funding is being requested for design and construction. Unit 3 improvements will consists of two (2) cross-culvert improvements at C Avenue and Lagoon Court along with channel improvements near the old S.R. 54 crossing. In turn, Unit 4 improvements will be composed of three (3) cross-culvert improvements at 8th Avenue, Wooden Bridge (upstream of 8th Avenue) and Plant Street. In addition, 6,500LF of channel maintenance is to be performed.

Benefit:

The overall proposed project promises to reduce expected flood levels so that approximately **fifty-nine (59)** structures can be reclassified as laying above the FEMA floodplain. Furthermore, the project will address access deficiencies for **two (2)** roadways (6th Avenue & 1st Street). These units represent the middle section of Zephyr Creek located directly downstream of Geiger Pond, and would serve to further alleviate flooding throughout the watershed. The Total Present Value of Future Benefits is estimated to be $9.96M. Estimated construction cost is at $5.1M, resulting in a B/C ratio of **3.08**

Cost:

FY 2019 and subsequent funding is begin requested to design and construct Unit 3 and 4 improvements. Total project cost is estimated to be $5.1M.

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental

benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water; curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed water is $0.32 per 1,000 gallons and $14.72 per month for residential irrigation. Pasco County's potable water rates are applied in a water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			300,000	2,250,000	2,550,000
Hillsborough River			300,000	2,250,000	2,550,000
Total			600,000	4,500,000	5,100,000

Matching Fund Reduction

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

Timelines

Zephyr 3 & 4

Milestone	Projected Date
Commence Construction	01/01/2020
Complete Construction	09/30/2020

Zepyhr 3 & 4

Milestone	Projected Date
Comence Design/Permitting	12/01/2018
30% Plans	06/01/2019
Complete Design/Permitting	09/01/2019

Data Collection Assessment:

☒ Groundwater or Surface Water Level measurements ☒ Land Survey

☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	WMP - Cypress Creek Watershed Management Plan Update
Project Number	N993
Cooperator	Pasco County
Department	Stormwater Management
Contact Person	David Sua
Address	4454 Grand Blvd
City Sate Zip	New Port Richey, FL 346525402
Phone #	727-834-3611 ext3611
Email	dsua@pascocountyfl.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 multi-year project will perform the following: 1) Watershed Evaluation and 2) Implement Watershed Management Plan elements of the District's Watershed Program (WMP) for the Cypress Creek Watershed. The objective is to update the existing WMP for the Cypress Creek/South Lakes (CCSL) Watershed, which was commenced in 2004 for the Southwest Florida Water Management District and Pasco County, and completed in May of 2011. The WMP update is needed to account for the following in the watershed: land use changes and new development impacts in the watershed, use of more accurate digital topographic data (LiDAR), incorporation of the County's current spatial infrastructure database for stormwater assets that are now available, which will help to more accurately reflect drainage features in the Watershed. The WMP update will also include updating the existing hydrologic and hydraulic model for the watershed, to reflect the aforementioned changes that have occurred since 2004, and include a BMP Alternatives Analysis for the Watershed that includes the following: updated floodplain model that updates previously identified BMP alternatives along with identification of additional new BMPs resulting from the updated floodplain modeling, to specifically address flood abatement in the watershed. Identification of specific BMPs or groups of BMPs, their types, sizes, conceptual design features and specifications, preliminary and revised/updated cost estimates and easement requirements that are needed to lower or eliminate the risk of flooding in the Cypress Creek Watershed will result from the updated WMP. Additionally, tabulations of flood depths, number of structures flooded or removed from the floodplain, depth and areal extent of parcel and roadway flooding (extent and linear footage) and production of GIS-based existing and proposed flood maps supporting the overall flood abatement effective of each BMP or groups of BMPs, as well as recommendation son the sequence of implementation that reflects BMP effectiveness, as well as address regulatory permittibility of the BMPs. Level of Service (LOS) determinations for structures and roadways shall also be addressed.

The project's study area includes only the approximately 130-acre portion of the Cypress Creek Basin in Pasco County, and includes the approximately 25-mile long creek that originates in north-central Pasco County, flowing southerly into Big Cypress Swamp, northwest of the I-75/SR54 interchange. Creek flow continues southerly into Hillsborough County before discharging into the Hillsborough River. The total budget amount for this project is $1,800,000, and was estimated based on the fact that there is already an existing WMP as well as staff experience with similar project requirements.

Benefit:

The resulting Watershed Model, floodplain analysis information and identified BMPs are critical to better identifying risk of flood damage assessment, effective floodplain management and future development planning in the Watershed. Results of this project will facilitate achievement of a lower ranking in the Community Rating System of the Federal Emergency Agency (FEMA), which may lead to lower insurance premiums in Pasco County.

Cost:

Total cost is estimated at $1,800,000 for this multi-year project, with the Applicant's share of $900,000, and an equivalent matching amount of $900,000 from the District. The FY 19 request is for $900,000 for the first phase, to cover watershed evaluation, WMP update and model updates. Future phase of implementation will finalize the WMP update and include the BMP Alternatives Analysis, as well as the FEMA map revision for the Cypress Creek Watershed.

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water; curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed water is $0.32 per 1,000 gallons and $14.72 per month for residential irrigation. Pasco County's potable water rates are applied in a water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			900,000	900,000	1,800,000
Hillsborough River			900,000	900,000	1,800,000
Total			1,800,000	1,800,000	3,600,000

Matching Fund Reduction

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

Timelines

Cypress Creek Water Management Plan

Milestone	Projected Date
Contract Consultant	10/02/2018
Watershed Evaluation Project Development	01/02/2019
Watershed Evaluation	10/02/2019
WMP Project Development	01/02/2020
Watershed Model Parametrization Development	10/02/2020
Peer Review	01/02/2021
Public Notification/Presentation to Governing Board	04/02/2021
Final Approved Deliverables	08/02/2021

Data Collection Assessment:

☒ Groundwater or Surface Water Level measurements
☒ Surface Water Flow (Discharge) measurements
☒ Groundwater or Surface Water Quality measurements
☒ Rainfall or Other Meteorological measurements
☒ Land Survey
☒ Mapping/GIS data
☒ Biological (vegetation, benthic, fish, etc.)

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	WMP - Plant City Watershed Management Plan
Project Number	N995
Cooperator	Plant City
Department	Engineering
Contact Person	Michael Schenk
Address	P.O. Box C
City Sate Zip	Plant City, FL 33564
Phone #	813-659-4200 ext4154
Email	mschenk@plantcitygov.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:

Watershed Management Plan (WMP) and storm water inventory, floodplain delineation, and Best Management Practices (BMP) alternative analysis for the Plant City Watershed using digital topographic information, ERP data, and land use updates. Two studies have been completed within the City Limits, the Eastside Canal Improvements in 2001 and the Westside Canal Improvements in 2008. Information from those studies will be utilized and incorporated into the new WMP. FY2019 funding will be used to initiate the WMP and start the documentation collection, surveys and inventory of existing systems.

Benefit:

The contractual Measurable Benefit will be the completion of a WMP and storm water inventory, floodplain delineation, Best Management Practices and Alternative Analysis for the Plant City Watershed in the City of Plant City using digital topographical information, ERP data and land use updates.

Cost:

Total Project Cost: $1,300,000
City of Plant City: $650,000
District: $650,000

The City of Plant City has an area of 28.16 square miles within its city limits and is served by two watersheds, Hillsborough River and Alafia River.

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

The City has submitted for the Watershed Management Plan Cooperative Funding Initiative in order to examine the existing storm water facilities and their conditions within the City and determine what best management practices and improvements could be installed to reduce flooding throughout the City.

In 2015 the Engineering Department started the process to enroll into the Community Rating System (CRS) as part of the Florida CRS Initiative. In April 2017 the City received the preliminary results regarding the credits for the CRS application. According to the credit results received the City has a CRS Classification of 8. A number of programs were started by the City to inform the public about the flood zones and floodplain management documents available on the City's website and in other public buildings around the City. The City also adopted revisions of higher standards to its development code to ensure that it required developments to

provide 18-inches of free-board above the flood stage elevations for finish floors. The Building Department also requires Elevation Certificates to be submitted for new buildings that are constructed in floodplains to verify the 18-inch free-board.

The City is committed to move forward on this Watershed Management Plan in order to improve the existing storm water facilities and lessen the flooding potential in the neighborhoods which will benefit the citizens of Plant City as well as those who reside outside of the City. Accompanying this application is a map which identifies those locations around Plant City which consistently flood during heavy rain events.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			250,000	400,000	650,000
General Fund-District Wide			250,000	400,000	650,000
Total			500,000	800,000	1,300,000

Matching Fund Reduction

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

Timelines

December 1, 2020 - November 30, 2021

Milestone	Projected Date
Phase III: Completion of Floodplain Delineation, Level of Services, BMP's	11/30/2021

December 2, 2019 - November 30, 2020

Milestone	Projected Date
Phase II: Completion of the Watershed Evaluation	11/30/2020

December 3, 2018

Milestone	Projected Date
Project Kickoff Meeting	12/03/2018

December 3, 2018 - November 29, 2019

Milestone	Projected Date
Phase I: Documentation collection, surveys, mapping existing systems	11/29/2019

Data Collection Assessment:

☒ Land Survey ☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	WMP - Kenneth City WMP and Stormwater Inventory
Project Number	N997
Cooperator	Advanced Engineering and Design Inc
Department	
Contact Person	Justin Keller
Address	3931 68th Avenue
City Sate Zip	Pinellas Park, FL 33781
Phone #	727-526-9158
Email	keller@aed-fl.com

Project Type:

[ ] Water Supply [X] Water Quality [X] Flood Protection [ ] Natural Systems

Strategic Initiatives:

[X] Water Quality Maintenance and Improvement	[ ] Water Quality Monitoring
[ ] Alternative Water Supply	[ ] Conservation
[ ] Reclaimed Water	[ ] Regional Water Supply Planning
[ ] Emergency Flood Response	[X] 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	[X] Pinellas	[ ] Sarasota	[ ] Sumter	[ ] Polk

Project Description/Benefit/Cost

Description:

The Town of Kenneth City is committed to improving water quality within and directly outside of its jurisdictional limits. Multiple CFI projects have been successfully constructed in prior years and the Town looks forward to future involvement in the program. Recent CFI projects have focused on improving the quality of stormwater discharged to Joe's Creek; a water body with multiple FDEP-recognized impairments.

Pinellas County and the District recently completed a Watershed Management Plan (WMP) for Joe's Creek. With the Town predominantly located within this watershed, the WMP highlighted the water body's impacts on Town lands. However, additional information on the performance of the Town's collection system is desired.

Runoff within the Town is generally routed to various lakes. These lakes do not have a permitted attenuation or water quality function. Rather, the lakes, controlled via the outflow culvert's elevation, "back up" into the collection system piping as the stages increase. Once they reach intermediate high points in the collection system, water transfers to the next lake's basin. This "spillover" from lake to lake continues until the water eventually reaches Joe's Creek. One goal of the Watershed Evaluation & Management Plan is to determine if lake modifications, by increasing the available storage volume or adding a control structure, can result in level of service (LOS) and water quality improvements. With excavation within the lakes a possible alternative, preliminary sediment sampling is also proposed (supplemental sampling would be required during final design, if proposed). Town staff and AED are not aware of historical dredging activities within these lakes and it is possible that decades of stormwater collection has resulted in some degree of pollutant presence within the soils. Another goal of the Watershed Evaluation & Management Plan is to inventory the Town's stormwater facilities. While archived information is present, there are often contradictions with these records and field observations. There have been multiple occurrences when piping shown on Town records has been abandoned, re-routed or absent. This effort will be helpful in identifying future maintenance obligations and schedules. With an interconnection between the lakes and stormwater system, the performance of the lakes directly correlates to the level of service (LOS) of the Town's roadways. Improvements to the lakes would also be coupled with recommendations on improvements to the stormwater piping; whether this be upsizing, replacing in-kind or re-routing piping in the event certain lakes are found to have excess storage. There are many locations where stormwater collection structures are not present. Understanding where newly collected flows could be routed (and possibly treated) will greatly serve the Town in improving the safety of their roadway network.

Once projects are developed and costs for said improvements are established, the City will be evaluating the feasibility of a stormwater fee.

Benefit:

This project will develop a long term stormwater management plan that will allow for the Town to identify more refined flood protection and water quality improvement projects. These projects would likely seek funding in future Cooperative Funding Initiative cycles. Additionally, this study will also inventory the Town's existing infrastructure and "truth" existing records streamlining future maintenance, improvements and NPDES annual reporting efforts.

Cost:

The cost for the study ($125,000.00) includes extensive field reconnaissance efforts, mapping and LOS evaluations. With a land mass of 485 acres, the cost for the study is $257/acre ($164,473/ sq. mile). However, the scope of work contains work tasks not typically included in such studies such as sediment sampling, wholesale system mapping and condition assessments.

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

The Town of Kenneth City is actively involved with maintaining clean water through yearly NPDES evaluations. The City has aggressively pursued ways to control erosion, minimize street and structural flooding all while enhancing water quality. Ordinances have been developed to maintain State and Federal requirements. Furthermore, the Town continues to schedule annual community cleanup events for rights-of-way and the lake system.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			62,500		62,500
Pinellas Anclote			62,500		62,500
Total			125,000		125,000

Matching Fund Reduction

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

Timelines

SWFWMD Authorization / Begin Project	10/31/2018
Complete Field Reconn. Efforts / Begin Topo Aquisition	03/01/2019
Complete Topo / Begin Mapping & Stormwater Model Development	04/19/2019
Complete Stormwater Evaluation / Begin DRAFT Report	08/16/2019
Submit DRAFT Report	12/20/2019
Complete Responses to District & Town Commentary / Submit FINAL Report	03/27/2020

Data Collection Assessment:

☒ Land Survey ☒ Other data collection: Preliminary Sediment Samples of Lakes

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	AWS- Tampa Bay Water Regional Facility Site Pump Station Expansion
Project Number	N998
Cooperator	Tampa Bay Water
Department	Engineering Support
Contact Person	Maribel Medina
Address	2575 Enterprise Rd
City Sate Zip	Clearwater, FL 337631102
Phone #	727-791-2378
Email	mmedina@tampabaywater.org

Project Type:

[X] Water Supply [ ] Water Quality [ ] Flood Protection [ ] Natural Systems

Strategic Initiatives:

[ ] Water Quality Maintenance and Improvement	[ ] Water Quality Monitoring
[X] 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	[X] Hillsborough	[ ] Lake
[ ] Levy	[ ] Manatee	[ ] Marion	[X] Pasco	[X] Pinellas	[ ] Sarasota	[ ] Sumter	[ ] Polk

Project Description/Benefit/Cost

Description:

This project will increase the existing regional water system alternative water supplies' firm pumping capacity by 10-12 MGD average and 20 to 22 MGD maximum day from the Regional Facility Site High Service Pump Station – the main pump station for the region's wholesale water system. The project will include engineering services for the design, bidding, construction management, and construction activities associated with the removal of an existing unused 10 MGD (600 HP) jockey pump and installation of a new 24 MGD (2,000 HP) split case pump, structural modifications to support pump, Variable Frequency Drive, motor and ancillary electrical and mechanical equipment.

Benefit:

This project will increase the existing regional water system alternative water supplies' firm pumping capacity from 110 MGD to 132 MGD at the Regional Facility Site High Service Pump Station, which is projected to increase the annual average capacity by 10-12 MGD over 20 years. The increased pumping capacity is part of a larger, overall program to increase the resiliency of the Tampa Bay region's water supply system and maximize the use of permitted surface water capacity when it is available. The Regional Facility Site High Service Pump Station is part of Tampa Bay Water' alternative water supply system that includes: the Regional C.W. Bill Young Regional Reservoir, the Tampa Bay Desalination Facility, and the Surface Water Treatment Plant. This additional pumping capacity will also prepare the system for the next increment of supply that will be developed as part of the Long-Term Master Water Supply Plan. Regional demands are projected to increase from water year 2017 demands of 251 MGD to water year 2040 demands of 280-320 MGD.

Cost:

The total capital cost for this project is $2.4 million including the following project elements:

- Engineering Design/Bidding $216,000
- Engineering Construction $185,000
- Construction $1,537,000
- Contingency $462,000

Expected annual operating and maintenance (not part of this funding request) for the project includes:

- Maintenance $ 20,000

- Operations (Power Consumption) $ 400,000

Expected Renewal and Replacement cost (no part of this funding request) at the end of the project's useful life (20 years) is $4.3 Million

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

Conservation is an important element of the region's water supply. Tampa Bay Water plans and coordinates conservation programming in the Tampa Bay region. Our member governments are responsible for implementing programs that quantifiably reduce water demand. Due to the successful conservation planning and implementation efforts by Tampa Bay Water and its members, the per capita use rate of approximately 100 gpcpd in the Tampa Bay region is significantly lower than the State average and exceeds District goals. Tampa Bay Water supports local government conservation programs by funding programs quantifying water conservation potential and cost, providing region-wide educational and marketing programs, and various research and development-based programs. Tampa Bay Water worked with its member governments in creating model irrigation and landscape ordinance language that was adopted by most of our members, has evaluated implementation of those ordinances, and is working with members to increase ease and effectiveness of implementation. Tampa Bay Water is a wholesale drinking water provider to our member governments and has no regulatory purview of any kind. Flood protection ordinances fall under the purview of the members and are implemented by them.

Tampa Bay Water continues to seek better ways of serving its customers and protecting the environment. In addition to comprehensive hydrologic and environmental monitoring at Tampa Bay Water facilities, technologies employed include the OROP, short-term and long-term demand forecasting, and surface water forecasting methods to ensure that we keep pace with our member government demands, react quickly to changed conditions, and manage our facilities for the protection of the environment and the benefit of our customers.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			108,000	1,092,000	1,200,000
Hillsborough River			108,000	1,092,000	1,200,000
Total			216,000	2,184,000	2,400,000

Matching Fund Reduction

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

Timelines

A-Professional Services Selection

Milestone	Projected Date
Engineering Services Scope Approval	10/01/2018

B-Design

Milestone	Projected Date
100% Design Complete	04/15/2019

C-Bidding

Milestone	Projected Date
Bid Approval	08/19/2019

D-Construction

Milestone	Projected Date
Construction Substantial Completion	12/21/2020

E-Close-Out

Milestone	Projected Date
Final Project Close-Out Approval	08/16/2021

Data Collection Assessment:

☒ No data will be collected for this project

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	Study - Hillsborough County SCADA Long-Term Planning
Project Number	Q001
Cooperator	Hillsborough County
Department	Public Works
Contact Person	Jie Tong
Address	601 E Kennedy Blvd 22nd Floor
City Sate Zip	Tampa, FL 33602
Phone #	813-307-1818
Email	TongJ@hillsboroughcounty.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:

1. Conduct a study and provide a master plan for installation of a lake/stream SCADA system in critical locations within Hillsborough County. 2. Calibrate/verify watershed models prior to each storm event based on current available data. 3. Develop a lake/stream warning system to be coupled with the watershed model results for prediction of the available capacity of the lake/ stream systems (potential to flood). 4. Provide recommendations to SWFWMD for operation of their lake and stream structures to optimize flood control and lake management during the hurricane season.

Benefit:

Three major rivers originate from surrounding counties, flow through Hillsborough County, and ultimately discharge into Tampa Bay. These systems include many natural lakes with control structures that are operated by SWFWMD and interconnected with other minor streams within Hillsborough County. Being able to predict available capacity of these systems coupled with the results of existing watershed studies will be able to provide a pre-storm and during-storm warning system for communities and the transportation system, as well as providing recommendations to SWFWMD for their structure operations to prevent /alleviate flooding problems during the hurricane season.

Cost:

The estimated cost is $2,000,000.

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

Water Conservation: Hillsborough County was the premier local government to decriminalize the violation of water use restrictions, and to adopt a civil citation process for the enforcement of the same in July 1993. A fulltime Water Conservation Manager assures that the County stays abreast of conservation issues. This facilitates amendments to the County's Water Conservation Ordinance (HCO 03-07) as needed to quickly address changing conditions in the regulatory environment and as deemed appropriate by the County's administration. Flood Protection: The principal purpose of Hillsborough County's floodplain management program is to

protect residents and business owners from flooding risks. Flooding disasters are the leading recurring hazard within the County and have the potential of affecting greater than one-quarter of the population at a value that is greater than five billion dollars in personal property. Construction standards and planning concepts are implemented through the County's Land Development Code. Floodplain Management Plan and Local Mitigation Strategy.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share		50,000	50,000	900,000	1,000,000
General Fund-District Wide			100,000	900,000	1,000,000
Total		50,000	150,000	1,800,000	2,000,000

Matching Fund Reduction

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

Timelines

Master Plan for Installation	03/31/2018
Develop a Lake/Stream Warning System	07/31/2018
Recommendations	09/30/2018
System Installations	09/30/2019

Data Collection Assessment:

☒ Groundwater or Surface Water Level measurements

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Flood Protection - Angus Valley
Project Number	Q007
Cooperator	Pasco County
Department	Stormwater Management
Contact Person	David Sua
Address	4454 Grand Blvd
City Sate Zip	New Port Richey, FL 346525402
Phone #	727-834-3611 ext3611
Email	dsua@pascocountyfl.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 flood protection project is an implementation of the Best Management Practices (BMPs) element of the District's Watershed Management Program (WMP) in the Angus Valley subdivision, located within the Cypress Creek/South Lakes Watershed in Pasco County. The Angus Valley Flood Protection Level of Service (FPLOS) was rated F with the Alternative BMP Analysis Final Report indicating flooding of up to 39 structures for the 100-year, 24-hour design storm event and road flooding of over 6-inches for the 25-year and mean annual events (Parsons, 2011). This multiyear project consists of design, land and/or easement acquisition, and construction of three regional solutions, including (1) improvements to existing conveyance system (culverts and channels) discharging at Mangrove Drive, (2) enlargement of the existing channel north and west of Mangrove Drive, and (3) enlargement of the existing channel conveyance along the northern boundary of the subdivision.

Benefit:

Construction of the proposed BMPs will relieve flooding impacts to residential properties and reduce street flooding within Angus Valley. While the project's estimated Benefit Cost Ratio (BCR) is 0.4, it should be noted that these BMPs are important priority components of a larger regional plan for improvements for the Cypress Creek/South Lakes Watershed and will provide additional benefits outside of Angus Valley as other portions of the WMP plan are implemented. For example, Angus Valley channel improvements will allow for significant flood reduction in portions of the adjacent Fox Run subdivision when the Fox Run BMPs are implemented, but those added benefits are not captured by the estimated BCR of 0.4.

Cost:

Total project cost for land acquisition, design, and construction is estimated at $5,100,000. FY19 funds ($300,000) will be used for preliminary design (30%) and 3rd-party review. FY20 funds ($4,800,000) will be used for final engineering design and permitting, land/easement acquisition, and construction.

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental

benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water; curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed water is $0.32 per 1,000 gallons and $14.72 per month for residential irrigation. Pasco County's potable water rates are applied in a water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			150,000	2,400,000	2,550,000
Hillsborough River			150,000	2,400,000	2,550,000
Total			300,000	4,800,000	5,100,000

Matching Fund Reduction

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

Timelines

Angus Valley Flood Reduction

Milestone	Projected Date
Contract Consultant	10/02/2018
Preliminary Engineering Design (30%)	02/28/2019
Third Party Review	04/30/2019
Final Engineering Design and Permitting	10/01/2019
Bid and Contract for Construction	02/01/2020
Begin Construction	02/02/2020
Complete Construction	10/01/2020

Data Collection Assessment:

☒ Land Survey ☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	Conservation- Tampa Advanced Metering Infrastructure Implementation
Project Number	Q010
Cooperator	City of Tampa
Department	Water Department
Contact Person	Seung Park
Address	306 E. Jackson St., 5e
City Sate Zip	Tampa, FL 33602
Phone #	813-274-7095
Email	seung.park@tampagov.net

Project Type:

[X] Water Supply [ ] Water Quality [ ] Flood Protection [ ] Natural Systems

Strategic Initiatives:

[ ] Water Quality Maintenance and Improvement	[ ] Water Quality Monitoring
[ ] Alternative Water Supply	[X] 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	[X] Hillsborough	[ ] Lake
[ ] Levy	[ ] Manatee	[ ] Marion	[ ] Pasco	[ ] Pinellas	[ ] Sarasota	[ ] Sumter	[ ] Polk

Project Description/Benefit/Cost

Description:

City of Tampa's Advanced Metering Infrastructure Implementation project will install electronic meter interface units (MIUs) on each meter or replace existing meters with new meters that have the meter interface units incorporated that collect readings from the meter and transmit them to data collection units (DCUs). DCUs will be permanently located strategically across the service area. The DCUs will then relay the collected data to a meter data management system (MDMS) database. We intend to begin with hourly reads and also have the capacity to obtain instantaneous reading upon demand. We expect to have meter data detail that provides analysis-based decision making and the timely availability of information about individual customer water consumption.

Benefit:

The following list has been compiled as benefits of Advanced Metering Infrastructure Project: 1. Elimination of human error and reduction of turnaround time associated with meter data collection, transcription, and bill creation, 2. Monthly and off-cycle billing based on actual meter readings, without the expense of deploying field staff, 3. Early identification of water leaks or high consumption events on the customer’s side of the meter, enabling the City to proactively notify customers before they receive high consumption bills, 4. Greater customer awareness of water consumption habits, leading to improvements in conservation, 5. Reduced customer calls and field investigations, 6. Employment of sophisticated rate structures, such as those based on individualized conservation water budgets, day-of-use, or time-of-use, 7. Analysis of trends in individual consumption readings to identify possible meter failure or wear–out, 8. Right-sizing of meters that experience flowrates outside the accuracy range of the installed meter, 9. Monitoring of individual customer consumption to perform precise, targeted conservation enforcement, 10. Detection of leaks in the distribution system, facilitating the reduction of non-revenue water and improvements in distribution efficiency, and 11. Identification of and influence on system-wide usage patterns, leading to improved infrastructure planning and potential deferral of certain capital investments.

Cost:

City anticipates $10,000,000 to be first year implementation cost for this project. City will commit $5,000,000 in its FY 2019 budget. City requests funding from the District to be $5,000,000 in FY 2019.

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

The City of Tampa has the following codes in place relating to water conservation: 1) Standard Plumbing Code (Ord. No. 92-67,2,5-7-92; Ord. No. 96-64,62,3-14-96; Ord. No.98-40,19 2-26-98), 2) Water Use Restrictions Code (Ord. No. 2003-316; Ord. No. 2000-69, 97, 3-16-00; Ord. No. 2000-43,97,9-14-00; Ord. No. 2001-87,97,3-29-01), 3) Increase in Water Restriction Violation

Fines (Ord. NO. 2001-19,23,1-4-1), 4) Landscaping Code (Ord. No. 97-34,2,2-6-97), 5) Rain Sensor Requirement (part of Plumbing Code, Ord. NO 98-40,19,2-26-98), 6) Schedule of Water Rates (Ord. NO. 2001-0987,26-31,8-30-01). The city has adopted a Flood Damage Control Ordinance (Ord. NO. 92-67, 2, 5-7-92, ord. NO 92-134, 3, 4, 81-3-92; Ord. NO. 96-64, 73-75, 3-14-96) as required to participate in the National Flood Insurance Program administered through FEMA.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			5,000,000	10,000,000	15,000,000
General Fund-District Wide			5,000,000	10,000,000	15,000,000
Total			10,000,000	20,000,000	30,000,000

Matching Fund Reduction

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

Timelines

Data Collection Unit Installation

Milestone	Projected Date
DCU Installation	01/31/2019

Meter Interface Unit Installation

Milestone	Projected Date
MIU Installation	12/31/2018

Testing and System Configuration

Milestone	Projected Date
Testing and System Configuration	06/30/2019

Year 1 Implementation

Milestone	Projected Date
Complete Year 1 Implementation	09/30/2019

Data Collection Assessment:

☒ Other data collection: water consumption data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	WMP - Pithlachascotee/Bear Creek Watershed Management Plan Update
Project Number	Q011
Cooperator	Pasco County
Department	Design Stormwater Management
Contact Person	Pasco County Public Works Department
Address	7536 State Street, Suite 140
City Sate Zip	New Port Richey, FL 34654
Phone #	727-847-8143
Email	mgarrett@pascocountyfl.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:

Pithlachascotee / Bear Creek, Cypress Creek, and Hammock Creek Watersheds are proposed for updating and conceptual design completion under the SWFWMD (Southwest Florida Water Management District) Watershed Management Program. The Hammock Creek Watershed study was last updated in 2008, however the study was not accepted by the SWFWMD Governing Board. The project will need to be updated and complete to the current standards with an increased level of detail. Cypress Creek and Pithlachascotee / Bear Creek Watersheds require updating. Significant development has occurred as depicted below necessitating the updating of the model to complete the conceptual alternatives for the Pasco County flood prone areas. LiDAR acquisition in FY18 will allow the terrain to be updated for use in the watershed model updates.

Benefit:

Watershed models allow Pasco County to identify watershed status and trends. These models become outdated as the County grows and new development is built. These plans survey existing structures, topography and develop a model which can run various scenarios to understand how water moves through the watershed. This information is critical in permitting new developments, identifying problem areas, and developing solutions for problem areas.

Cost:

Total Cost: $1,600,000

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water; curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed

water is $0.32 per 1,000 gallons and $14.72 per month for residential irrigation. Pasco County's potable water rates are applied in a water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			400,000	400,000	800,000
Withlacoochee River			400,000	400,000	800,000
Total			800,000	800,000	1,600,000

Matching Fund Reduction

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

Timelines

Pithlaschascotee/Bear Creek WMP

Milestone	Projected Date
Contract with Consultant	10/01/2018
Watershed Evaluation	01/01/2019
WMP Project Development	01/01/2019
Watershed Evaluation Project Development	01/01/2020
Watershed Model Development	10/01/2020
Peer Review	01/01/2021
Public Notification/ Governing Board Approval	04/01/2021
Final Approval of Deliverables	08/01/2021

Data Collection Assessment:

☒ Land Survey ☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Flood Protection - Buck/ Lanier
Project Number	Q012
Cooperator	Pasco County
Department	Design Stormwater Management
Contact Person	Pasco County Public Works Department
Address	7536 State Street, Suite 140
City Sate Zip	New Port Richey, FL 34654
Phone #	727-847-8143
Email	mgarrett@pascocountyfl.net

Project Type:

[ ] Water Supply [X] Water Quality [X] Flood Protection [ ] Natural Systems

Strategic Initiatives:

[X] Water Quality Maintenance and Improvement
[ ] Water Quality Monitoring
[ ] Alternative Water Supply
[ ] Conservation
[ ] Reclaimed Water
[ ] Regional Water Supply Planning
[X] 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 [X] Pasco [ ] Pinellas [ ] Sarasota [ ] Sumter [ ] Polk

Project Description/Benefit/Cost

Description:

Design and implement Alternative 2 of the 2012 Buck/Lanier study by URS. Create additional 8.5 ac-ft storage and improved conveyance

Benefit:

The area at Buck and Lanier and the area near Fantasy Lane experience flooding regularly. Adding increased storage will reduce flooding in these two areas of a closed basin protecting multiple structures. Discharge from the Crystal Lakes MHP north of HWY 54 causes the flooding and makes this an intermediate system. In the past 6 years the area has experienced 4-50 year events. The Benefit /Cost is 3.0

Cost:

$120,000 2019 for design/permitting
$500,000 2020 for construction

Parcel ID 18 26 21 0000 02400 0020 will be acquired at $100,000

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water; curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed water is $0.32 per 1,000 gallons and $14.72 per month for residential irrigation. Pasco County's potable water rates are applied in a water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water

distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			60,000	250,000	310,000
Hillsborough River			60,000	250,000	310,000
Total			120,000	500,000	620,000

Matching Fund Reduction

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

Timelines

Buck & Lanier

Milestone	Projected Date
Begin Design/Permitting	12/01/2018
Aquisition	02/01/2019
Complete Design/Permitting	09/01/2019
Commense Construction	02/01/2020
Complete Construction	10/01/2020

Data Collection Assessment:

☒ Groundwater or Surface Water Level measurements ☒ Land Survey

☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	WMP - Hammock Creek WMP
Project Number	Q013
Cooperator	Pasco County
Department	Design Stormwater Management
Contact Person	Pasco County Public Works Department
Address	7536 State Street, Suite 140
City Sate Zip	New Port Richey, FL 34654
Phone #	727-847-8143
Email	mgarrett@pascocountyfl.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:

Hammock Creek SWMMP_Description

This is a multi-year project that will develop a Watershed Management Plan for the Hammock Creek Basin located in Northwest Pasco County. The project will include all aspects of a WMP including development of a watershed model, floodplain analysis, peer review of the model and preliminary flood plain analysis, public meeting, District Governing Board approval, final floodplain analysis, BMP development and related efforts

Benefit:

The Hammock Creek area has experienced heavy flooding in the past and the several efforts have been made to complete a WMP for the area. The Hammock Creek Watershed contains over 1,500 sub-basins and roughly 60% are closed. The current floodmaps do not accurately predict the flood risk in the majority of the sub-basins. An accurate model and floodplain maps will provide a tool for better development and aid in permitting. Significant flooding occurs and development of BMPs will help reduce flooding. In 2004 Countyline road was closed due to flooding in the basin

Cost:

$1,800,000, multiyear with the first year (FY19) cost of $450,000 District and $450,000 Pasco County will fund the project through the Watershed evaluation phase and FY20 funding of $450,000 district and $450,000 Pasco County will complete the project

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water;

curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed water is $0.32 per 1,000 gallons and $14.72 per month for residential irrigation. Pasco County's potable water rates are applied in a water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			450,000	450,000	900,000
Coastal Rivers			450,000	450,000	900,000
Total			900,000	900,000	1,800,000

Matching Fund Reduction

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

Timelines

Hammock Creek WMP

Milestone	Projected Date
Contract with consultant	10/01/2018
Watershed Evaluation	01/01/2019
WMP project Development	01/01/2019
Watershed Evaluation Project Development	01/01/2020
Watershed Model Development	10/01/2020
Peer Review	01/01/2021
Public Notification/Governing Board Approval	04/01/2021
Final Approval of Deliverables	08/01/2021

Data Collection Assessment:

☒ Land Survey ☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	Conservation-Pasco County - Toilet Rebate - Phase 12
Project Number	Q014
Cooperator	Pasco County
Department	Utilities
Contact Person	Pamela Lynch
Address	19420 Central Blvd.
City Sate Zip	Land O'Lakes, FL 34637
Phone #	813-235-6191
Email	plynch@pascocountyfl.net

Project Type:

[X] Water Supply [ ] Water Quality [ ] Flood Protection [ ] Natural Systems

Strategic Initiatives:

[ ] Water Quality Maintenance and Improvement
[ ] Water Quality Monitoring
[ ] Alternative Water Supply
[X] 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 [X] Pasco [ ] Pinellas [ ] Sarasota [ ] Sumter [ ] Polk

Project Description/Benefit/Cost

Description:

This is a twelfth year request for a proven, successful toilet rebate project that offers financial incentives to water customers (residential and commercial) within Pasco County Utilities' service area to replace existing high-volume (3.5 gallons per flush (gpf) or higher) with high-efficiency (HET) models (1.28 gpf or lower) to save potable water. The Fiscal Year 2019 project proposes to retrofit and rebate up to an additional 500 toilets through an outside contracted consultant. The rebates are offered in the form of a credit to the customer's water bill. The educational materials, program promotion, and surveys necessary to ensure the success of the program are included. Depending on the program's continued success, the Utilities Department may continue the program for additional years.

Benefit:

Based on the Water Management District's Acceptable Data for Estimating Conservation Savings, it is anticipated that by replacing 500 high-volume toilets this phase of the program will provide an estimated potable water savings of approximately 13,956 gallons per day in the Northern Tampa Bay Water Use Caution Area.

Cost:

The project's cost effectiveness is $1.97 per thousand gallons saved.
FY '19 project costs:
Total District share - $50,000 Total County share - $50,000 Total project cost - $100,000

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water; curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015,

100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed water is $0.32 per 1,000 gallons for customers that have storage capability. All other bulk customers that feed directly off of the system will be charged $0.63 per thousand gallons used. Residential irrigation customers will be billed a flat rate of $14.72 per month. Pasco County's potable water rates are applied in a water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share	710,000	50,000	50,000		810,000
General Fund-District Wide	710,000	50,000	50,000		810,000
Total	1,420,000	100,000	100,000		1,620,000

Matching Fund Reduction

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

Timelines

Commence rebate period

Milestone	Projected Date
October 1, 2018	10/01/2018

Project completion

Milestone	Projected Date
September 30, 2019	09/30/2019

Data Collection Assessment:

☒ No data will be collected for this project

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	Recl. Water - Pasco Co. Cypress Preserve Recl. Water Trans. Main - Ph. 2 Grand Live Oak Blvd.
Project Number	Q021
Cooperator	Pasco County
Department	Utilities
Contact Person	Pamela Lynch
Address	19420 Central Blvd.
City Sate Zip	Land O'Lakes, FL 34637
Phone #	813-235-6191
Email	plynch@pascocountyfl.net

Project Type:

[X] Water Supply [ ] Water Quality [ ] Flood Protection [ ] Natural Systems

Strategic Initiatives:

[ ] Water Quality Maintenance and Improvement	[ ] Water Quality Monitoring
[X] Alternative Water Supply	[ ] Conservation
[X] 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	[X] Pasco	[ ] Pinellas	[ ] Sarasota	[ ] Sumter	[ ] Polk

Project Description/Benefit/Cost

Description:

This project is for the continuation of construction of approximately 4,500 linear feet of an estimated 16-inch reclaimed water transmission main that will extend from the terminus on Hawks Landing Drive and continue on to Grand Live Oak Blvd. Cypress Preserve is an approved MPUD located on U.S. Highway 41 just south of State Road 52. Construction of the Cypress Preserve community began in 2017 with the District cooperatively funding the first phase of construction on U.S. Highway 41 from Asbel Road to Hawks Landing Drive within the Cypress Preserve community. This Fiscal Year 2019 request is for an approximate total project cost of $413,000.00 ($206,500 - District share and $206,500 - County share).

The Cypress Preserve community will eventually consist of 557 single family homes, 284 multi-family homes, and approximately 15 acres of common areas. Furthermore, future development to the west of the project is anticipated to be significant - up to 10,000 single family homes. The community's distribution system will advance the utilization of reclaimed water for irrigation of homes and businesses and will eliminate the need to utilize potable water for this purpose.

This is a multi-year funded project.

Benefit:

The annual average flow offset of potable water used for irrigation at build out of the Cypress Preserve community is approximately 70 million gallons per year or .192 million gallons per day (mgd). Customers to be served are anticipated to be receiving project benefits by 2019. The project will be designed to provide a benefit of approximately .192 mgd of reclaimed water. This project will enable the continuation of concurrent reclaimed water construction with roads and other utilities. Cypress Preserve is located in the Northern Tampa Bay Water Use Caution Area. It will serve to further implement the District's Regional Water Supply Plan by greatly reducing the need for utilizing ground water for irrigation purposes.

Cost:

The total project cost is $413,000. District Share = $206,500 - County Share = $206,500

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water; curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed water is $0.32 per 1,000 gallons for customers that have storage capability. All other bulk customers that feed directly off of the system will be charged $0.63 per thousand gallons used. Residential irrigation customers will be billed a flat rate of $14.72 per month. Pasco County's potable water rates are applied in a water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			206,500		206,500
General Fund-District Wide			206,500		206,500
Total			413,000		413,000

Matching Fund Reduction

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

Timelines

Commence Construction

Milestone	Projected Date
Commence Construction	10/01/2018

Complete Construction

Milestone	Projected Date
Complete Construction	12/31/2019

Data Collection Assessment:

☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name SW IMP - Flood Protection - N Falkenburg Rd. Drainage Improvements
Project Number Q026
Cooperator Hillsborough County
Department Public Works
Contact Person Jie Tong
Address 601 E Kennedy Blvd 22nd Floor
City Sate Zip Tampa, FL 33602
Phone # 813-307-1818
Email TongJ@hillsboroughcounty.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:

The drainage improvements include 3 locations along the system which ultimately outfalls to the Tampa Bypass Canal: 1. Vandenberg Airport Road-Harney Flat Canal, 2. North Falkenburg Road, and 3. East Sligh Avenue drainage upgrade.

Benefit:

Recommended in the Hillsborough River and Tampa Bypass Canal Watershed Masterplan Study which was co-funded by SWFWMD. 30% Design is in process and will be ready for construction in FY19.

Cost:

The estimated cost is $1,300,000.

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

Water Conservation: Hillsborough County was the premier local government to decriminalize the violation of water use restrictions, and to adopt a civil citation process for the enforcement of the same in July 1993. A fulltime Water Conservation Manager assures that the County stays abreast of conservation issues. This facilitates amendments to the County's Water Conservation Ordinance (HCO 03-07) as needed to quickly address changing conditions in the regulatory environment and as deemed appropriate by the County's administration. Flood Protection: The principal purpose of Hillsborough County's floodplain management program is to protect residents and business owners from flooding risks. Flooding disasters are the leading recurring hazard within the County and have the potential of affecting greater than one-quarter of the population at a value that is greater than five billion dollars in personal property. Construction standards and planning concepts are implemented through the County's Land Development Code. Floodplain Management Plan and Local Mitigation Strategy.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding

Applicant Share	300,000	500,000	800,000
General Fund-District Wide		500,000	500,000
Total	300,000	1,000,000	1,300,000

Matching Fund Reduction

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

Timelines

Alternative Analysis	10/15/2017
Design	02/28/2018
Land / ROW ACQ.	09/30/2018
Construction	09/30/2019

Data Collection Assessment:

☒ No data will be collected for this project

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Flood Protection - 56th St and Hanna Avenue Regional Drainage Improvements
Project Number	Q027
Cooperator	Hillsborough County
Department	Public Works
Contact Person	Jie Tong
Address	601 E Kennedy Blvd 22nd Floor
City Sate Zip	Tampa, FL 33602
Phone #	813-307-1818
Email	TongJ@hillsboroughcounty.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:

The 56th St. and Hanna Ave. Drainage Improvement Project will include the identification of deficiencies related to flood control and water quality, assess flooding risk and property damage, provide an alternatives analysis, and design plans. The proposed system will include:
• A second outfall to the Hillsborough River.
• Local drainage system improvements along 56th Street, and a diversion structure (smart box) near the intersection of 56th St. and E. Sligh Ave.
• Three(3) to five(5) acres of wet detention pond(s) along 56th St which will intercept the runoff from surrounding concrete industries to provide flood attenuation as well as water quality treatment.

Benefit:

The proposed project will improve the drainage system of 56th Street which serves as a major evacuation route.

Cost:

The estimated cost is $3,350,000.

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

Water Conservation: Hillsborough County was the premier local government to decriminalize the violation of water use restrictions, and to adopt a civil citation process for the enforcement of the same in July 1993. A fulltime Water Conservation Manager assures that the County stays abreast of conservation issues. This facilitates amendments to the County's Water Conservation Ordinance (HCO 03-07) as needed to quickly address changing conditions in the regulatory environment and as deemed appropriate by the County's administration. Flood Protection: The principal purpose of Hillsborough County's floodplain management program is to protect residents and business owners from flooding risks. Flooding disasters are the leading recurring hazard within the County and have the potential of affecting greater than one-quarter of the population at a value that is greater than five billion dollars in personal property. Construction standards and planning concepts are implemented through the County's Land Development Code. Floodplain Management Plan and Local Mitigation Strategy.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share		100,000	100,000	1,475,000	1,675,000
General Fund-District Wide			200,000	1,475,000	1,675,000
Total		100,000	300,000	2,950,000	3,350,000

Matching Fund Reduction

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

Timelines

Project Development	01/31/2018
PD&E	06/30/2019
Preliminary Design	09/30/2019

Data Collection Assessment:

☒ Land Survey ☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name Reclaimed Water-Tampa Augmentation Project Implemention Phase I
Project Number Q028
Cooperator City of Tampa
Department Water Department
Contact Person Seung Park
Address 306 E. Jackson St., 5e
City Sate Zip Tampa, FL 33602
Phone # 813-274-7095
Email seung.park@tampagov.net

Project Type:

[X] Water Supply [X] Water Quality [ ] Flood Protection [X] Natural Systems

Strategic Initiatives:

[X] Water Quality Maintenance and Improvement
[ ] Water Quality Monitoring
[X] Alternative Water Supply
[ ] Conservation
[X] Reclaimed Water
[ ] Regional Water Supply Planning
[ ] Emergency Flood Response
[ ] Floodplain Management
[ ] Minimum Flows and Level Establishment and Monitoring
[X] 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 [X] Hillsborough [ ] Lake
[ ] Levy [ ] Manatee [ ] Marion [X] Pasco [X] Pinellas [ ] Sarasota [ ] Sumter [ ] Polk

Project Description/Benefit/Cost

Description:

This phase of the project will focus on engineering design services for implementing a recharge/recovery system to treat, store and recover reclaimed water in the Florida Aquifer System (FAS) for subsequent delivery to the Hillsborough River Reservoir or directly to the water intake system of the David L. Tippin Water Treatment Facility (DLTWTF). Project components include, but not limited to a 48-inch diameter transmission main, a pumping station at the Howard F. Curren Advanced Wastewater Treatment Plant (HFCAWTP), and multiple recharge and recovery wells and associated appurtenances.

Benefit:

The project provides for a new, safe, local, cost-effective, drought-resistant, long term sustainable alternative source of drinking water for the Tampa Bay region. The project will help protect and enhance important environmental resources such as Hillsborough Bay and Tampa Bay by reducing nutrient loading and also the Lower Hillsborough River by adding freshwater flows to meet Minimum Flows requirements. It also enables Tampa to manage its water resources for the highest and best use.

Cost:

The City anticipates $4,000,000 of costs for the engineering consultant for the first year design effort and will commit $2,000,000 in its FY 2019 Capital Improvement Program budget. The City's request for funding from the District is $2,000,000 in FY 2019. The District funded the feasibility study phase (N751) in FY2016 and FY2017.

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

The City of Tampa has the following codes in place relating to water conservation: 1) Standard Plumbing Code (Ord. No. 92-67,2,5-7-92; Ord. No. 96-64,62,3-14-96; Ord. No.98-40,19 2-26-98), 2) Water Use Restrictions Code (Ord. No. 2003-316; Ord. No. 2000-69, 97, 3-16-00; Ord. No. 2000-43,97,9-14-00; Ord. No. 2001-87,97,3-29-01), 3) Increase in Water Restriction Violation Fines (Ord. NO. 2001-19,23,1-4-1), 4) Landscaping Code (Ord. No. 97-34,2,2-6-97), 5) Rain Sensor Requirement (part of Plumbing Code, Ord. NO 98-40,19,2-26-98), 6) Schedule of Water Rates (Ord. NO. 2001-0987,26-31,8-30-01). The city has adopted a Flood Damage Control Ordinance (Ord. NO. 92-67, 2, 5-7-92, ord. NO 92-134, 3, 4, 81-3-92; Ord. NO. 96-64, 73-75, 3-14-96) as required to participate in the National Flood Insurance Program administered through FEMA.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			2,000,000	10,000,000	12,000,000

General Fund-District Wide	2,000,000	10,000,000	12,000,000
Total	4,000,000	20,000,000	24,000,000

Matching Fund Reduction

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

Timelines

Contract Execution

Milestone	Projected Date
Contract Execution	12/31/2018

Design Completion

Milestone	Projected Date
100% Design	09/30/2019

Design Development

Milestone	Projected Date
Preliminary Design Report	04/30/2019

Data Collection Assessment:

☒ Land Survey ☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name Study - Lake Tarpon Outfall Canal Feasibility Study
Project Number Q029
Cooperator City of Oldsmar
Department Public Works
Contact Person Felicia Donnelly
Address 300 Commerce Blvd.
City Sate Zip Oldsmar, FL 34677
Phone # 813-749-1261
Email FDonnelly@myoldsmar.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:

Specific Project Description:

The City of Oldsmar and the Southwest Florida Water Management District ("District")desires that the City of Oldsmar evaluate management needs and requirements for flood protection and water quality on the remaining undeveloped areas of the Project by conducting a feasibility analysis that will identify and quantify the acres and area requirement for future dredging of the Lake Tarpon Outfall Canal ("Canal") and any SWIM opportunities that may exist. The project limits include the Canal from its intersection with McMullen Booth Road (PC611)/Tampa Road (PC 752) to its intersection with Tampa Bay, and the adjoining properties as demonstrated in the attached map located in the municipal limits of the City of Oldsmar. The feasibility study will explore detailed future activities needed to enhance the efficiency of the Lake Tarpon Outfall Canal including the extent of future improvements (possible dredging), the determination of volume and disposal method of any excavated materials, and any other improvements to enhance capacity, water quality and natural systems.

This project is a single phase project, and is located in the Tampa Bay/Anclote River Watershed.

The Lake Tarpon Outfall Canal was constructed to provide a surface outlet for conveying flood waters from Lake Tarpon to Old Tampa Bay. The District initiated the acquisition of the lands in 1965 as part of the Four Rivers Basins, Florida Project Plan. The Four River Basins, Florida Project Plan was a federal flood control project initiated after severe flooding was experienced in 1960 attributed to Hurricane Donna. To date, The District has acquired approximately 241 acres which include 121 acres in fee title and 120 acres in easement. Project lands include the right-of-way for a 3.5 mile Canal as well as additional lands beyond the right-of-way boundary. An operable control structure for regulating the water level (S-551) is located within the Canal. Lands within the Project meet the District's flood protection and water quality area of responsibility.

Consistent with the Four River Basins objective, the U.S. Army Corps of Engineers required that the water management and flood control project for Lake Tarpon be multi-purpose and offer outdoor recreation opportunities to the public. The City of Oldsmar and the District entered into interlocal agreements for the development of recreational opportunities on 12/5/1978, 3/4/1981 and 8/18/1987 as indicated on the attached copy of the 1987 agreement. The City of Oldsmar has historically partnered with the District on all recreation opportunities at the Oldsmar Sports Complex (formerly Canal park) and on other Project lands to ensure compliance with the Four River Basins objectives.

Benefit:

The project will provide a measurable benefit of the completion of the feasibility study which will identify and quantify the acres and area requirement for future dredging of the Lake Tarpon Outfall Canal ("Canal") and any SWIM opportunities that may exist.

Cost:

The feasibility study is estimated to cost $400,000 to be split in equal portions by SWFWMD and the City of Oldsmar.

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

The City of Oldsmar has a history of being progressive in terms of development, implementation of water conservation. water quality and flood protection. Some of the efforts, include but are not limited to:

- The City of Oldsmar provides continual public education efforts including the annual Mayor's Water Challenge, annual Water Conservation Water Challenge, celebration of Water Conservation month, and many more efforts.
- Oldsmar's potable water rates have an "inverted structure" (lower rates for lower usage) to encourage the most efficient use of City's water infrastructure and discourage unnecessary or wasteful use of resources.
- The City has a reclaimed water system available to offset potable water use for non-potable uses in many areas of the City, and provides a financial incentive for its use.
- The City of Oldsmar participates in the Community Rating System (CRS), a voluntary program for participating communities. The goals of the CRS are to encourage a comprehensive approach to flood plain management and reduce flood damage to insurable properties. Oldsmar Flood Control, Stormwater Management and Wetland Protection ordinance are enacted and can be foundin Article VI of the City of Oldsmar Land Development Code (Sections 6.1 - 6.26) (See attached)

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			200,000		200,000
General Fund-District Wide			200,000		200,000
Total			400,000		400,000

Matching Fund Reduction

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

Timelines

Consultant Selection

Milestone	Projected Date
RFP process	01/01/2019

Data Collection and Evaluation

Milestone	Projected Date
Completion of data collection and evaluation	06/01/2019

Draft Documents

Milestone	Projected Date
Completion of draft documents	07/01/2019

Final Document

Milestone	Projected Date
Final Document	09/01/2019

Project Development

Milestone	Projected Date
Project Development - Scope Preparation	10/31/2018

Data Collection Assessment:

☒ Aerial Imagery ☒ Mapping/GIS data

☒ Sediment

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	Immediate Maintenance - Plantation Palms
Project Number	Q033
Cooperator	Pasco County
Department	Stormwater Management
Contact Person	David Sua
Address	4454 Grand Blvd
City Sate Zip	New Port Richey, FL 346525402
Phone #	727-834-3611 ext3611
Email	dsua@pascocountyfl.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 project is for consideration restoring and stabilizing an approximately 900-foot segment of the existing Plantation Palms major drainage flow-way, under the "Immediate Maintenance of Intermediate Level Systems" guidelines of the Southwest Florida Water Management District's Cooperative Funding Initiative guidelines, as described on pages 33 and 34 of the Fiscal Year (FY) 19 Cooperative Funding Initiative Guidelines. The Plantation Palms drainage ditch lies between the District permitted Plantation Palms residential community to the south, and the older Lake Padgett Estates to the north. The ditch is approximately 5,010 feet long, with a top width that varies from 50 to 60 feet. Flow enters the ditch from culverts under Collier Parkway, at the Parkway Boulevard intersection, and continues easterly between the two residential communities for terminal discharge into a large Class I wetland system east of the two development.

On July 5, 2017, the Plantation Palms Homeowners Association requested and received a SWFWMD Emergency Field Authorization (EFA) to repair and restore the southern side slopes and residential back yards of 11 residential lot (Nos. 597 through 603), abutting the south side of the ditch. Before restoring the ditch banks as shown on the SWFWMD approved EFA plans, additional slope failure occurred along the north ditch (as well as the south ditch) slopes, during Hurricane Irma. The exacerbated slope failure is threatening private property as well as human life and safety in Lake Padgett Estates as well as in the Plantation Palms residential community. Subsidence on the Lake Padgett Estates lots averages approximately 18 to 24 inches deep. This portion of the ditch behind the Lake Padgett Estates homes is outside the Emergency Field Authorization. The District EFA is authorized for only 90 days, and has now expired. However, staff has spoken with District Environmental Permit Review and Compliance officials who have indicated that issuance of an exemption from Environmental Resource Permitting will not be a problem since routine custodial maintenance of drainage facilities such as this one, is exempt by Rule. Pasco County will therefore secure a District Exemption from Environmental Resource Permitting. This "immediate maintenance" project qualifies for the maintenance funding exception of the Cooperative Funding Initiative because it is **urgent in nature and will address significant immediate flood risk to habitable structures and the County is unable to complete the work in the short term without District's assistance**. The project also qualifies for an Environmental Resource Permit Exemption, as noted above, and the exemption will be secured.

Benefit:

The singular benefit of this project is to prevent possible loss of life and damage to 17 residential dwellings on parcels that abut the Plantation Palms ditch, as well as to maintain a free-flowing large drainage flow-way. Without the project, catastrophic failure could occur in the ditch, resulting in possible loss of life and property, and flooding on a large scale, if the flow-way were totally blocked.

Even if no loss of life occurred, and only the 17 homes collapsed into the ditch, there would be property loss of $4,218,931.00 (homes); not including the cost of emergency response, temporary housing to relocate citizens, and flood damage to several homes.

Cost:

The cost of restoring and correcting the failing ditch slopes is estimated to be approximately $2,051,190.00. The cost of replacing the 17 homes is approximately $4,218,931.00, using the "just value" estimates of the Pasco County Property Appraiser. The estimated B/C ratio is greater than 1.

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water; curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed water is $0.32 per 1,000 gallons and $14.72 per month for residential irrigation. Pasco County's potable water rates are applied in a water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			1,025,595		1,025,595
Hillsborough River			1,025,595		1,025,595
Total			2,051,190		2,051,190

Matching Fund Reduction

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

Timelines

Plantation Palms

Milestone	Projected Date
Contract Consultant	10/02/2019
Engineering and Design	12/20/2019
Start Construction	02/02/2020
End Construction	05/30/2020
Asbuilt Submittal	06/15/2020

Data Collection Assessment:

☒ Land Survey

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	WMP - Brooker Creek Watershed Management Plan Update
Project Number	Q034
Cooperator	Pinellas County
Department	Public Works
Contact Person	Paul Miselis
Address	22211 Us Highway 19 North
City Sate Zip	Clearwater, FL 33765
Phone #	727-646-8921
Email	pmiselis@pinellascounty.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:

The project involves the development of a comprehensive watershed management plan (WMP) that results in recommendations for drainage, water quality and natural systems improvement projects.

The Brooker Creek Watershed covers approximately 15.6 square miles in northeastern Pinellas County. It also extends into Hillsborough and Pasco. The majority of current land use within the Brooker Creek Watershed is rural and agricultural; however, increasing percentages of the land area are planned for residential community development, mainly concentrated around the lake chains of the upper portion of the watershed in Hillsborough County and in the lower portion of the watershed in Pinellas County. This area has experienced significant hydrologic changes due to rapid growth. These changes have resulted in impacts to flood protection, water quality and natural systems. The morphology of the area changes from a lake dominated landscape in Hillsborough County to an upland forest and wetland-dominated landscape in Pinellas County. The watershed contains 37 named lakes, multiple wetlands and Brooker Creek, which is the primary tributary to Lake Tarpon, a SWIM priority water body.

In 2010, Pinellas County completed a WMP for Brooker Creek, which included recommendations for BMPs to improve water quality and flooding issues. Hillsborough County and SWFWMD has recently completed an update to the watershed management plan for the Hillsborough portion of Broker Creek. The Pinellas County project would provide a new WMP in Pinellas portion of the Brooker Creek watershed.

Benefit:

This project involves the development of a comprehensive watershed management plan that results in BMP recommendations for flood protection, water quality, and natural system improvement projects in the contributing watershed.

Cost:

This request is for the first year of a three-year project whose total project amount is estimated to be $900,000.

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

The Surface Water Element of the County's Comprehensive Plan (CP) obligates the County to protect, enhance, and improve water quality through water quality monitoring, watershed management plan development, and environmental enforcement.

Pinellas County is dedicated to improving flood protection as documented in the CP. The County has a fertilizer ordinance which restricts using products containing nitrogen or phosphorus during the wet season with a related sales ban, a pet waste ordinance, and street sweeping program all designed to reduce nutrient pollution to receiving waters. The County also recently adopted a stormwater utility that collects fees to fund surface water programs which includes stormwater maintenance and related public outreach and education programs.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			75,000	375,000	450,000
Pinellas Anclote			75,000	375,000	450,000
Total			150,000	750,000	900,000

Matching Fund Reduction

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

Timelines

Procurement	01/31/2019
Project Development	03/31/2019
Watershed Evaluation	09/01/2019
Floodplain Analysis	05/01/2020
FPLOS and BMP Alternatives Analysis	11/01/2020
SWRA and BMPs for Water Quality	06/01/2021

Data Collection Assessment:

☒ Groundwater or Surface Water Level measurements	☒ Surface Water Flow (Discharge) measurements
☒ Groundwater or Surface Water Quality measurements	☒ Rainfall or Other Meteorological measurements
☒ Land Survey	☒ LIDAR/Elevation data
☒ Aerial Imagery	☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Flood Protection - Bartlett Park Park and 7th Street South Stormwater Improvements
Project Number	Q036
Cooperator	City of St. Petersburg
Department	Engineering Stormwater
Contact Person	Carlos Frey
Address	One 4th Street N.
City Sate Zip	Saint Petersburg, FL 337013804
Phone #	727-892-5380
Email	carlos.frey@stpete.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:

This project is to implement the design and construction for stormwater improvements at Bartlett Park, and along 7th Street South from 18th Avenue South to 22nd Avenue South. The project provides for drainage improvements that will alleviate flooding within the neighborhood west of Bartlett Park and within Bartlett Park. The existing stormwater system is undersized and is negatively affected by regional tailwater conditions, resulting in frequent flooding within the neighborhood. The proposed drainage improvements includes low-impact development (LID) elements, a nutrient separating baffle box, and increased conveyance capacity via enlarged piping and natural swales. The project will implement Complete Streets concepts (includes LID, green infrastructure, bicycle paths, etc.).

Benefit:

St. Petersburg's low-lying terrain combined with high intensity, short duration storm events overload the City's existing drainage system. This causes street flooding resulting in residents suffering inconveniences and, in some cases, property damage. The new conveyance system will meet the City's level-of-service (LOS) goal which is a 10-year storm event and reduce peak stages during the 100-year, 24 hour design storm event. The total present value of future benefits for this project is approximately $2,550,000.

Cost:

The total Applicant share of the project is $1,150,000, and the District share is also $1,150,000. The breakdown of the total project cost of $2,300,000 is as shown in the attached documents.

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

Numerous educational outreaches have been initiated by the city related to water conservation including school presentations taught at St. Petersburg's public and private schools. The City's web site incorporates the Water Resources Water Conservation site that includes information about indoor and outdoor conservation, water use calculations, water wise awards, conservation resources and youth education resources. The Water Conservation site also includes information about sprinkling restrictions and

water and waste water maintenance contact information. Lawn watering restrictions have been established through City Ordinance 842-F and 178-G. A new Water Efficient Landscape Ordinance (Chapter 16 of the City Code) was adopted by City Council in 2002.

The City has used reclaimed water for irrigating lawns and landscaped areas since 1977 which has significantly lowered potable water demands.

The City Administration has been proactive in the development of ordinances vital to achieving the desired objective of management of water resources and flood protection. Ordinance No. 2017-F and 147-G regulates the control and management of drainage and surface waters in harmony with the City Comprehensive Plan and SWFWMD regulations. Building developments are regulated in terms of the quantity and quality of stormwater runoff. Water pollution protection is provided by Ordinance 16-311, which identifies unlawful discharges into the public drainage system and provides for prosecution of violators. The City of St. Petersburg participates in the National Flood Insurance Program (NFIP). In order to qualify for the program the City adopted and enforces Article VII Flood Damage Prevention (City Code Sec. 16-376 through Sec. 16-433) to regulate development in the flood hazard areas. The basic objective of the ordinance is to ensure that such development will not aggravate existing flood conditions and to verify that new buildings will be protected from damage. The City's current Community Rating Score (CRS) is a 5 (per FEMA, October 1, 2016, https://www.fema.gov/media-library/assets/documents/15846).

The City of St. Petersburg currently collects a stormwater fee.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			122,500	1,027,500	1,150,000
Pinellas Anclote			122,500	1,027,500	1,150,000
Total			245,000	2,055,000	2,300,000

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
Commence Construction	10/01/2019
Complete Construction	10/01/2020

Design

Milestone	Projected Date
Commence Design	11/30/2018
Complete Design	09/02/2019

Data Collection Assessment:

☒ Land Survey

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Flood Protection - Grand Boulevard Stormwater Improvement
Project Number	Q038
Cooperator	New Port Richey
Department	Department Of Public Works
Contact Person	Brent Heath
Address	10503 Cyndee Lane
City Sate Zip	Odessa, FL 33556
Phone #	352-642-4412
Email	Brent@StroudEngineering.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 Grand Boulevard Project is planned as a stormwater pipe replacement and increase in size of the existing stormwater drainage pipe under Grand Boulevard, just south of Homecrest Boulevard. The overall drainage basin (System # 26 and 27 of the City of New Port Richey's 2013 Stormwater Master Plan) is approximately 372 acres. The drainage pipe will be increased to a 48-inch diameter pipe to allow greater drainage and decrease the flooding issues of the upstream stormwater basin during rainfall events.

This is one project of several that are planned, in design, or under construction to improve the drainage and treatment of stormwater during normal and high peak events. For the fiscal year of 2019, there are several projects including Grand Boulevard slated to be designed and completed by the City of New Port Richey. For the fiscal years of 2019-2021, there are additional larger projects that are slated to be designed and completed by the City of New Port Richey. The Grand Boulevard Project is one of many projects that will make a regional impact in flood protection and water quality improvements with the Pithlachascotee River basin.

Benefit:

This project will decrease localized flooding by approximately 2-feet for the mean annual through the 100-yr/24-hr storm events and will provide additional conveyance for future improvements proposed by Pasco County upstream of the Grand Boulevard culvert.

Cost:

The total cost for the design, permitting and construction of the proposed stormwater improvements is $116,500. The design, permitting, and construction services cost is estimated to be $12,500, and the pipe, inlet, and end section construction is estimated to be $104,000.

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

The City has maintained an active stormwater utility since 2001, with annual fees collected once a year through the ad valorem process. Other complementary efforts include a street sweeper program, fertilizer ordinance (FDEP model ordinance adopted in 2013), and an active education stormwater outreach program required by the City's current NPDES permit.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			58,250		58,250

Coastal Rivers	58,250	58,250
Total	116,500	116,500

Matching Fund Reduction

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

Timelines

Design and Permitting	01/01/2019
CEI	07/01/2019
Construction	07/01/2019

Data Collection Assessment:

☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name Conservation- New Port Richey Toilet Rebate - Phase 5
Project Number Q041
Cooperator New Port Richey
Department Department Of Public Works
Contact Person John Mckeon
Address 9748 Decubellis Rd
City Sate Zip New Port Richey, FL 34654
Phone # 727-841-4570
Email mckeonj@cityofnewportrichey.org

Project Type:

[X] Water Supply [ ] Water Quality [ ] Flood Protection [ ] Natural Systems

Strategic Initiatives:

[ ] Water Quality Maintenance and Improvement
[ ] Water Quality Monitoring
[ ] Alternative Water Supply
[X] 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 [X] Pasco [ ] Pinellas [ ] Sarasota [ ] Sumter [ ] Polk

Project Description/Benefit/Cost

Description:

This is a fifth time funding request for a toilet rebate program that offers financial incentives to water customers within the City's utility service area to replace high volume toilets (3.5 gpf or greater) with high efficiency models (HET) to save potable water. The 2019 project proposes to replace and rebate up to 80 toilets through an outside consultant. Depending on the programs success, the Public Works Department may continue this program for additional years. The District's 50 percent share will come from the Basin Board's CFI. The City of New Port Richey's share is $7,470. In a 2005 public opinion survey conducted by Tampa Bay Water, about 60% of residents surveyed said they would be willing to participate in a rebate program for HET's. The City continues to provide utility customers with low flow shower heads and replacement toilet flappers and has now distributed more than 850 shower heads and flappers in the past 9 years. The HET program will be part of the City's overall 5 year Water Conservation Plan.

Benefit:

The benifit is a possible savings of 1,014 gpd and 370,250 gallons annually

Cost:

The cost for this benifit is $1.57 per thousand gallons

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

The City of New Port Richey adopted Ordinance 1936 to protect water supplies from inefficient use at all times and over utilization during periods of water shortage by assisting the Southwest water Management District in the implementation of it's year round water conservation measures and water shortage plan. Every Police Officer and Deputy Sheriff having jurisdiction in the area governed by this article shall diligently enforce the provisions of this article. The City Manager may also designate responsibilities to agencies and departments of the City of New Port Richey government in accordance with state and local law. Violations of this article shall be subject to penalties of $155 for the first violation , $310 for the second violation and a fine not to exceed $500 and/or imprisonment in the local jail, not to exceed 30 days. The City Council has also determined that the use of reclaimed water is necessary and in the best interests of the City and the City's utility service area. For the past 14 years, 100% of the City's wastewater was reused.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share	142,170	7,470	7,470	7,470	164,580

Coastal Rivers	142,170	7,470	7,470	7,470	164,580
Total	284,340	14,940	14,940	14,940	329,160

Matching Fund Reduction

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

Timelines

October 1, 2019

Milestone	Projected Date
Piggyback on Pasco County consultant	10/05/2017

Data Collection Assessment:

☒ No data will be collected for this project

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Flood Protection - PHSC Berm/Boggy Creek
Project Number	Q042
Cooperator	Pasco County
Department	Design Stormwater Management
Contact Person	Pasco County Public Works Department
Address	7536 State Street, Suite 140
City Sate Zip	New Port Richey, FL 34654
Phone #	727-847-8143
Email	mgarrett@pascocountyfl.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:

The Boggy Creek system receives stormwater from Crane's Roost, Lake Worrell Acres, Crescent Forest and Bass Lake Estates neighborhoods in major storm events . These areas have experienced major flooding in recent and historical storm events. The intent of this project is to evaluate the existing stormwater system and identify opportunities to improve drainage conveyance in the system. Items that will be considered are expanding the capacity for the existing drainage system as well as potentially creating new conveyance paths near the Hidden Lake Airport and behind the Pasco Hernando Community College on Ridge Road where the existing berm will be breached with a drop structure. This will allow the upstream waters to be conveyed more directly to Boggy Creek thus relieving the flooding in the Lake Worrell system.

Benefit:

Reduced flooding in the Lake Worrell system. The Benefit Cost Analysis Ratio is estimated to be 1.25.

Cost:

Design and Permitting: $250,000
Construction: $3,000,000
Total Cost: $3,250,000

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

Pasco County's reclaimed water system includes metering and incentive based reuse rate structures for high volume water users and has pro-active reclaimed water expansion policies which maximize utilization, water resource benefits, and environmental benefits. Pasco County adopted Ordinance 01-08 requiring the following: one day/week irrigation restrictions for potable water; curtailed use of potable water for irrigation when rain has occurred within 24 hours; scheduled availability and restricted use of reclaimed water irrigation to distribute limited supply to as many customers as possible; washing of non-business, personal vehicles only using low volume methods and over non-impervious surfaces; prohibiting aesthetic uses of water unless such use also provides a necessary aeration or water quality benefit; and the use of reclaimed water for road construction activities when available. Enforcement of this ordinance is by designated County personnel and law enforcement officers. During Water Year 2015, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2017, the bulk rate charged for the use of reclaimed

water is $0.32 per 1,000 gallons and $14.72 per month for residential irrigation. Pasco County's potable water rates are applied in a water conservation inclining block rate. County Ordinance 93-16 requires each new development to construct a reclaimed water distribution system as a condition of wastewater service when the development is within designated areas in the Reclaimed Water Master Plan and when providing the development with reclaimed water supply is determined in the best interest of the County. Pasco County participates in the National Flood Insurance Program, administered through FEMA. All finished floor elevations are required to be above the 100-year flood elevation. These elevations are reviewed prior to construction and certified after construction. Fill Ordinance, adopted in March 2005, requires permit applications and review for placement of fill greater than 5 CY on properties.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			125,000	1,500,000	1,625,000
Pinellas Anclote			125,000	1,500,000	1,625,000
Total			250,000	3,000,000	3,250,000

Matching Fund Reduction

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

Timelines

PHSC Berm/Boggy Creek

Milestone	Projected Date
Commence Design and Permitting	10/01/2018
Complete Design and Permitting	03/01/2019
Commence Construction	12/01/2019
Complete Construction	03/01/2020

Data Collection Assessment:

☒ Land Survey

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Water Quality - Beach Street Stormwater System Improvements
Project Number	Q045
Cooperator	New Port Richey
Department	Department Of Public Works
Contact Person	Brent Heath
Address	10503 Cyndee Lane
City Sate Zip	Odessa, FL 33556
Phone #	352-642-4412
Email	Brent@StroudEngineering.com

Project Type:

[ ] Water Supply [X] Water Quality [X] Flood Protection [ ] Natural Systems

Strategic Initiatives:

[X] Water Quality Maintenance and Improvement
[ ] Water Quality Monitoring
[ ] Alternative Water Supply
[ ] Conservation
[ ] Reclaimed Water
[ ] Regional Water Supply Planning
[X] 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 [X] Pasco [ ] Pinellas [ ] Sarasota [ ] Sumter [ ] Polk

Project Description/Benefit/Cost

Description:

The Beach Street Stormwater Improvements Project is planned as a stormwater conveyance system to collect stormwater from several sub-basins and direct the flow to a new outfall to the Pithlachascotee River in the City of New Port Richey. The new stormwater collection system will be installed along Beach Street from High Street to the river. New stormwater inlets will be constructed at the intersection of High Street and Maple Street, High Street and Beach Street, and Beach Street and Meadowlane Street. A Continuous Deflective Separator Unit will be installed prior to the outfall at Executive Drive. The overall drainage basin (system # 126 of the City of New Port Richey's 2013 Stormwater Master Plan) is approximately 35.4 acres. The new collection system will receive flows from an estimated area of 13.12 acres during rainfall events.

This is one project of several that are planned, in design, or under construction to treat stormwater during normal and high peak events. For the fiscal year of 2019, there are several projects including Beach Street slated to be designed and completed by the City of New Port Richey. For the fiscal years of 2019-2021, there are additional larger projects that are slated to be designed and completed by the City of New Port Richey. The Beach Street Project is one of many projects that will make a regional impact in flood protection and water quality improvements within the Pithlachascotee River basin.

Benefit:

This collection system will reduce street and residential property flooding in the drainage basin at the High Street and Maple Street intersection and increase the runoff capacity of the stormwater system by capturing runoff during rain events. The water quality benefit of the construction of the proposed CDS Unit includes the capture of suspended sediment, nutrients and floating debris, such as litter and trash, entrained in the stormwater runoff. It is estimated that close to 104,000 lbs of total suspended solids will be removed over a period of 20 years with the construction of this CDS Unit.

Cost:

The total cost for the design, permitting and construction of the proposed stormwater system improvements is $708,800. The design and permitting cost is estimated to be $66,500, and the project construction is estimated to be $642,300.

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

The City has maintained an active stormwater utility since 2001, with annual fees collected once a year through the ad valorem process. Other complementary efforts include a street sweeper program, fertilizer ordinance (FDEP model ordinance adopted in 2013), and an active education stormwater outreach program required by the City's current NPDES permit.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			354,400		354,400
Coastal Rivers			354,400		354,400
Total			708,800		708,800

Matching Fund Reduction

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

Timelines

Design and Permitting	03/01/2019
Bid and Contractor Selection	05/01/2019
CEI	03/01/2020
Construction	03/01/2020

Data Collection Assessment:

☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Water Quality - Town of Belleair Palmetto Rd. BMPs
Project Number	Q046
Cooperator	Town of Belleair
Department	Public Works
Contact Person	Albert Carrier
Address	565 S. Hercules Ave
City Sate Zip	Clearwater, FL 33764
Phone #	727-822-4151 ext213
Email	al@deuelengineering.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 goal of this project is an implementation of the Best Management Practices (BMPs) element for Palmetto Rd. BMPs project. This urban watershed covers an area of 20.9 acres that discharges into Clearwater Harbor South WBID# 1528 and is part of Outstanding Florida Waterbody (OFW) Pinellas Aquatic Preserve (AP) per FDEP 303(d), Clearwater Harbor South is a Class 3M Estuary impaired for mercury. This project is currently in the conceptual design phase.The Palmetto Rd. BMPs is located along Palmetto Rd., Bay View Dr., Country Club Rd, and Cardenia St. servicing a residential neighborhood in Belleair and currently provides no water quality treatment of the stormwater runoff. Significant quantities of vegetative matter, debris, and sediments are carried by stormwater and discharged through the existing outfall located on Palmetto Rd. This project will construct a new stormwater system and upsize existing stormwater inlets and pipes to meet the 10-year Town of Belleair design standards. To improve water quality a second generation nutrient separating baffle box will be installed to collect debris and sediments so the materials can be vacuumed and hauled off site for disposal.

Benefit:

The project will alleviate flooding problems on a “local” level as defined in the FY 2019 CFI Guidelines. A baffle box will reduce total suspended solids (TSS). The estimated average removal efficiency of pollution reduction for a 2nd generation nutrient separating baffle box is 66% for total-suspended solids. The removal efficiencies are shown below:TSS will have a total reduction of 66% from 8,028 lb/yr to 2,729 lb/yr.*Numbers were derived using EPA STEPL

Cost:

The total cost for this project is estimated to be $4,000,000 based on similar previously completed projects in the Town of Belleair. The Town of Belleair (Cooperator) share will be $2,000,000 and the Southwest Florida Water Management District (District) share will be $2,000,000 for the fiscal year 2019 through 2021 budget for the design and construction of this project. The estimated quarterly expenditure for the life of the project is as follows: FY2019 Q1 = $90,000; FY2019 Q2 = $156,000; FY2019 Q3=$108,000; FY2019 Q4=$16,000; FY2020 Q1= $10,000; FY2020 Q2 = $1,086,000; FY2020 Q3 = $1,086,000; FY2020 Q4 = $1,086,000; FY2021 Q1= $181,000; FY2021 Q2 = $181,000.Project CostThe design and construction cost total $575,000 and $3,425,000 respectively. 30% contingency is currently proposed due to the uncertainty in design and materials cost. The total project cost is $4,000,000. Please see attached cost estimate for a detailed breakdown.Cost EffectivenessTSS will remove 105,980 lbs over a 20 year period for a cost per lb of TSS removed of $19.*Calculation: (District Share)/[(Existing lb/yr - Proposed lb/yr)*(20 yrs)]

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

Water Conservation Effort
The Town of Belleair has adopted water conservation rate structures, promotes water conservation through education, implementation of a lawn and landscape watering schedule, water usage monitoring through AquaHawk Alerting, and has adopted the District’s Water Shortage Language.
Flood Protection

The Town of Belleair is actively pursuing participation in the Community Rating System (CRS) - an incentive program that encourages community floodplain management activities that exceed the minimum National Flood Insurance Program's (NFIP) requirements. The Town also provides education through the Town website directing residents to various FEMA websites and Pinellas County programs including the Pinellas County Storm Surge Protector Application and Pinellas County Local Mitigation Strategy.

Additional Complimentary Efforts

The City’s additional complimentary efforts include operating a stormwater maintenance program with stormwater utility fee, street sweeping program for its local roadways, and active education campaign on stormwater (drain labels, etc.).

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			185,000	1,815,000	2,000,000
Pinellas Anclote			185,000	1,815,000	2,000,000
Total			370,000	3,630,000	4,000,000

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
Commence Construction	03/01/2021
Substational Completion	01/01/2022
Construction Complete	03/01/2022

DESIGN

Milestone	Projected Date
Consultant Notice to Proceed	10/01/2019
Survey Complete	12/01/2019
Geotechnical Investigation Complete	12/01/2019
30% Design Complete	02/01/2020
60% Design Complete (Include draft RFB)	04/01/2020
90% Design Complete (includes final RFB)	07/01/2020
Subsurface Utility Locates Complete	07/01/2020
Final Design Complete	10/01/2020
Operation and Maintenance Plan Complete	10/01/2020

PERMITTING

Milestone	Projected Date
Pre-application Meeting(s) Complete	03/01/2020
Draft Permit Applications Complete	04/01/2020
Permit Submittal (Complete)	07/01/2020
Final Permit Applications Complete	07/01/2020
Response to RAI Complete	09/01/2020
Permit Issued Complete	10/01/2020

REQUEST FOR BIDS (RFB) ADVERTISEMENT AND AWARD

Milestone	Projected Date
RFB Advertisement Complete	10/01/2020
RFB Evaluation and Award	01/01/2021
Contractor Notice to Procced	02/01/2021

Data Collection Assessment:

☒ Groundwater or Surface Water Level measurements ☒ Land Survey

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	FY2019 Tampa Bay Environmental Restoration Fund
Project Number	W024
Cooperator	TBEP
Department	Executive
Contact Person	Maya Burke
Address	263 13th Avenue S., Suite 350
City Sate Zip	St. Petersburg, FL 33701
Phone #	727-893-2765
Email	mburke@tbep.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:

This project is for Year 7 of the highly successful Tampa Bay Environmental Restoration Fund (TBERF) to fund restoration, applied research and education initiatives in Tampa Bay and its contributing watershed, consistent with the District's core mission and priorities expressed for the Tampa Bay Planning Region. TBERF is a competitive grant fund open to public entities (including SWFWMD) and NGOs, with project awards from $25,000 to $200,000 to support habitat restoration, water quality improvement and environmental education. Project proposals will be solicited through a widely-distributed Request for Proposals early in 2019, following execution of the contract between SWFWMD and TBEP. Eligible proposals are reviewed by a Proposal Review team, consisting of scientists, resource managers and restoration practitioners who provide their findings to the TBEP Executive Director. The TBEP Policy Board (which includes a District Governing Board member) approves the final list of projects to be funded in May 2019. All funded projects will be initiated by September 2019, and are generally 1-3 years in duration. In the first five years (2013-2017), SWFWMD CFI funds were matched with other public and private sources to provide $3.7M for 43 competitively-awarded projects. $1.2M has been awarded to eight different District projects for the same period.

Benefit:

The TBERF request presents an opportunity to leverage SWFWMD funds with other public and private partners in the Tampa Bay area and funds from outside Florida to directly address SWFWMD core mission objectives. In the first five years (2013-2017), SWFWMD CFI funds were matched with other public and private sources to provide funds for 43 competitively-awarded projects, resulting in measurable environmental benefits including: 7,500 acres of planned or restored coastal habitat; more than 15,000 square feet of oyster reefs; 200 acres of seagrass; Florida-Friendly Landscaping; natural resources and nutrient management education; assessment of fish habitat, harmful algal blooms, hard bottom substrate, remote sensing technology, existing habitat value of dredged holes in Tampa Bay, carbon sequestration in coastal habitats, and microplastics abundance; treatment of urban runoff from 500 acres of highly urbanized areas; and waterbird management on 13 Tampa Bay island sanctuaries. Projects selected for the sixth year of the TBERF grant program (projects are scheduled to be selected in spring 2018) will have similar requirements to provide significant measurable environmental benefits consistent with the District's core mission, strategic initiatives and regional priorities.

Cost:

The Tampa Bay Estuary Program will continue to act as the local sponsor for the FY2019 TBERF. The non-profit Restore America's Estuaries (RAE), a 501(c)(3), will act as our national partner, and brings the ability to leverage local funds with funds obtained through appropriations, environmental fines and philanthropic gifts from entities beyond the Tampa Bay area. For FY2019, the CFI

request of $350,000 is expected to be met with funds from Hillsborough County, Pinellas County, The Mosaic Company Foundation, Manatee County, TECO, FDOT, and USFWS at a minimum. It is anticipated that additional funds will be raised from other local and national sources.

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

Generally, this category does not apply to the Tampa Bay Estuary Program. However, TBEP does have a Comprehensive Conservation and Management Plan (CCMP), approved by federal, state and local governments (including SWFWMD), that lays out a detailed road map for Tampa Bay restoration and recovery. This Plan includes measurable goals and strategic initiatives for Tampa Bay and its contributing watersheds. Implementation of the CCMP by TBEP partners, in particular SWFWMD, has led to the most successful estuary restoration effort in the country. The CCMP also addresses water conservation and management issues.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Alafia River		100,000	100,000		200,000
Applicant Share		350,000	350,000		700,000
Hillsborough River		100,000	100,000		200,000
Pinellas Anclote		150,000	150,000		300,000
Total		700,000	700,000		1,400,000

Matching Fund Reduction

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

Timelines

RFP Advertisement	02/28/2019
RFP Evaluation and Award	05/31/2019
Notice to Proceed Issued to Contractors	09/30/2019
FY19 Projects Closed Out/Measurable Benefits Acheived	09/30/2022

Data Collection Assessment:

☒ Other data collection: TBERF projects may include data collection, which will be made available to the District.

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	Restoration - Roosevelt Creek Channel 5 Improvements
Project Number	W214
Cooperator	Pinellas County
Department	Public Works
Contact Person	Josie Benwell
Address	22211 Us Hwy 19 N.
City Sate Zip	Clearwater, FL 33765
Phone #	727-464-3519
Email	jbenwell@pinellascounty.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:

This project involves the construction of improvements to Roosevelt Creek Channel 5, which flows to Old Tampa Bay, a SWIM priority waterbody, including: reconfiguration of an existing salinity barrier to allow for fish/biota passage and more natural hydrologic flow, removal of exotic/invasive vegetation and re-establishment with native species, limited bank stabilization, removal of accumulated sediments within the channel from Executive Drive north to the existing salinity barrier, and creation of a sediment sump (if found feasible during final design process). Design, permitting, development of construction documents and bidding are being funded by the County. The construction and CEI work is to be cooperatively funded. The project was previously part of a tri-party agreement between SWFWMD, TBEP, and Pinellas County under the project ID W203.

Benefit:

Allowance of fish/biota passage; creation of more natural hydrologic flow; habitat restoration (removal of exotics/invasives, mostly Brazilian pepper, and reestablishing with mangroves, and planting the channel banks immediately upstream of the weir location with native species) in vicinity of the barrier; reduction in roadway flooding for the 25 year storm and 100 year storm; reduced flood elevations for 13 structures for the 100 year storm.

Cost:

$715,142. This amount was based on the opinion of probable costs for recommended alternative 2 from the 2016 PER conducted by AECOM (see documents tab for associated attachments) and is subject to the possibility of change as final design and permitting progresses.

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

The Pinellas County Comprehensive Plan obligates the County to protect, enhance, and improve water quality through water quality monitoring, watershed management plan development, implementation of projects, and environmental enforcement. In addition, the County is obligated by the Comprehensive Plan to work to improve flood protection and natural systems. The County has a fertilizer ordinance which restricts using products containing nitrogen or phosphorus during the rainy season with a related sales ban, a pet waste ordinance, and a street sweeping program all designed to reduce nutrient pollution to receiving waters. The County also has adopted a stormwater assessment that collects money to fund surface water programs which includes stormwater maintenance and related public outreach/education programs. In addition, many of our County vehicles are wrapped with stormwater education messages and professional landscape maintenance companies are required to take a BMP training certification course.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share			357,571		357,571
Pinellas Anclote			357,571		357,571
Total			715,142		715,142

Matching Fund Reduction

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

Timelines

Final Design & Permitting	07/31/2018
Anticipated Construction Commencement	10/01/2018

Data Collection Assessment:

☒ Land Survey ☒ Mapping/GIS data

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

FY2019 Cooperative Funding Initiative Application Form

Project Name	SW IMP - Water Quality - Roosevelt Stormwater Retrofit Project
Project Number	W305
Cooperator	Pinellas County
Department	Public Works
Contact Person	Josie Benwell
Address	22211 Us Hwy 19 N.
City Sate Zip	Clearwater, FL 33765
Phone #	727-464-3519
Email	jbenwell@pinellascounty.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:

Construction of stormwater retrofits to Roosevelt Creek Stormwater facility, including connection of a borrow pit to the existing stormwater treatment facility and expanding the borrow pit pond to include a littoral shelf/wetland treatment area to provide additional water quality treatment to the existing system. The retrofit proposes to increase the contributing area by 21 acres to include an area not currently receiving stormwater treatment and improve nitrogen removal in the existing pond system. Stormwater retrofits are estimated to remove an additional 157 pounds per year of Total Nitrogen from the water flowing into Roosevelt Creek, which outfalls to Tampa Bay, a SWIM priority waterbody. Design, Permitting, and construction are to be cooperatively funded (multi-year project).

Benefit:

Removal of an estimated 157 pounds per year of Total Nitrogen from water flowing into Roosevelt Creek which discharges to Tampa Bay, a SWIM priority waterbody. Retrofit is proposed to incorporate approximately 21 acres of urbanized watershed into the system.

Cost:

Estimated total cost of construction is $601,020, as determined by the Alternatives Analysis Report completed in 2016 (previously submitted to SWFWMD project manager). Design funds as estimated in the report were previously requested for FY18 and the contract with SWFWMD is currently under development - the funding table shows the full breakdown.

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

The Pinellas County Comprehensive Plan obligates the County to protect, enhance, and improve water quality through water quality monitoring, watershed management plan development, implementation of projects, and environmental enforcement. In addition, the County is obligated by the Comprehensive Plan to work to improve flood protection and natural systems. The County has a fertilizer ordinance which restricts using products containing nitrogen or phosphorus during the rainy season with a related sales ban, a pet waste ordinance, and a street sweeping program all designed to reduce nutrient pollution to receiving waters. The County also has adopted a stormwater assessment that collects money to fund surface water programs which includes stormwater maintenance and related public outreach/education programs. In addition, many of our County vehicles are wrapped with stormwater education messages and professional landscape maintenance companies are required to take a BMP training certification course.

Funding Source	Prior Funding	FY2018 Budget	FY2019 Budget	Future Funding	Total Funding
Applicant Share		50,000	300,510		350,510
Pinellas Anclote		50,000	300,510		350,510
Total		100,000	601,020		701,020

Matching Fund Reduction

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

Timelines

Overall Project

Milestone	Projected Date
Permitting	11/30/2018
Design	12/31/2018
Bidding & Contract Award	04/30/2019
Construction and Construction Engineering Inspection (CEI)	12/31/2019
As-Built Survey, Record Drawings, and Substantial Completion	03/31/2020

Data Collection Assessment:

☒ Land Survey ☒ Mapping/GIS data

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