

*Fiscal Year 2021*  
Cooperative Funding Initiative Applications  
**Tampa Bay Region**

**Stewart Middle Magnet School Shoreline Restoration Project**

Managed by:  
The Southwest Florida Water Management District  
Surface Water Improvement and Management (SWIM) Program

Funded by:  
The Southwest Florida Water Management District SWIM Program  
The Hillsborough River Basin Board of the Southwest Florida Water Management District  
Hillsborough County Public Schools

The Pinellas County Environmental Fund Partners –  
Pinellas County and the National Oceanic and Atmospheric Administration

Designed by: Ecosphere Restoration Institute, Inc.    Constructed by: SWFWMD Operations Department

Southwest Florida Water Management District  
Hillsborough County  
ecosphere Restoration Institute, Inc.    Pinellas County    NOAA    Florida Department of Environmental Protection    WMD





## Coop Funding By Region For FY2021

### Tampa Bay Region

Project	Project Name	Project Cost
N748	SW IMP - Flood Protection - Dale Mabry Henderson Trunkline – Upper Peninsula Watershed Drainage Improvements	\$36,500,000
N773	SW IMP - Flood Protection - Cypress Street Outfall Regional Stormwater Improvements	\$34,516,215
N901	SW IMP - Port Richey Alternative Outfall	\$3,250,000
N904	WMP - City of St. Petersburg Watershed Management Plan	\$1,800,000
N949	Southeast Seminole Heights Flood Relief	\$23,500,000
N965	AWS - TBW Tampa Bypass Canal Gate Automation	\$393,800
N970	WMP - South Creek Watershed Management Plan	\$750,000
N993	WMP - Cypress Creek WMP Update	\$1,800,000
N995	WMP - Plant City Watershed Management Plan	\$1,300,000
N998	AWS - TBW Regional Treatment Facility Pumping Expansion	\$1,277,500
Q034	WMP - Brooker Creek Watershed Management Plan	\$900,000
Q053	Grosse Avenue Corridor Drainage Improvements	\$933,800
Q061	Study - TBW Regional Surface Water Treatment Plant Expansion Feasibility	\$325,000
Q063	Study - TBW Desal Facility Expansion Feasibility	\$2,450,000
Q083	WMP - Klosterman Bayou Watershed Management Plan	\$300,000
Q090	Study - Belleair Brackish Feasibility and Testing	\$1,763,350
Q115	WMP - East Pasco WMP Update	\$800,000
Q116	WMP - Roosevelt Creek Watershed Management Plan	\$800,000
Q130	Study-Nutrient Source Tracking	\$200,000
Q132	Countywide Floodway Update and Re-delineation	\$1,000,000
Q136	Starkey Stormwater Management Facility (M10)	\$500,000
Q140	Tarpon Springs Toilet Rebate Phase II	\$20,000
Q142	Chesnut Park Aquifer Storage and Recovery System	\$3,955,500
Q144	Two Rivers Reclaimed Water Transmission Main Extension	\$2,700,000
Q146	Southern Hillsborough County Booster Pump Station	\$4,050,000
Q147	Area 3 and Area 5 Stormwater BMPs	\$5,870,000
Q149	Coastal Zone 5 Watershed Management Plan	\$575,000
Q152	Town of Redington Beach CIP FY21 Stormwater Retrofits	\$150,000
Q156	Port Richey Alternative Outfall - Northern Outfall Project	\$3,000,000
Q158	River Landing Reclaimed Water Transmission Main Extension	\$3,386,600
Q161	McIntosh Park Indirect Potable Reuse - Detailed Design of Treatment System and Construction of Aquifer Recharge Well	\$7,850,000
Q162	Chesnut Park Managed Aquifer Recharge System	\$6,893,000
Q163	Seminole Stormwater Master Plan Update and Infrastructure Assessment	\$500,000
Q169	Zephyr Creek Feasibility Study	\$150,000
Q171	McKay Creek Watershed Management Plan Recommendations	\$520,000
Q175	Bluff Restoration and Erosion Abatement	\$400,000
Q183	Ibis Stormwater Pond Improvements	\$290,000
Q189	Tammy Lane/Timber Lake Estates Feasibility Study	\$150,000
Q190	Lower Peninsula Stormwater Improvements – Southeast Region	\$25,000,000
Q196	Joe's Creek BMP and Lower Floodplain Creation	\$1,440,000
Q199	Starkey Road WMP Update	\$500,000
Q206	Plant City McIntosh Park Integrated Water Management Plan Phase III	\$16,050,000
Q210	Griffin Park Flood Abatement Project	\$1,800,000
Q213	Hillsborough County SCADA System Long Term Planning (Stream/Lake Warning System Installation)	\$2,000,000
Q215	Conservation - TBW Demand Management	\$3,881,437
W024	FY2021 Tampa Bay Environmental Restoration Fund	\$1,400,000
W211	Weedon Island Preserve Salt Marsh Restoration	\$1,037,800
<b>Region Total</b>		<b>\$208,629,002</b>



# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** SW IMP - Flood Protection - Dale Mabry Henderson Trunkline – Upper Peninsula Watershed Drainage Improvements  
**Project Number** N748  
**Cooperator** City of Tampa  
**Department** Stormwater  
**Contact Person** Ben Allushuski  
**Address** 306 E Jackson St, 6n  
**City State 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 Highway is approximately 18 inches during the mean annual rainfall event. There is also significant neighborhood flooding occurring along 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 at the Estrella St canal. The Florida Department of Transportation is separately funding a box culvert along Dale Mabry Highway 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 principal arterial roadway and serve future lateral connections to adjacent neighborhoods that experience frequent flooding. The anticipated FY 2021 phase of the project consists of the construction of a new box culvert along W Watrous Avenue that will terminate at Dale Mabry Highway with a stub for FDOT to connect their future system. 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 vehicles per day between Henderson Blvd and W Neptune St. High intensity, short duration rainfall events often overwhelm the existing stormwater system, causing dangerous driving conditions. 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 on the modeled conditions shows flood stage reductions of greater than 2 feet at fifteen (15) locations on Dale Mabry, Morrison, and Watrous Avenue. Six (6) other locations exhibit flood stage reductions greater than 12 inches. 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 the existing Neptune box culvert. A Benefit-Cost Ratio of 0.94 was calculated using the Federal Emergency Management Agency (FEMA) Benefit-Cost Analysis Tool. There are also significant water quality benefits to this project as many Green Infrastructure practices are being implemented along the project corridor including Bioswales, Pervious

Pavement, and Nutrient Separating Baffle Boxes. The estimated nutrient removal rates for this project include the removal of approximately 106 lbs/year TN, and 16 lbs/year TP from approximately 119 acres of highly-urbanized landscape.

**Cost:**

The FY 2021 portion of the project is estimated at \$6.5 million, with a total project cost of \$36.5 million. 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. This will be the sixth and final year of funding for the current multi-year contract.

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

As of October 1, 2019, the City of Tampa will now be a Class 5 Community Rating System (CRS) community. This improved rating through the National Flood Insurance Program (NFIP) provides residents in the City with a 25% discount on their flood insurance policies. 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. The City of Tampa also has a Stormwater Assessment Program that includes a Service Assessment and an Improvement Assessment. The Service Assessment has been in existence since 2003 as described in Resolution 2003-937. The Improvement Assessment was adopted in 2016 as described in Resolution 2016-706. The Service Assessment is an annual non-ad valorem assessment that pays for operations and maintenance of the existing stormwater system. Services include street sweeping, pond maintenance, pipeline system cleaning, outfall cleaning, ditch maintenance and miscellaneous micro-projects ancillary to maintenance activities. The Improvement Assessment is an annual non-ad valorem assessment that pays for capital improvements associated with the stormwater system in the City of Tampa. Improvements include system capacity increases, treatment facilities such as ponds, ditches and baffle boxes, new pipelines and box culverts, pump stations, backflow valves, inlets, curb and gutter systems, as well as roadway regrading to improve flow patterns.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share	10,000,000	5,000,000	3,250,000		18,250,000
Hillsborough River	10,000,000	5,000,000	3,250,000		18,250,000
Total	20,000,000	10,000,000	6,500,000		36,500,000

**Matching Fund Reduction**

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

**Timelines**

Finish Work on Manhattan Ave	10/25/2019
Finish Work on Jetton Ave	11/05/2019
Open Watrous/Manhattan Intersection	11/06/2019
MOT Henderson Blvd Intersection	04/22/2020
Finish Box Culvert on Watrous Ave	06/05/2020
Final Completion	08/28/2020

**Data Collection Assessment:**

No data will be collected for this project

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 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 State 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 construction of regional stormwater improvements to serve an area of approximately 700 acres of highly-urbanized landscape in the West Riverfront and North Hyde Park areas of Tampa. This project is a multi-year project that provides a primary stormwater conveyance trunkline 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. This project will be implemented by routing stormwater through a box culvert system along W Gray Street, N Rome Avenue, and W Cass Street, where this project will connect to the first phase, which routes stormwater north along North Boulevard, and east along Cypress Street, where it ultimately discharges into the Hillsborough River. The Fiscal Year 2021 portion of the construction consists of box culvert construction on W Gray St and S Rome Ave, as shown on the attached maps and 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 trunkline 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 structure and roadway flooding. A Benefit-Cost Ratio of 1.00 was calculated using the Federal Emergency Management Agency (FEMA) Benefit-Cost Analysis Tool, which has been revised since the original analysis to more accurately account for the benefits and costs associated with the project. The attached Benefit-Cost Ratio calculations shows the improvement in Level of Service (LOS) for roadways in the affected areas as well as for structures impacted by flooding. There are also significant water quality benefits to this project as many Green Infrastructure practices are being implemented along the project corridor including Bioswales, Pervious Pavement, and Nutrient Separating Baffle Boxes. The estimated nutrient removal rates for this project include the removal of approximately 687 lbs/year TN, and 139 lbs/year TP from approximately 69 acres of highly-urbanized landscape.

**Cost:**

The total project cost for construction is estimated at \$34.5 million. Project costs are inclusive of utility relocations, roadway restoration, and the box culvert system. The estimated Fiscal Year 2021 expenditure for construction is \$15,516,215. 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.**

As of October 1, 2019, the City of Tampa will now be a Class 5 Community Rating System (CRS) community. This improved rating through the National Flood Insurance Program (NFIP) provides residents in the City with a 25% discount on their flood insurance policies. 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. The City of Tampa also has a Stormwater Assessment Program that includes a Service Assessment and an Improvement Assessment. The Service Assessment has been in existence since 2003 as described in Resolution 2003-937. The Improvement Assessment was adopted in 2016 as described in Resolution 2016-706. The Service Assessment is an annual non-ad valorem assessment that pays for operations and maintenance of the existing stormwater system. Services include street sweeping, pond maintenance, pipeline system cleaning, outfall cleaning, ditch maintenance and miscellaneous micro-projects ancillary to maintenance activities. The Improvement Assessment is an annual non-ad valorem assessment that pays for capital improvements associated with the stormwater system in the City of Tampa. Improvements include system capacity increases, treatment facilities such as ponds, ditches and baffle boxes, new pipelines and box culverts, pump stations, backflow valves, inlets, curb and gutter systems, as well as roadway regrading to improve flow patterns.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share	4,500,000	5,000,000	7,758,108		17,258,108
Hillsborough River	4,500,000	5,000,000	7,758,107		17,258,107
Total	9,000,000	10,000,000	15,516,215		34,516,215

**Matching Fund Reduction**

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

**Timelines**

Finish Construction on W Cass St	04/01/2020
Finish Construction on N Rome Ave	09/18/2020
Finish Construction on W Gray St	07/21/2021
Final Completion	08/18/2021

**Data Collection Assessment:**

No data will be collected for this project

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** SW IMP - Port Richey Alternative Outfall  
**Project Number** N901  
**Cooperator** Pasco County  
**Department** Design Stormwater Management  
**Contact Person** Joseph Amoah  
**Address** 4454 Grand Blvd  
**City State Zip** New Port Richey, FL 34652  
**Phone #** 727-834-3611 ext1047  
**Email** jamoah@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. The project is currently in design.

**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; Other parcels may be need.

**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 2018, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2018, the bulk rate charged for the use of reclaimed water is \$0.34 per 1,000 gallons for customers that have storage capability. All other bulk customers that feed directly off of the system will be charged \$0.67 per thousand gallons used. Residential irrigation customers will be billed a flat rate of \$15.39 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.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share	625,000		750,000	250,000	1,625,000
Coastal Rivers	625,000		750,000	250,000	1,625,000
<b>Total</b>	<b>1,250,000</b>		<b>1,500,000</b>	<b>500,000</b>	<b>3,250,000</b>

**Matching Fund Reduction**

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

**Timelines**

**PRAO**

<b>Milestone</b>	<b>Projected Date</b>
Conceptual Design	11/27/2019
30% Plans Design Package	02/25/2020
Third Party Review Coordination	05/25/2020
Final Design/Permitting	01/20/2021
Construction Begins	05/20/2021
Complete Construction	06/14/2022

**Data Collection Assessment:**

Land Survey  Mapping/GIS data

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** WMP - City of St. Petersburg Watershed Management Plan  
**Project Number** N904  
**Cooperator** City of St. Petersburg  
**Department** Engineering  
**Contact Person** Dan Saunders  
**Address** One 4th Street North  
**City State Zip** St. Petersburg, FL 33701  
**Phone #** 727-893-7854  
**Email** dan.saunders@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 is a continuing project which began in 2018. The City of St. Petersburg watershed encompasses an area of roughly 62 square miles and has experienced very significant flooding and water quality issues in the recent years. In 1994, the City developed their Stormwater Management Master Plan (Plan). Since 1994, the City has updated portions of the watershed for implementation of recommended projects. The current model is now comprised of sections in multiple software including ICPR, SWMM3, SWMM4, and Excel spreadsheets. The City has some of their basin data and stormwater inventory in a GIS format, but is looking to develop a more robust GIS database to house their model data. Since 1994, the City has been continuously implementing stormwater improvements as recommended in the City's previous Plan. However, there are still areas within the City that are prone to flooding. There are also FDEP-designated WBIDs within the City that are verified as impaired and/or have adopted Total Maximum Daily Loads (TMDLs).

Due to the age of the existing Plan, the City is looking to develop a new comprehensive Watershed Management Plan (WMP) to address all four of the Southwest Florida Water Management District's (SWFWMD) areas of responsibility, including flood protection, water quality, natural systems, and water supply. The City will utilize the information from their existing Plan, in conjunction with new datasets such as LiDAR, plan sets, field reconnaissance, and survey, to develop a new Watershed Management Plan in accordance with the SWFWMD Guidelines and Specifications.

The objectives of the new WMP include: 1) development of a GIS database to house all existing model components, 2) conversion of the existing models into SWMM5 or ICPR, 3) update to the existing model/GIS to account for new LiDAR data, plan sets for areas of new/ updated development, etc., 4) increase the level of detail between the existing and updated models, 5) development of floodplains, 6) determination of Level- of-Service for the watershed, and 7) analysis of Best Management Practice (BMP) alternatives to reduce flooding, address sea- level-rise, improve water quality, and restore/create natural systems.

**Benefit:**

The results of this WMP study will help the City to further identify their flood-prone areas and will help devise alternatives for flood management and water quality management throughout the City. The products of the WMP will also serve as best available data

for SWFWMD Resources Regulation. The continuous updating of WMPs is essential for making reliable information available to local and regional decision makers.

The City of St Petersburg participates in the National Flood Insurance Program (NFIP) and the Community Rating System (CRS). Currently the City is a Class 6 community, and this provides a 20% discount to all flood insurance premiums for people within the Special Flood Hazard Area (SFHA). The City has implemented goals to lower this score to a Class 5, with an effective discount of 25%. These goals have involved a Program for Public Information, higher level of flood protection, analysis of flood problem areas, and collaboration with Pinellas County Government to enhance the Watershed Management Plan. The proposed Watershed Management Plan project aligns with the City's goals and may help the City achieve the desired Class 5 rating.

During the course of this project, the City plans to hold public meetings to present the results of the preliminary floodplains. The meetings will be beneficial as they provide an opportunity to encourage public involvement by receiving feedback regarding resident's questions and concerns.

It should be noted that there is new LiDAR data to be obtained from Pinellas County, and the City will be using this data for this project. Therefore, no additional costs are expected to be incurred due to LiDAR data collection efforts for this project.

**Cost:**

\$1,800,000.00

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

The City is a premier local government engaging in multiple water conservation efforts that engage the public. The City participates and offers numerous programs including the Sensible Sprinkling Program, Toilet Rebate Programs, Indoor Water Conservation Kits, Restaurant Spray Valve Replacement Programs for Service Providers, Water Conservation Publications, Indoor Water Conservation Kits, and Public Presentations and Workshops. The City is authorized through its MS4 permit and/or local ordinances to maintain, construct, reconstruct, improve and extend stormwater systems and to establish just and equitable stormwater utility rates, fees and charges for the services and facilities provided by the system. The utility fee is applied to each developed parcel in the City.

The City has been supportive of neighborhood and community volunteer opportunities that help to implement their Drainage and Surface Water Management Ordinance. The Friends of Crescent Lake is a visible example of a voluntary effort on the part of the City and community to improve the lake's water quality and shoreline environment, while providing an aesthetic value and improvement to the quality of life within the community. Monthly vegetation management and water quality sampling efforts have provided opportunities for environmental education and community service for high school and university students. Significantly, the volunteer efforts in aquatic plant control and habitat creation have reduced the operational maintenance effort needed by the City Stormwater Department.

The City of St Petersburg participates in the National Flood Insurance Program (NFIP) and the Community Rating System (CRS). The CRS program gives incentives to go above and beyond the minimum NFIP requirements by rewarding the City with a flood insurance premium discount. Currently the City is a Class 6 community, and this provides a 20% discount to all flood insurance premiums for people within the Special Flood Hazard Area (SFHA). The City has implemented further goals to lower this score to a Class 5, with an effective discount of 25%. These goals have involved a Program for Public Information, higher level of flood protection, analysis of flood problem areas, and collaboration with Pinellas County Government to enhance the Watershed Management Plan. The current Floodplain Ordinance #191-H establishes minimum floodplain requirements for all buildings being constructed or improved within the SFHA.

The City Administration has been pro-active 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 quality and quantity of stormwater runoff. Water pollution is provided by Ordinance Section 27-430 - Section 27-433, which identify unlawful discharges into the public drainage system and provides for prosecution of violators.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share	281,250	350,000	268,750		900,000
Pinellas Anclote	281,250	350,000	268,750		900,000
Total	562,500	700,000	537,500		1,800,000

**Matching Fund Reduction**

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

**Timelines**

Watershed Evaluation	05/22/2020
Floodplain Analysis	06/28/2021
Floodplain Level of Service BMP Alternative Analysis	07/25/2022

**Data Collection Assessment:**

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

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# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** 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 State 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 highly-urbanized 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. The City of Tampa's intent is to construct and implement several flood relief measures 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 trunk lines, constructing new stormwater ponds, and implementing Green Infrastructure components for water quality benefits. The City of Tampa will be coordinating these efforts with FDOT as they have jurisdiction over many of the critical roads in the watershed including Interstate-275. The City of Tampa has already purchased three residential lots in the watershed that repetitively flood and constructed 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 flood protection for the 100-year/24-hour storm event in the project area. The Fiscal Year 2021 portion of the project will fund the first year of construction for the project. The total cost of the project is approximately \$23,500,000. A detailed feasibility study and corridor analysis of the proposed stormwater improvements is attached to this application.

**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. This project will decrease the 5-year/8-hour floodplain in the watershed, as well as provide structural flood protection for the 100-year/24-hour storm event. There will also be significant water quality benefits to this project as many Green Infrastructure components will be implemented along the project corridor. Through the use of Nutrient Separating Baffle Boxes, the estimated nutrient removal rates for this project include the removal of approximately 16 lbs/year TN, and 2 lbs/year TP from

approximately 780 acres of highly-urbanized landscape. A benefit/cost ratio of 0.71 was also calculated for this project using SWFWMD's benefit/cost ratio spreadsheet tool.

**Cost:**

The total project cost is estimated at approximately \$23,500,000 based on an engineer's opinion of probable cost. The City of Tampa is requesting \$7,000,000 total in FY 2021 for construction. A more detailed cost estimate, benefit/cost ratio analysis, and estimated nutrient removal rates will be forthcoming in December 2019 as the City of Tampa's design progresses.

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

As of October 1, 2019, the City of Tampa will now be a Class 5 Community Rating System (CRS) community. This improved rating through the National Flood Insurance Program (NFIP) provides residents in the City with a 25% discount on their flood insurance policies. 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. The City of Tampa also has a Stormwater Assessment Program that includes a Service Assessment and an Improvement Assessment. The Service Assessment has been in existence since 2003 as described in Resolution 2003-937. The Improvement Assessment was adopted in 2016 as described in Resolution 2016-706. The Service Assessment is an annual non-ad valorem assessment that pays for operations and maintenance of the existing stormwater system. Services include street sweeping, pond maintenance, pipeline system cleaning, outfall cleaning, ditch maintenance and miscellaneous micro-projects ancillary to maintenance activities. The Improvement Assessment is an annual non-ad valorem assessment that pays for capital improvements associated with the stormwater system in the City of Tampa. Improvements include system capacity increases, treatment facilities such as ponds, ditches and baffle boxes, new pipelines and box culverts, pump stations, backflow valves, inlets, curb and gutter systems, as well as roadway regrading to improve flow patterns.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share	500,000		3,500,000	7,750,000	11,750,000
Hillsborough River	500,000		3,500,000	7,750,000	11,750,000
<b>Total</b>	<b>1,000,000</b>		<b>7,000,000</b>	<b>15,500,000</b>	<b>23,500,000</b>

**Matching Fund Reduction**

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

**Timelines**

Complete 30 Percent Design Package	03/31/2020
Complete Third-Party Review	09/30/2020
Construction	09/30/2022

**Data Collection Assessment:**

No data will be collected for this project

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** AWS - TBW Tampa Bypass Canal Gate Automation  
**Project Number** N965  
**Cooperator** Tampa Bay Water  
**Department** Planning And System Decision Support  
**Contact Person** Ivana Kajtezovic  
**Address** 2575 Enterprise Road  
**City State Zip** Clearwater, FL 337631102  
**Phone #** 727-791-2345  
**Email** ikajtezovic@tampabaywater.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 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, Permitting, and Bidding \$195,500
- Construction \$659,500
- Construction Engineering & Inspection (CEI) \$172,000
- As-Built Survey, Record Drawings, & Substantial Completion \$5,000

**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.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share		216,800	88,500		305,300
General Fund-District Wide			88,500		88,500
<b>Total</b>		<b>216,800</b>	<b>177,000</b>		<b>393,800</b>

**Matching Fund Reduction**

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

**Timelines**

**Bidding**

**Milestone**

Bid Approval

**Projected Date**

10/21/2019

**Close-out**

**Milestone**

Final project close-out approval

**Projected Date**

06/20/2022

**Construction**

**Milestone**

Substantial completion

**Projected Date**

12/31/2021

**Data Collection Assessment:**

No data will be collected for this project

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** 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 State Zip** Clearwater, FL 33765  
**Phone #** 727-464-8921  
**Email** pmiselis@pinellascounty.org

**Project Type:**

Water Supply  Water Quality  Flood Protection  Natural Systems

**Strategic Initiatives:**

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

**Indicate All Counties to Benefit From Project:**

<input type="checkbox"/> Charlotte	<input type="checkbox"/> Citrus	<input type="checkbox"/> Desoto	<input type="checkbox"/> Hardee	<input type="checkbox"/> Hernando	<input type="checkbox"/> Highlands	<input type="checkbox"/> Hillsborough	<input type="checkbox"/> Lake
<input type="checkbox"/> Levy	<input type="checkbox"/> Manatee	<input type="checkbox"/> Marion	<input type="checkbox"/> Pasco	<input checked="" type="checkbox"/> Pinellas	<input type="checkbox"/> Sarasota	<input type="checkbox"/> Sumter	<input type="checkbox"/> 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 will develop a new WMP for South Creek, which will be developed in general accordance with the District's Guidelines and Specifications.

**Benefit:**

The contractual Measurable Benefit will be the completion of an updated WMP that identifies floodplains, establishes LOS, and evaluates BMPs to address flooding concern, water quality and natural systems in the watershed.

**Cost:**

This request is for the third 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 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 include stormwater maintenance and related public outreach and 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.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share	75,000	150,000	150,000		375,000
Pinellas Anclote	75,000	150,000	150,000		375,000
<b>Total</b>	<b>150,000</b>	<b>300,000</b>	<b>300,000</b>		<b>750,000</b>

**Matching Fund Reduction**

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

**Timelines**

**Watershed Management Plan**

<b>Milestone</b>	<b>Projected Date</b>
Project Development	12/31/2019
Watershed Evaluation	06/01/2020
Floodplain Analysis	12/01/2020
FPLOS and BMPs	06/01/2021
SWRA and BMPs for Water Quality	10/31/2021

**Data Collection Assessment:**

Land Survey

Mapping/GIS data

Other data collection: LiDAR, rain, flow and water quality data will be sourced from existing monitoring efforts.

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** WMP - Cypress Creek WMP Update  
**Project Number** N993  
**Cooperator** Pasco County  
**Department** Stormwater Management  
**Contact Person** David Sua  
**Address** 4454 Grand Boulevard  
**City State Zip** New Port Richey, FL 346525402  
**Phone #** 727-834-3611 ext1041  
**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 on the sequence of implementation that reflects BMP effectiveness, as well as address regulatory permissibility of the BMPs. Level of Service (LOS) determinations for structures and roadways shall also be addressed. Project description includes Project Development, Watershed Evaluation, Floodplain Analysis, Level of Service Analysis and BMP Alternatives Analysis.

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, as depicted in the Funding Table Tab. Future phases 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. The initial Project Development and Watershed Evaluation aspects of the project were previously funded.

**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 2018, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2018, the bulk rate charged for the use of reclaimed water is \$0.34 per 1,000 gallons for customers that have storage capability. All other bulk customers that feed directly off of the system will be charged \$0.67 per thousand gallons used. Residential irrigation customers will be billed a flat rate of \$15.39 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	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share	200,000	448,000	252,000		900,000
Hillsborough River	200,000	448,000	252,000		900,000
Total	400,000	896,000	504,000		1,800,000

**Matching Fund Reduction**

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

**Timelines**

**01/01/2022 - 04/30/2022**

**Milestone**

Level of Service Analysis

**Projected Date**

04/30/2022

**05/01/2022 - 06/30/2023**

**Milestone**

BMP Alternatives Analysis

**Projected Date**

06/30/2023

**10/01/2020 - 12/31/2021**

**Milestone**

Floodplain Analysis

**Projected Date**

12/31/2021

**Data Collection Assessment:**

- Land Survey       LIDAR/Elevation data
- Mapping/GIS data

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 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 State 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. The first year funding was FY2019 and is being used to initiate the WMP. The funding which has been committed for FY 2021, will be used to conduct the watershed evaluation and modelling that will identify the preliminary floodplain areas within the City. The preliminary delineation of the floodplain areas will be based on the SWIM modeling. This year's funding, FY 2021, will be used for the completion of the floodplain delineation, the level of serves to be provided, and the BMP's that are to be recommended that would improvement the existing storm water facilities and lessen flooding in neighborhoods.

**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 has previously committed \$250,000 for the first phase of the project starting FY 2019. The City also previously committed \$200,000 for the second phase in FY2020. The City will provide \$200,000 for this third and final phase of the Watershed Management Plan for FY2021. 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 is submitting for Phase 3, FY 2021 funding for the Watershed Management Plan Cooperative Funding Initiative in order to complete the watershed evaluation and modeling efforts. Results from the modeling will provide the preliminary delineation of the floodplain areas based on SWIM modeling. The City is fully committed to move forward on Phase 3, FY 2021, 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.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share	250,000	200,000	200,000		650,000
General Fund-District Wide	250,000	200,000	200,000		650,000
<b>Total</b>	<b>500,000</b>	<b>400,000</b>	<b>400,000</b>		<b>1,300,000</b>

**Matching Fund Reduction**

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

**Timelines**

**December 1, 2019 - November 30, 2021**

**Milestone**

Phase III: Completion of Floodplain Delineation, Level of Services, BMP's

**Projected Date**

11/30/2021

**December 2, 2019 - November 30, 2020**

**Milestone**

Phase II: Completion of Watershed Evaluation

**Projected Date**

11/30/2020

**December 3, 2019 - November 29, 2019**

**Milestone**

Phase I: Documentation collection, surveys, mapping existing systems

**Projected Date**

11/29/2019

**Data Collection Assessment:**

Land Survey  Mapping/GIS data

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** AWS - TBW Regional Treatment Facility Pumping Expansion  
**Project Number** N998  
**Cooperator** Tampa Bay Water  
**Department** Planning And System Decision Support  
**Contact Person** Ivana Kajtezovic  
**Address** 2575 Enterprise Road  
**City State Zip** Clearwater, FL 337631102  
**Phone #** 727-791-2345  
**Email** ikajtezovic@tampabaywater.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 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 which is 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 an installation of a new 24 mgd (2,000HP) 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 High Service Pump Station is part of Tampa Bay Water's alternative supplies which also includes the Regional C.W. Bill Young 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 Plan 2023.

**Cost:**

The total cost for the project is \$2,400,000 and it includes the following elements:

- Design, permitting, and bidding - \$150,000
- Construction - \$2,095,000
- Construction engineering and inspection - \$150,000
- As built survey, record drawings, and substantial completion - \$5,000

**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 and demand management programming in the Tampa Bay Region. Our member governments are responsible for implementing programs that can reduce water demand. Due to successful conservation planning and implementation efforts by Tampa Bay

Water and its members, the per capita use rate of approximately 100 gpcpd in the region is significantly lower than the State average, and it exceeds District goals. 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. 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 governments demands, react timely to changing conditions, and manage our facilities for the protection of the environment and the benefit of our customers.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share	108,000	1,014,500	77,500		1,200,000
General Fund-District Wide			77,500		77,500
<b>Total</b>	<b>108,000</b>	<b>1,014,500</b>	<b>155,000</b>		<b>1,277,500</b>

**Matching Fund Reduction**

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

**Timelines**

**Bidding**

**Milestone**

Bid Approval

**Projected Date**

10/21/2019

**Close-out**

**Milestone**

Final project close-out approval

**Projected Date**

02/21/2022

**Construction**

**Milestone**

Construction substantial completion

**Projected Date**

06/30/2021

**Data Collection Assessment:**

No data will be collected for this project

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** WMP - Brooker Creek Watershed Management Plan  
**Project Number** Q034  
**Cooperator** Pinellas County  
**Department** Public Works  
**Contact Person** Paul Miselis  
**Address** 22211 Us Highway 19 North  
**City State Zip** Clearwater, FL 33765  
**Phone #** 727-464-8921  
**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 Brooker Creek. The Pinellas County project will provide a new WMP in Pinellas portion of the Brooker Creek watershed, which will be developed in general accordance with the District's Guidelines and Specifications.

**Benefit:**

The contractual Measurable Benefit will be the completion of an updated WMP that identifies floodplains, establishes LOS, and evaluates BMPs to address flooding concerns water quality and natural systems in the watershed.

**Cost:**

This request is for the third 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 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 include stormwater maintenance and related public outreach and 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.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share	150,000	225,000	75,000		450,000
Pinellas Anclote	150,000	225,000	75,000		450,000
Total	300,000	450,000	150,000		900,000

**Matching Fund Reduction**

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

**Timelines**

**Watershed Management Plan**

<b>Milestone</b>	<b>Projected Date</b>
Watershed Evaluation	11/01/2019
Floodplain Analysis	07/01/2020
FPLOS and BMPs	01/01/2021
SWRA and BMPs	06/01/2021

**Data Collection Assessment:**

Land Survey

Mapping/GIS data

Other data collection: LiDAR, rain, flow and water quality data will be sourced from existing monitoring efforts.

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Grosse Avenue Corridor Drainage Improvements  
**Project Number** Q053  
**Cooperator** Tarpon Springs  
**Department** Public Services  
**Contact Person** Anthony Mannello  
**Address** 324 E. Pine Street  
**City State 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, WBID #1440, a Class 3M estuary waterbody. Primary land use for the contributing basin area is urban/residential. There are five (5) areas of historical flooding that comprise this project, none of the areas having storm sewer infrastructure or a stormwater management facility. The project was originally submitted under SWFWMD CFI Application No. 5309 and ranked HIGH (Project Number N770). However, there have been significant changes to the scope of work required to provide the flood abatement identified in the original proposal, as presented to the Southwest Florida Water Management District (SWFWMD). In addition, there have been additional resource benefits added to the project that were not included with the original proposal. With these items in mind, the City is resubmitting the project with the SWFWMD Stormwater Improvement Flood Protection (SIFP) Benefit Cost Analysis Tool results to demonstrate that the project and added costs are cost-effective, beneficial, and in accordance with the District's Strategic Plan. The SIFP Benefit Cost Analysis resulted in a Benefit / Cost Ratio of 1.54. In the current conditions, 9 single-family homes and 1 general warehouse (office complex) have finish floor elevations below the 100-year/24-hour storm event flood stage. In the proposed conditions, all 100-year/24-hour storm event flood stages are lower or equal to the existing finished floor elevations. Significant reductions to the flood stage and duration to five residential roadways have also been accomplished. The project has secured all regulatory permits including; SWFWMD ERP General Permit (No. 47043379.000), US Army Corps of

Engineers Nationwide Permit (No. SAJ-2018-00574), Pinellas County R/W Use Permit (No. 18-0392 D), and Pinellas County Dredge and Fill Permit (No. DF2691-18). The proposed work activity will not require any additional R/W. The project is on track to have Final Plans provided to the City of Tarpon Springs before the end of January 2019.

**Benefit:**

The project would provide direct flooding abatement (duration and flood frequency) for the 25-yr./24-hr. storm event for over 36 residential properties, 2 structures, 5 roadways, one of those roadways being a hurricane evacuation route for City residents. Project would also provide a net improvement (reduction of 121.59 kg/yr TN and 22.62 kg/yr TP) to water quality discharge to Anclote River, WBID #1440, a Class 3M estuary waterbody. The SIFP Benefit Cost Analysis resulted in a Benefit / Cost Ratio of 1.54. In the current conditions, 9 single-family homes and 1 general warehouse (office complex) have finish floor elevations below the 100-year/24-hour storm event flood stage. In the proposed conditions, all 100-year/24-hour storm event flood stages are lower or equal to the existing finished floor elevations. Significant reductions to the flood stage and duration to five residential roadways have also been accomplished.

**Cost:**

\$3,159,976

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

The project would provide direct flooding abatement (duration and flood frequency) for the 25-yr./24-hr. storm event for over 36 residential properties, 2 structures, 5 roadways, one of those roadways being a hurricane evacuation route for City residents. Project would also provide a net improvement (reduction of 121.59 kg/yr TN and 22.62 kg/yr TP) to water quality discharge to Anclote River, WBID #1440, a Class 3M estuary waterbody. The SIFP Benefit Cost Analysis resulted in a Benefit / Cost Ratio of 1.54. In the current conditions, 9 single-family homes and 1 general warehouse (office complex) have finish floor elevations below the 100-year/24-hour storm event flood stage. In the proposed conditions, all 100-year/24-hour storm event flood stages are lower or equal to the existing finished floor elevations. Significant reductions to the flood stage and duration to five residential roadways have also been accomplished.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share			466,900		466,900
Pinellas Anclote			466,900		466,900
Total			933,800		933,800

**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
Continue Construction	10/01/2020
End Construction	09/30/2021

**Data Collection Assessment:**

Other data collection: As-Builts

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Study - TBW Regional Surface Water Treatment Plant Expansion Feasibility  
**Project Number** Q061  
**Cooperator** Tampa Bay Water  
**Department** Planning And System Decision Support  
**Contact Person** Ivana Kajtezovic  
**Address** 2575 Enterprise Road  
**City State Zip** Clearwater, FL 337631102  
**Phone #** 727-791-2345  
**Email** ikajtezovic@tampabaywater.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 purpose of this project is to further assess the feasibility of expanding the existing Regional Surface Water Treatment Plant and increasing the use of associated surface water supplies to maximize the available yield of surface water supplies. This project would leverage the existing facility as much as possible for meeting projected regional water demands without significant capital expenditures, as well as inform design decisions for the future expansion. The project will also evaluate an alternative location for a new surface water treatment plant near the C.W. Bill Young Regional Reservoir, including the inventorying of anticipated risks and benefits associated with that location. The overall objective of the project is to increase Tampa Bay Water's annual average yield of surface water supplies by 10 to 15 MGD, thus contributing to the required regional supply increase of 20 MGD. The 20 MGD supply need was identified in the 2018 Long-term Master Water Plant Update for the 2020 – 2040 planning horizon. The Regional Surface Water Treatment Plant is part of Tampa Bay Water's alternative water supply system that also includes the Regional C.W. Bill Young Regional Reservoir, the Tampa Bay Desalination Facility, and the Regional Facility Site High Service Pump Station. Financial support is being requested through the Southwest Florida Water Management District Cooperative Funding Initiative to cover the following efforts:

- Detailed capacity analysis of the existing Regional Surface Water Treatment Plant to identify process limitations and evaluate the feasibility of rerating or modifying unit processes to address process limitations as required for the expansion.
- Field testing of existing biofiltration unit process and/or other treatment processes to evaluate the impact of operation and treatment at a higher loading rate.
- Additional modeling to finalize the potential yield and withdrawal capacities from the existing sources to expand the surface water treatment capacity.
- Feasibility study and surface water/reservoir modeling to evaluate the impacts of constructing a new 20 MGD surface water treatment plant at the C.W. Bill Young Regional Reservoir. The study will evaluate the reliability and vulnerability of the new facility at this location with respect to drought conditions and infrastructure failures. Opportunities to mitigate the potential risks will be evaluated.

- Hydraulic evaluation of the raw water transmission and pumping system to accommodate the new surface water treatment plant.
- Preliminary property assessment and piping route studies for new surface water treatment plant location.
- Conceptual cost for expanding the existing facility or constructing a new facility.

**Benefit:**

This project has the potential to increase the available surface water supplies by 10 – 15 MGD as one of Tampa Bay Water’s long-term water supply projects. This project is part of a larger, overall strategy to increase Tampa Bay Water’s regional water supplies in order to meet projected regional demands. Existing surface water sources are a promising option for additional yield based on the results of a multi-criteria decision analysis that was conducted as part of the 2018 Long-term Master Water Plan. Increased use of surface water supplies scored favorably relative to other water supply options in terms of environmental, economic, and reliability criteria.

**Cost:**

The total capital cost for this project is \$550,000, including the following project elements. A total of \$275,000 is being requested from the Southwest Florida Water Management District, all of which will be matched by the applicant.

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

Tampa Bay Water uses a complex model to optimize and balance use of its existing supplies, which considers the impact on the environment, water quality, and reliability of the source water while meeting the overall system demands. Potential new supplies are incorporated into the model to evaluate the ability of the new supplies to meet future system demands while balancing the usage of Tampa Bay Water’s existing sources. The model provides Tampa Bay Water with an effective tool for assessing and utilizing its existing and future water sources. Conservation is an important element of Tampa Bay Water’s regional water supply. Tampa Bay Water plans and coordinates conservation programming in the Tampa Bay region. 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 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 Optimized Regional Operations Plan (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	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share		225,000	50,000		275,000
General Fund-District Wide			50,000		50,000
Total		225,000	100,000		325,000

**Matching Fund Reduction**

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

**Timelines**

**Regional Surface Water Treatment Plant Expansion**

Milestone	Projected Date
Engineering Services Scope Approval	10/21/2019
Feasibility Study Completion	10/19/2020
Project Closeout	12/21/2020

**Data Collection Assessment:**

No data will be collected for this project

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Study - TBW Desal Facility Expansion Feasibility  
**Project Number** Q063  
**Cooperator** Tampa Bay Water  
**Department** Planning And System Decision Support  
**Contact Person** Ivana Kajtezovic  
**Address** 2575 Enterprise Road  
**City State Zip** Clearwater, FL 337631102  
**Phone #** 727-791-2345  
**Email** ikajtezovic@tampabaywater.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 purpose of this project is to further assess the feasibility of expanding the existing Desalination Water Treatment Plant to maximize the available yield of Tampa Bay Water's regional water supplies. This project would leverage the existing facility as much as possible for meeting projected regional water demands, as well as inform design decisions for the future expansion. The overall objective of the project is to increase Tampa Bay Water's available supply by 10 - 15 MGD by expanding the Desalination Water Treatment Plant, which would contribute toward the region's 20 MGD need that was identified in the 2018 Long-term Master Water Plan Update for the 2020 - 2040 planning horizon. The Desalination Water Treatment Plant is part of Tampa Bay Water's alternative water supply system that also includes the C.W. Bill Young Regional Reservoir, the Regional Surface Water Treatment Plant, and the Regional Facility Site High Service Pump Station. Financial support is being requested through the Southwest Florida Water Management District Cooperative Funding Initiative to cover the following efforts required for the expansion:• Detailed evaluation of several potential opportunities to increase the capacity and improve the reliability of the facility. Improved reliability and a sustainable capacity at the Desalination WTP are critical as a strong foundation for a future expansion. • Pilot scale testing of alternate pretreatment systems to reduce the footprint of the expansion while improving overall system reliability and providing more consistent water quality to the membranes. Pilot testing will also evaluate alternate membranes that could increase the flux rate through the membranes while increase overall plant recoveries to limit the required footprint of the expansion. • Water quality sampling to evaluate future changes in influent water quality. • Evaluation of alternate intake configurations to account for the expansion. • Evaluation of the concentrate management system based on changes in recovery and increases in the concentrate disposal quantities. • Evaluation of the vulnerability of the facility to storm surge and infrastructure failures and opportunities to mitigate weaknesses as part of the expansion. • Consideration of potential improvements based on future TECO operational changes as it relates to influent flow, water quality, and concentrate blending. • Preliminary permitting and modeling efforts to evaluate potential impacts to the Bay based on changes to the concentrate quality and increased flows. • Conceptual cost and site plan development for the expansion of the existing facility.

#### Benefit:

This project has the potential to increase the available water supply by 10 – 15 MGD as one of Tampa Bay Water's long-term water supply projects. This project is part of a larger, overall strategy to increase Tampa Bay Water's regional water supplies in order to meet projected regional demands. Existing source water from the Bay is a promising option for additional yield based on the results of a multi-criteria decision analysis that was conducted as part of the 2018 Long-term Master Water Plan. Increased use of the seawater supply within several future water supply configurations scored favorably relative to other water supply options in terms of environmental, economic, and reliability criteria.

**Cost:**

The total capital cost for this project is \$3,000,000, including the following project elements. A total of \$1,500,000 is being requested from the Southwest Florida Water Management District, all of which will be matched by the applicant.

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

Tampa Bay Water uses a complex model to optimize and balance use of its existing supplies, which considers the impact on the environment, water quality, and reliability of the source water while meeting the overall system demands. Potential new supplies are incorporated into the model to evaluate the ability of the new supplies to meet future system demands while balancing the usage of Tampa Bay Water's existing sources. The model provides Tampa Bay Water with an effective tool for assessing and utilizing its existing and future water sources. Conservation is an important element of Tampa Bay Water's regional water supply. Tampa Bay Water plans and coordinates conservation programming in the Tampa Bay region. 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 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 Optimized Regional Operations Plan (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.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share		550,000	950,000		1,500,000
General Fund-District Wide			950,000		950,000
<b>Total</b>		<b>550,000</b>	<b>1,900,000</b>		<b>2,450,000</b>

**Matching Fund Reduction**

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

**Timelines**

**Desalination Water Treatment Plant Expansion**

<b>Milestone</b>	<b>Projected Date</b>
Engineering Scope Approval	10/21/2019
Pilot Testing	04/19/2021
Feasibility Study Completion	10/18/2021
Closeout	12/20/2021

**Data Collection Assessment:**

No data will be collected for this project

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** WMP - Klosterman Bayou Watershed Management Plan  
**Project Number** Q083  
**Cooperator** Pinellas County  
**Department** Public Works  
**Contact Person** Paul Miselis  
**Address** 22211 Us Highway 19 North  
**City State Zip** Clearwater, FL 33765  
**Phone #** 727-464-8921  
**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 Klosterman Bayou watershed. Except for the County's Stormwater Master Plan completed in the early 1980's, no more up-to-date watershed management plan exists for the Klosterman Bayou watershed. This project would develop a new WMP for Klosterman Bayou, which will be developed in general accordance with the District's Guidelines and Specifications.

The Klosterman Bayou watershed is located in northeast Pinellas County, west of Lake Tarpon. The total basin area is approximately 2,068 acres. The watershed also contains the County's William E. Dunn Water Reclamation Facility. The watershed is mostly low to medium density residential land use. All surface water runoff generated in eastern portions of the freshwater segment of the Klosterman Bayou watershed enters a series of interconnected lakes located in the central portion of the basin and ultimately outfalls to St. Joseph Sound via a tidal creek and canals.

**Benefit:**

The contractual Measurable Benefit will be the completion of an updated WMP that identifies floodplains, establishes LOS, and evaluates BMPs to address flooding, water quality and natural systems concerns 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 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 include stormwater maintenance and related public outreach and 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.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share		100,000	50,000		150,000
Pinellas Anclote		100,000	50,000		150,000
Total		200,000	100,000		300,000

**Matching Fund Reduction**

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

**Timelines**

**Watershed Management Plan**

<b>Milestone</b>	<b>Projected Date</b>
Procurement	01/31/2020
Project Development	03/31/2020
Watershed Evaluation	09/01/2020
Floodplain Analysis	05/01/2021
FPLOS and BMPs	11/01/2021
SWRA and BMPs for water Quality	06/01/2022

**Data Collection Assessment:**

Land Survey

Mapping/GIS data

Other data collection: LiDAR, rain, flow and water quality data will be sourced from existing monitoring efforts

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Study - Belleair Brackish Feasibility and Testing  
**Project Number** Q090  
**Cooperator** Town of Belleair  
**Department** Public Works  
**Contact Person** Terry Griffin  
**Address** 380 Park Place Boulevard, Suit  
**City State Zip** Clearwater, FL 33759  
**Phone #** 727-224-9480  
**Email** terry.griffin@Cardno.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 Town of Belleair (Town) is requesting funding assistance to support a hydrogeologic investigation of the upper Floridan aquifer in western Pinellas County, Florida, and to determine the feasibility of transitioning to brackish groundwater production and treatment within this 90 year old coastal wellfield. Key objectives of this project will be to identify the presence and characteristics of a deeper brackish water zone within the upper Floridan aquifer (Zone B), that could potentially provide an additional source of brackish groundwater in the future; and to investigate the presence and characteristics of a deeper permeable zone (Zone C) in the upper Floridan aquifer that could be utilized for injection of brine concentrate from the reverse osmosis (RO) treatment process. This Project would constitute the first phase of developing a brackish groundwater reverse osmosis (RO) desalination system for the Town of Belleair. Currently the Town's water demand is met through its potable-quality wellfield and water treatment plant. The wellfield is currently permitted under Water Use Permit (WUP) 20007692.007, with an annual average withdrawal of 885,900 gpd and a peak month of 1.063 mgd.

The Town's wellfield is located near the Gulf of Mexico. Chloride levels in production wells have risen significantly since the 1970s and the rate of increase has accelerated in recent years, even as groundwater withdrawal rates within the wellfield have been significantly reduced during the same time period. Chloride concentrations have exceeded or are approaching the drinking water standard in most production wells. Blending of water from the wells is currently producing a finished water supply that meets the chloride standard. However, given the rate of chloride increase, the Town may be unable to meet water quality standards within the next few

**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:

- Provide critical hydrogeologic and water quality information at multiple depth intervals within the dynamic salt water interface portion of the upper Floridan aquifer in western Pinellas County, offering temporal data potentially associated with sea level rise in the region,
- Maintain optimum and best use of water that is of reduced quality due to regional impacts on the aquifer systems,
- Provide data to assist with development of reclaimed water aquifer recharge/aquifer storage and recovery projects throughout the District

In addition, the Project is the first step in 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, which would have the negative effect of increasing stress on ground and surface water sources in Pasco and Hillsborough Counties.

**Cost:**

Cost estimates were developed through discussions with drilling contractors currently working in the Tampa Bay Area. A summary of the total project costs are as follows: Total Project Cost \$1,763,350.00 Cooperator Share \$881,675.00 Funds Requested in FY 20 \$705,340.00 Funds Requested in FY 21 \$176,335.00

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

The Town of Belleair has substantially reduced its withdrawal quantities during the previous 20+ years, including a reduction in the permitted withdrawal quantity from 1,160,400 gpd to 885,900 gpd in 2017. The Town only allows irrigation one day a week year round, and has an aggressively tiered rate structure for water use. The Town uses a state of the art metering and billing system that notifies the Public Works Department and individual customers if water use rates increase beyond the norm. The Town has also removed two production wells, backplugged a third well, and installed three new wells that are further from the coast and further from other production wells. An optimized pumping schedule is also used to minimize drawdowns due to superposition of well influences.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share		705,340	176,335		881,675
General Fund-District Wide		705,340	176,335		881,675
Total		1,410,680	352,670		1,763,350

**Matching Fund Reduction**

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

**Timelines**

7/15/19

Milestone	Projected Date
Initiate UIC permitting	06/02/2020
<b>Milestone</b>	<b>Projected Date</b>
Design and testing documents to District	10/18/2019
Bid solicitation and contractor selection	03/06/2020
Complete UIC permitting	05/29/2020
Zone A and Zone B Monitor Well Installation	07/30/2020
Exploratory Injection Well Completion	04/30/2021
final report submittals	07/30/2021
Project closeout	11/29/2021

**Data Collection Assessment:**

- Groundwater or Surface Water Level measurements     Groundwater or Surface Water Quality measurements
- Monitor Well Installation     Lithologic/Geophysical data
- Aquifer Testing

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** WMP - East Pasco WMP Update  
**Project Number** Q115  
**Cooperator** Pasco County  
**Department** Stormwater Management  
**Contact Person** David Sua  
**Address** 4454 Grand Boulevard  
**City State Zip** New Port Richey, FL 346525402  
**Phone #** 727-834-3611 ext1041  
**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:**

The East Pasco Watershed Plan is proposed for updating and conceptual design completion under the SWFWMD (Southwest Florida Water Management District) Watershed Management Program. The East Pasco Watershed consists of the Lake Zephyr Watershed and the East Zephyrhills Watershed and was last updated in 2009. The project will need to be updated and completed to the current standards with an increased level of detail. 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/ FY19 will allow the terrain to be updated for use in the watershed model updates. 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, and related efforts.

**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: \$800,000

**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 2018, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2018, the bulk rate charged for the use of reclaimed water is \$0.34 per 1,000 gallons for customers that have storage capability. All other bulk customers that feed directly off of the system will be charged \$0.67 per thousand gallons used. Residential irrigation customers will be billed a flat rate of \$15.39 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.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share		200,000	200,000		400,000
Hillsborough River		200,000	200,000		400,000
Total		400,000	400,000		800,000

**Matching Fund Reduction**

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

**Timelines**

**East Pasco WMP**

<b>Milestone</b>	<b>Projected Date</b>
Watershed Evaluation	01/01/2020
WMP Project Development	01/01/2020
Watershed Evaluation and Project Development	01/01/2021
Watershed Model Development	10/01/2021
Peer Review	01/01/2022
Public Notification/Governing Board Approval	04/01/2022
Final Deliverables	08/01/2022

**Data Collection Assessment:**

Mapping/GIS data

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** WMP - Roosevelt Creek Watershed Management Plan  
**Project Number** Q116  
**Cooperator** Pinellas County  
**Department** Public Works  
**Contact Person** Paul Miselis  
**Address** 22211 Us Highway 19 North  
**City State Zip** Clearwater, FL 33765  
**Phone #** 727-464-8921  
**Email** pmiselis@pinellascounty.org

**Project Type:**

Water Supply  Water Quality  Flood Protection  Natural Systems

**Strategic Initiatives:**

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

**Indicate All Counties to Benefit From Project:**

<input type="checkbox"/> Charlotte	<input type="checkbox"/> Citrus	<input type="checkbox"/> Desoto	<input type="checkbox"/> Hardee	<input type="checkbox"/> Hernando	<input type="checkbox"/> Highlands	<input type="checkbox"/> Hillsborough	<input type="checkbox"/> Lake
<input type="checkbox"/> Levy	<input type="checkbox"/> Manatee	<input type="checkbox"/> Marion	<input type="checkbox"/> Pasco	<input checked="" type="checkbox"/> Pinellas	<input type="checkbox"/> Sarasota	<input type="checkbox"/> Sumter	<input type="checkbox"/> 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 Roosevelt Creek watershed. The Roosevelt Creek watershed covers approximately 8,116 acres of central Pinellas County. The watershed consists of intensely-developed urban and industrial land use within portions of unincorporated Pinellas County as well as parts of the City of St. Petersburg and the City of Pinellas Park. Three major channels drain the Roosevelt Creek watershed into Old Tampa Bay.

The most recent Roosevelt Creek WMP was completed in 2007, but the watershed has seen a great deal of development over the last 10 years. Furthermore, significant new capital improvement projects are planned in the watershed (e.g., the FDOT's Gateway Expressway project, the County's 126<sup>th</sup> Ave. North improvement project, and the County's two, SWFWMD co-funded water quality improvement projects). Concurrently, the City of St. Petersburg is undertaking an update to their stormwater master plan, which includes their portion of the Roosevelt Creek watershed. The County's project would develop an updated WMP for Roosevelt Creek within unincorporated Pinellas County and would complement St. Petersburg's efforts to update the WMP within their portion of the watershed. The WMP will be developed in general accordance with the District's Guidelines and Specifications.

**Benefit:**

The contractual Measurable Benefit will be the completion of an updated WMP that identifies floodplains, establishes LOS, and evaluates BMPs to address flooding concerns water quality and natural systems in the watershed.

**Cost:**

This request is for the second year of a three-year project, whose total project amount is estimated to be \$800,000.

**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 include stormwater maintenance and related public outreach and 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.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share		100,000	150,000	150,000	400,000
Pinellas Anclote		100,000	150,000	150,000	400,000
Total		200,000	300,000	300,000	800,000

**Matching Fund Reduction**

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

**Timelines**

**Watershed Management Plan**

<b>Milestone</b>	<b>Projected Date</b>
Procurement	01/31/2020
Project Development	03/31/2020
Watershed Evaluation	09/01/2020
Floodplain Analysis	05/01/2021
FPLOS and BMPs	11/01/2021
SWRA and BMPs for Water Quality	06/01/2022

**Data Collection Assessment:**

Land Survey

Mapping/GIS data

Other data collection: LiDAR, rain, flow and water quality data will be sourced from existing monitoring efforts.

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Study-Nutrient Source Tracking  
**Project Number** Q130  
**Cooperator** Pinellas County  
**Department** Environmental Management  
**Contact Person** Kelli Hammer Levy  
**Address** 22211 Us Hwy 19 N Bldg 10  
**City State Zip** Clearwater, FL 33765  
**Phone #** 727-464-4425 ext3317  
**Email** klevy@pinellascounty.org

**Project Type:**

Water Supply  
  Water Quality  
  Flood Protection  
  Natural Systems

**Strategic Initiatives:**

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

**Indicate All Counties to Benefit From Project:**

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

**Project Description/Benefit/Cost**

**Description:**

This request is for second year funding of a three year project. Year one (FY2020) has been approved for funding by SWFWMD. The purpose of this project is to identify the sources of elevated nutrient levels (nitrogen and phosphorus) observed in the McKay Creek, Allen's Creek, and Curlew Creek watersheds using isotope analysis. Each of these watersheds is impaired for nutrients, and McKay and Curlew have nutrient TMDLs in place. Because of these impairments and TMDLs, water quality improvement in these watersheds is a high priority for the County. To most effectively use funds for best management practice implementation, it is vital to know the sources of the nutrients and identify "hot spot" areas of nutrient loading and this project will accomplish both of those objectives.

The McKay Creek watershed comprises approximately nine square miles in west-central Pinellas County and drains to southern Clearwater Harbor. The Allen's Creek watershed encompasses 7.5 square miles in central eastern Pinellas County and flows into Old Tampa Bay. The Curlew Creek watershed in north-central Pinellas County encompasses nearly 11 square miles and drains into northern Clearwater Harbor. Each of these watersheds is highly developed, mostly with high density residential land use, and multi-jurisdictional. McKay and Allen's have existing Watershed Management Plans (WMPs), and a WMP is currently being developed for Curlew. This project aligns with recommendations in the WMPs. This project will include a review of existing watershed data, development of a sampling regime for each watershed, sampling at multiple sites in each watershed for at least one year, use of appropriate tracer tools such as isotopes, and a report of findings with recommendations to reduce nutrient sources in each watershed. The results of this project will be presented to the municipalities that share jurisdiction with the County in order to collaborate to most effectively and efficiently address the nutrient impairments in each watershed.

**Benefit:**

The major benefits of this project will be the identification of sources of nutrients, both in terms of form and location, and recommendations for reducing nutrient loads in each of three impaired watersheds. This will allow for future targeted best management practices aimed at reducing nutrient inputs in a cost-effective manner, with the ultimate goal of attaining designed uses and improved water quality.

**Cost:**

This request is to secure year two funding of a three year project. Year one funding (FY2020) was approved by SWFWMD in September 2019. The second year cost (FY2021) is anticipated to be \$90,000. The total cost of this project is expected to be \$200,000 over the course of three fiscal years. The first year cost (FY2020) is anticipated to be \$80,000 and the third year cost (FY2020) is anticipated to be \$30,000.

**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.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share		40,000	45,000	15,000	100,000
Pinellas Anclote		40,000	45,000	15,000	100,000
Total		80,000	90,000	30,000	200,000

**Matching Fund Reduction**

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

**Timelines**

Review Existing Watershed Data	03/01/2020
Sampling Plan Development	05/01/2020
Field Monitoring	09/30/2020
Lab and Data Analysis	12/01/2021
Final Report and Nutrient Management Recommendations	07/01/2022

**Data Collection Assessment:**

Surface Water Flow (Discharge) measurements  Groundwater or Surface Water Quality measurements

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Countywide Floodway Update and Re-delineation  
**Project Number** Q132  
**Cooperator** Hillsborough County  
**Department** Public Works  
**Contact Person** Jie Tong  
**Address** 601 E Kennedy Blvd 22nd Floor  
**City State Zip** Tampa, FL 33602  
**Phone #** 813-307-1818  
**Email** TongJ@hillsboroughcounty.org

**Project Type:**

Water Supply  
  Water Quality  
  Flood Protection  
  Natural Systems

**Strategic Initiatives:**

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

To re-delineate the floodway with the new LiDAR information for the Countywide Watersheds

**Benefit:**

The products of the updated plan will serve as best available information both for SWFWMD Resources Regulation and County Land Development Regulation. The continuous updating of watershed plans is essential for making reliable information available to local and regional decision makers and will help streamline the land development regulation permit process.

**Cost:**

The estimated cost is \$ 1,000,000.00

**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 criminalize the violation of water use restrictions, and to adopt a civil citation process for the enforcement of the same in July 1993. A full time Water Conservation Manager assures that the County stays abreast of conservation issues. This facilitates amendments to the County's Water Conservation Ordinance(HCO 91-27) 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	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Alafia River			500,000		500,000
Applicant Share		200,000	300,000		500,000
Total		200,000	800,000		1,000,000

**Matching Fund Reduction**

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

**Timelines**

**Final Report**

**Milestone**  
09/30/2021

**Projected Date**  
09/30/2021

**Floodway delineation**

**Milestone**  
8/30/2021

**Projected Date**  
08/30/2021

**Kick - off meeting**

**Milestone**  
10/30/2020

**Projected Date**  
10/30/2020

**Data Collection Assessment:**

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

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Starkey Stormwater Management Facility (M10)  
**Project Number** Q136  
**Cooperator** Pinellas County  
**Department** Public Works  
**Contact Person** Josie Benwell  
**Address** 22211 Us Hwy 19 N.  
**City State Zip** Clearwater, FL 33765  
**Phone #** 727-464-3519  
**Email** jbenwell@pinellascounty.org

**Project Type:**

Water Supply  
  Water Quality  
  Flood Protection  
  Natural Systems

**Strategic Initiatives:**

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

**Indicate All Counties to Benefit From Project:**

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 construct a variable weir at the western end of an existing County mitigation facility (M10) through which Starkey Channel 6 flows. Installation of the weir will necessitate construction of an additional over-bank stormwater storage area on County-owned property to the east of the intersection of Starkey Road and 126th Avenue North, which will provide some additional treatment and native vegetative habitat. The goal of the weir and storage area project is to increase the residence time at M10, thereby providing increased water quality treatment.

**Benefit:**

The weir project is estimated to remove 139 pounds per year of Total Nitrogen from Starkey Channel 6 and, ultimately, Boca Ciega Bay. A tangential benefit is the creation of some habitat by way of planting the stormwater storage area with native vegetation.

**Cost:**

Estimated construction cost is \$500,000.

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

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

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share			25,000	225,000	250,000
Pinellas Anclote			25,000	225,000	250,000

Total 50,000 450,000 500,000

**Matching Fund Reduction**

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

**Timelines**

**Anticipated Construction Commencement**

**Milestone**

Anticipated Construction Commencement

**Projected Date**

08/01/2021

**Design & Permitting**

**Milestone**

Design & Permitting

**Projected Date**

06/30/2021

**Data Collection Assessment:**

Land Survey  Mapping/GIS data

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Tarpon Springs Toilet Rebate Phase II  
**Project Number** Q140  
**Cooperator** Tarpon Springs  
**Department** Public Services  
**Contact Person** Nick Makris  
**Address** 324 E. Pine Street  
**City State Zip** Tarpon Springs, FL 34689  
**Phone #** 727-942-5638 ext2244  
**Email** nmakris@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:**

Project consists of the second phase of the ongoing Tarpon Springs Toilet Rebate Program. This water conservation project will provide financial incentives to residential customers for the replacement of conventional toilets with high-efficiency toilets that use 1.28 gallons per flush or less and to commercial customers for the replacement of conventional toilets with ultra-low flow toilets that use 1.6 gallons per flush or less. This project will include rebates and program administration for the replacement of approximately 100 high flow toilets. Also included in this project phase are water conservation kits and related educational materials to include other promotional materials to ensure the success of the program.

**Benefit:**

It is anticipated that by replacing 100 high-volume toilets, this project will provide an estimated potable water savings of 2,547 gallons per day in the Northern Tampa Bay Water Use Caution Area. The contractual Measurable Benefit will be the implementation of the program and the completion of a Final Report.

**Cost:**

Total project cost \$20,000; split between the City of Tarpon Springs: \$10,000; and the SWFWMD: \$10,000. The project's cost effectiveness is \$2.16 per thousand gallons saved. (2,547 gpd water saved at a cost of \$20,000 amortized at 8% over 20 years).

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

The City of Tarpon Springs has a Water Distribution Division and Water Meter Repair Division, which are responsible for maintaining and evaluating the operating conditions of each component to optimize our public water supply system and keep our avoidable water loss to a minimum. Each division performs any required repairs and performs specific preventative maintenance tasks to ensure conservation of our water supply. The City of Tarpon Springs Law Enforcement Officers are responsible for enforcing the mandated water restrictions within the City. It should be noted, the City has maintained watering restrictions that are more stringent than currently required by the District. City conservation efforts include a water conserving inclining block rate structures and a comprehensive reclaimed water program that helps to offset potable quality groundwater for irrigation. It should be noted that our reclaimed water program continues to improve and expand with additional customers, most recently notable is the recently completed Westwinds and Grassy Pointe residential reclaimed transmission and distribution project that received cooperative grant assistance from the SWFWMD. The promotion of these water conservation efforts have resulted in a measurable and steady reduction in our per capita water consumption to 90 gallons per capita per day. The City has an alternative water supply facility that relies upon the efficient use of water resources for long-term sustainability and accordingly, water conservation

represents an integral part. City leadership remains committed to providing extremely water conservation is one of the most effective ways we can help build a sustainable water supply and we are looking forward to building upon our successful collaborative relationship for this water conservation project for evaluation and consideration of CFI funding.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share			10,000		10,000
General Fund-District Wide			10,000		10,000
Total			20,000		20,000

**Matching Fund Reduction**

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

**Timelines**

**Draft Final Report**

**Milestone**

Draft Final Report

**Projected Date**

12/01/2021

**Final Report**

**Milestone**

Final Report

**Projected Date**

02/01/2021

**Toilet Rebates Begin**

**Milestone**

Toilet Rebates Issuance Commences

**Projected Date**

10/01/2020

**Toilet Rebates End**

**Milestone**

Toilet Rebates End

**Projected Date**

10/01/2021

**Data Collection Assessment:**

No data will be collected for this project

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Chesnut Park Aquifer Storage and Recovery System  
**Project Number** Q142  
**Cooperator** Pinellas County Utilities  
**Department** Utilities  
**Contact Person** David Adams  
**Address** 14 S. Ft. Harrison Ave.  
**City State Zip** Clearwater, FL 33756  
**Phone #** 727-464-4441  
**Email** dadams@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 County proposes to construct the surface facilities for an existing ASR Well (ASRTP-1) and associated monitoring wells (UZMW-1, SZMW-1, and SZMW-2). The existing wells are sited at Chesnut Park, 2200 East Lake Rd, Palm Harbor, FL 34685, which is owned and under the institutional control of the County. The wells were constructed by the County and funded by the SWFWMD in 2001. The existing ASR well is 16-inches in diameter and is cased to approximately 190 feet but currently has a no-flow permit. The County is now resubmitting a FDEP UIC Class V, Group 2 Well Construction and Testing Permit application for the ASR Well to resume operations. A feasibility study has been performed by the County's consultant and it shows that an ASR Well is conceptually feasible for the County location and can provide several benefits by using the excess alternative surface water supply to supplement reclaimed water supply. The document also identifies the surface facilities and components associated with the system. The multi-year project tasks include the preliminary engineering design of the surface facilities (30%), final engineering design of the surface facilities (60%; 90%; 100% design and permitting, and bidding), services during construction of the surface facilities, construction of the surface facilities, an FDEP Environmental Resource Permit, and an FDEP UIC operation permit.

**Benefit:**

The project's primary goal is to increase the reliability and resiliency of the North County Reclaimed Water System (NCRWS) by adding a separate source with year-round water availability. The installation of an ASR system at Chesnut Park directly addresses the County's dry-weather reclaimed water shortages by providing up to 2 MGD of supplemental water supply to the NCRWS. Project benefits anticipated include: increasing reclaimed water supply, assisting in restoring declining water level elevations within the NWUCA (as some water is expected to be left in the aquifer); reducing nutrient loading to Upper Tampa Bay by up to 2 tons/yr from surface water discharge from Lake Tarpon; and providing a regional demonstration of ASR wells that other utilities within the District can mimic.

**Cost:**

The funding request from the District for FY2021 totals \$163,700 for engineering design of the surface facilities (60%; 90%; 100% design) permitting, and bidding services of the surface facilities, and construction of surface facilities.

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

The County promotes environmental awareness through progressive, industry-leading water conservation initiatives that provide for the protection and preservation of our water resources by enacting ordinances and supplying residential and business water conservation guidelines. The County also uses several approaches to protect its natural floodplain areas and water resources through various management plans, strategies, and monitoring programs.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share		193,050	647,725	1,233,500	2,074,275
Pinellas Anclote			647,725	1,233,500	1,881,225
Total		193,050	1,295,450	2,467,000	3,955,500

**Matching Fund Reduction**

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

**Timelines**

**8/30/19 - 9/30/2020**

**Milestone**

Well Permitting

**Projected Date**

09/30/2020

**9/30/20 - 9/30/2021**

**Milestone**

Surface Facility Design and Construction

**Projected Date**

09/30/2021

**Data Collection Assessment:**

- Groundwater or Surface Water Level measurements
- Groundwater or Surface Water Quality measurements
- Aquifer Testing
- Land Survey

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Two Rivers Reclaimed Water Transmission Main Extension  
**Project Number** Q144  
**Cooperator** Pasco County  
**Department** Utilities  
**Contact Person** Pamela Lynch  
**Address** 19420 Central Blvd.  
**City State Zip** Land O'Lakes, FL 34637  
**Phone #** 813-235-6191  
**Email** plynch@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 the construction of the following reclaimed water (RW) transmission mains:

Approximately 2,600 linear feet (LF) of 12-inch RW transmission main that will extend south along Morris Bridge Road from the intersection of S.R. 56 and will continue to the first residential subdivision entrance, and approximately 10,900 LF of RW transmission main of varying sizes that will traverse along S.R. 56 from Morris Bridge Road to the easternmost proposed north-south collector roadway intersection within the Two Rivers community.

Two Rivers has a Future Land Use designation of Planned Development (PD) and Conservation (CON) with Subarea Policies. It is currently Agricultural (AC) Zoning and is required to be rezoned into not more than two MPUDs. It is located between U.S. 301 and Morris Bridge Road (north and south of existing S.R. 56 extension). This Fiscal Year 2021 request is for an approximate total project cost of \$2,700,000 (\$1,350,000– District share and \$1,350,000 – County share). At full community build-out, the Two Rivers Community will eventually consist of 5,025 single family (SF) homes, 1000 multi-family (MF) homes, and approximately 46 acres of commercial area, along with an elementary and middle school site totaling 2,700 students, and approximately 20 acres of common areas. The project benefit discussed below represents the potable water irrigation offset for a subset of the full build-out entitlements detailed above. Specifically, the near-term entitlements included in the benefit computations total approximately 1,000 SF units, along with 300 MF apartments, one elementary school, one middle school, and 10 acres of common area. The non-SF areas represent 23 acres of irrigable area. The community's distribution system will advance the utilization of reclaimed water for irrigation of homes and business and will eliminate the need to utilize potable water for those purposes.

**Benefit:**

The annual average reclaimed water demand for near-term development is estimated to be approximately 208 million gallons per year or 0.57 million gallons per day (mgd). This will create an offset of potable water use of approximately 0.37 mgd. Customers to be served are anticipated to be receiving project benefits by 2022. This project will enable the continuation of concurrent reclaimed water construction with roads and other utilities. Two Rivers 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 \$2,700,000. District Share = \$1,350,000 - County Share = \$1,350,000

Projected Commencement Date: 10/01/2020

Projected Completion Date: 9/30/2022

**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 2018, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2018, the bulk rate charged for the use of reclaimed water is \$0.34 per 1,000 gallons for customers that have storage capability. All other bulk customers that feed directly off of the system will be charged \$0.67 per thousand gallons used. Residential irrigation customers will be billed a flat rate of \$15.39 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	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share			1,350,000		1,350,000
General Fund-District Wide			1,350,000		1,350,000
Total			2,700,000		2,700,000

**Matching Fund Reduction**

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

**Timelines**

**Commence Construction**

**Milestone**

Commence Construction

**Projected Date**

10/01/2020

**Complete Construction**

**Milestone**

Complete Construction

**Projected Date**

09/30/2022

**Data Collection Assessment:**

Mapping/GIS data

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Southern Hillsborough County Booster Pump Station  
**Project Number** Q146  
**Cooperator** Tampa Bay Water  
**Department** Planning And System Decision Support  
**Contact Person** Ivana Kajtezovic  
**Address** 2575 Enterprise Road  
**City State Zip** Clearwater, FL 337631102  
**Phone #** 727-791-2345  
**Email** ikajtezovic@tampabaywater.org

**Project Type:**

Water Supply  
  Water Quality  
  Flood Protection  
  Natural Systems

**Strategic Initiatives:**

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

**Indicate All Counties to Benefit From Project:**

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

**Project Description/Benefit/Cost**

**Description:**

This project is an entirely new potable water booster pump station to increase delivery capacity to the Regional Delivery Point of Connection at the Lithia Water Treatment Plant, from the existing Brandon-South Central Transmission Main. No chemical storage or feed facilities are included in the project. The project includes the design, permitting, and construction of a new in-line potable water booster station in the vicinity of production well BUD-7. The new booster station will take advantage of residual line pressure in the Brandon Transmission Main coming from the High Service Pump Station and boost pressures to sustain a higher flow rate to the existing Lithia Point of Connection than is possible using only High Service Pump Station discharge pressure. Booster station capacity will be approximately 20 MGD. Net gain in transmission line flow will be approximately 5 – 7 MGD from the booster station project. Below is the list of anticipated improvements that will be part of this project:

**Booster Pump Station:** A booster pump station will be sized and designed to connect into the existing 30" South-Central Pipeline so that it can boost pressure in the line to net 5-7 MGD additional flow through the pipeline. The Pump Station will be designed to meet Hillsborough County noise ordinances while in operation and will aesthetically match the surrounding neighborhood. Structure will be designed to withstand Category 3 Hurricane. Structure will be unmanned, but will include an office and bathroom, electrical room, and storage room for maintenance use. Pump room will include a bridge crane and roll-up door for loading and unloading of the pumps. Pumps: Pumps will need to be designed with a spare and are envisioned to be horizontal split-case pumps. Initial hydraulic analysis indicates 5 – 200 Hp pumps, but this will need to be verified during design. Pumps and piping (including valves and meters) will be designed for ease of maintenance and reliability. Piping: Pipelines to connect the booster pump station to the existing 30" pipeline along Durant Rd. Pipeline sizing will be confirmed during design. A shutdown plan and tie-in connection design will be required. Communications, Electrical and Arc Flash Improvements: Include VFDs for each motor. An Arc Flash Study will also be required for the proposed design. No permanent generator will be included in this project; however, the site will need a portable generator hookup. BUD Well #7: The pump and motor may need to be replaced to pump into the new hydraulic conditions in the pipeline. The Motor Control Center and VFD will need to be replaced if motor sizing dictates a change. Including a cover for the adjacent chemical area. Lithia Point of Connection: the existing Cla-Val is too small to handle the increased flows, so a new valve will need to be included in the design. Permitting: An ERP is anticipated as are County site development and possible rezoning. ROW use permits and FDEP pipeline permits will also be required.

**Benefit:**

This project has the potential to increase the available water supply by 5-7 MGD at the Lithia Point of Connection with Hillsborough County as one of Tampa Bay Water's near-term water supply projects. This project is part of a larger, overall strategy to increase Tampa Bay Water's regional water supplies in order to meet projected regional demands. This project helps bridge the near-term

demand increases anticipated in southern Hillsborough county until one of the longer-term project options can be brought online in 2028.

**Cost:**

The total capital cost for this project is \$7,100,000. Portions of the design will already be underway prior to October 2020, so those funds have already been deducted from the following totals. A total of \$3,550,000 is being requested from the Southwest Florida Water Management District, all of which will be matched by the applicant.

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

Tampa Bay Water uses a complex model to optimize and balance use of its existing supplies, which considers the impact on the environment, water quality, and reliability of the source water while meeting the overall system demands. Potential new supplies are incorporated into the model to evaluate the ability of the new supplies to meet future system demands while balancing the usage of Tampa Bay Water's existing sources. The model provides Tampa Bay Water with an effective tool for assessing and utilizing its existing and future water sources. Conservation is an important element of Tampa Bay Water's regional water supply. Tampa Bay Water plans and coordinates conservation programming in the Tampa Bay region. 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 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 Optimized Regional Operations Plan (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	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share			500,000	3,050,000	3,550,000
General Fund-District Wide			500,000		500,000
Total			1,000,000	3,050,000	4,050,000

**Matching Fund Reduction**

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

**Timelines**

**Booster Station**

Milestone	Projected Date
Professional Services Selection	09/09/2021
Design	04/01/2022
Bidding	08/15/2022
Construction	03/29/2024
Close-out	08/19/2024

**Data Collection Assessment:**

No data will be collected for this project

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Area 3 and Area 5 Stormwater BMPs  
**Project Number** Q147  
**Cooperator** Madeira Beach  
**Department**  
**Contact Person** Christopher Chin, P.E.  
**Address** 565 South Hercules Avenue  
**City State Zip** Clearwater, FL 33764  
**Phone #** 727-822-4151 ext206  
**Email** christopher@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 Madeira Beach Area 3 & Area 5 Storm Water BMPs project. This urban watershed covers an area of 27.9 acres that discharges into Boca Ciega Bay (North) WBID# 1694B which is a part of Outstanding Florida Waterbody (OFW) Boca Ciega Bay Aquatic Preserve (AP) and overlaps OFW Pinellas County AP. Per FDEP 303(d), Boca Ciega Bay (North) is a Class 3M Estuary impaired for mercury. This project is currently in the conceptual design phase. The Madeira Beach Areas 3 & 5 Storm Water BMPs are located along E Parsley Dr., W Parsley Dr., Marguerite Dr, 131st Ave E, and 129th Ave E in Madeira Beach and currently provides no water quality treatment of the storm water runoff. Significant quantities of vegetative matter, debris, and sediments are carried by storm water and discharged through eleven existing outfalls. This project will up-size pipes and add additional inlets to meet the 10-year City of Madeira Beach design standards. To improve water quality, existing impervious pavement will be removed and replaced with permeable pavement in order to collect debris and sediments so that the materials can be vacuumed and hauled off site for disposal. The City of Madeira Beach will enter into a Join Project Agreement (JPA) with Pinellas County where funding will be provided by the County for potable water and sanitary sewer replacement and upgrades.

**Benefit:**

The project will alleviate flooding problems on a "local" level as defined in the FY 2021 CFI Guidelines. Permeable pavement will reduce nitrogen and phosphorous total mass daily loads. The estimated average removal efficiency of pollution reduction for porous pavement BMP is 85% for nitrogen removal, 65% for phosphorus removal and 90% for total suspended solids removal. The removal efficiencies are shown below:

TN will have a total load reduction of 85% from 130.4 lb/yr to 19.6 lb/yr.

TP will have a total load reduction of 65% from 23.5 lb/yr to 8.2 lb/yr.

TSS will have total load reduction of 90% from 5994.6 lb/yr to 433.6 lb/yr.

\*Numbers were derived using EPA STEPL

**Cost:**

The total cost for this project is estimated to be \$5,870,000 based on similar previously completed projects in the City of Madeira Beach. The City of Madeira Beach (Cooperator) share will be \$2,935,000 and the Southwest Florida Water Management District (District) share will be \$2,935,000 for the fiscal year 2021 budget for the construction of this project. The estimated quarterly expenditure for the life of the project is as follows: FY2021 Q1 = \$75,000; FY2021 Q2 = \$323,500; FY2021 Q3=\$31,500, FY2021 Q4=\$1,632,000 FY2022 Q1= \$1,632,000; FY2022 Q2 = \$1,632,000; FY2022 Q3 = \$272,000, FY2022 Q4 = \$272,000.

The design and construction cost total \$650,000 and \$5,218,500, respectively. 10% contingency is currently proposed due to the uncertainty in design and materials cost. The total project cost is \$5,870,000. Please see attached Opinion of Probable Cost for a detailed breakdown.

TN will remove 2217 lbs over a 20 year period for a cost per lb of TN removed of \$1324.

TP will remove 305 lbs over a 20 year period for a cost per lb of TP removed of \$9,611.

TSS will remove 119893 lbs over a 20 year period for a cost per lb of TSS removed of \$27

\*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 City of Madeira Beach has adopted the Pinellas County Utilities Watering Schedule & Restrictions. The City has also adopted SWFWMD water conservation efforts providing links on the City's website homepage to the SWFWMD website where viewers are given information in regards to low-flow toilets, "Fix it for Less" program, rain barrels, and many other publications to help conserve water. The City also contracts with Pinellas County Government to provide reclaimed water service to its residents and businesses. Water conservation information is distributed through the City's website www.madeirabeach.gov and pamphlets and newsletters directing interested individuals to various water conservation educational sources are available at the Madeira Beach City Hall.

**Flood Protection Ordinance**

In November, 2011 the City of Madeira Beach adopted Ordinance No. 2011-05. The Madeira Beach website also assists and directs residents and businesses of Madeira Beach to useful Flood Information.

**Additional Complimentary Efforts**

The City's additional complimentary efforts include fertilizer ordinance, a pet waste ordinance, operates a stormwater maintenance program with stormwater utility fee, street sweeping program for its local roadways, in addition to vacuum trucks for the City's existing pervious pavement on Boca Ciega Drive and 137th Ave Circle (both successful CFI projects with the City of Madeira Beach and SWFWMD), and active education campaign on stormwater (drain labels, etc.).

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share			1,030,000	1,905,000	2,935,000
Pinellas Anclote			1,030,000	1,905,000	2,935,000
Total			2,060,000	3,810,000	5,870,000

**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	07/01/2021
Substantial Completion	06/01/2022
Construction Complete	07/01/2022

**Design**

Milestone	Projected Date
Consultant Notice to Proceed	10/01/2020
Survey	11/01/2020
Geotechnical Investigation	11/01/2020
30% Design	01/01/2021
60% Design (includes draft RFB)	02/01/2021
90% Design (Includes final RFB)	03/01/2021
Subsurface Utility Locates	03/01/2021
Final Design	04/01/2021
Operation and Maintenance Plan	04/01/2021

**Permitting**

Milestone	Projected Date
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Pre-application Meeting(s)	02/01/2021
Draft Permit Applications	03/01/2021
Permit Submittal	04/01/2021
Final Permit Applications	04/01/2021
Permit Issued	06/01/2021
Response to RAI	06/01/2021

**Request for Bids (RFB) Advertisement and Award**

<b>Milestone</b>	<b>Projected Date</b>
RFB Advertisement	04/01/2021
Notice to Proceed to Contractor	06/01/2021
RFB Evaluation and Award	06/01/2021

**Data Collection Assessment:**

Land Survey

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# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Coastal Zone 5 Watershed Management Plan  
**Project Number** Q149  
**Cooperator** Pinellas County  
**Department** Public Works  
**Contact Person** Paul Miselis  
**Address** 22211 Us Highway 19 North  
**City State Zip** Clearwater, FL 33765  
**Phone #** 727-464-8921  
**Email** pmiselis@pinellascounty.org

**Project Type:**

Water Supply  Water Quality  Flood Protection  Natural Systems

**Strategic Initiatives:**

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

**Indicate All Counties to Benefit From Project:**

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

**Project Description/Benefit/Cost**

**Description:**

The project involves the development of a comprehensive Watershed Management Plan for the Coastal Zone 5 watershed, this would include watershed evaluation, flood plain analysis, level of service (LOS) determination, surface water resource assessment (SWRA) and best management practice (BMP) alternatives analysis. The result of the watershed management plan would be recommendations for drainage, water quality and natural systems improvement projects. the Coastal Zone 5 Watershed covers approximately 6.5 square miles of southwest Pinellas County.

No formal watershed management plan has been completed for this watershed as a result the watershed evaluation and floodplain analysis will require a high level of effort. With Pinellas County being a highly urbanized area with continuous redevelopment the watershed has seen major alterations to hydrology and hydraulics. The watershed has substantial flooding concerns around the Bay Point Golf Course.

**Benefit:**

The contractual measurable benefit will be the completion of a WMP that identifies floodplains, establishes LOS, performs SWRA, and evaluates BMPs to address flooding, natural systems and water quality concerns and in the watershed.

**Cost:**

This request is for the first year of a three-year project, whose total project amount is estimated to be \$575,000.

**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 include stormwater maintenance and related public outreach and 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	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share			75,000	212,500	287,500
Pinellas Anclote			75,000	212,500	287,500
Total			150,000	425,000	575,000

**Matching Fund Reduction**

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

**Timelines**

**Watershed Management Plan**

Milestone	Projected Date
Procurement	01/31/2021
Project Development	04/30/2021
Watershed Evaluation	10/01/2021
Floodplain Anaylis	05/01/2022
FPLOS and BMP Alternatives Analysis	11/01/2022
SWRA and BMPs for Water Quality	12/31/2023

**Data Collection Assessment:**

Land Survey

Mapping/GIS data

Other data collection: LiDAR, rain, flow and water quality data will be sourced from existing monitoring efforts.

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Town of Redington Beach CIP FY21 Stormwater Retrofits  
**Project Number** Q152  
**Cooperator** Redington Beach  
**Department**  
**Contact Person** Missy Clarke  
**Address** 105 164th Avenue  
**City State Zip** Redington Beach, FL 33708  
**Phone #** 727-391-3875  
**Email** townclerk@townofredingtonbeach.com

**Project Type:**

Water Supply  Water Quality  Flood Protection  Natural Systems

**Strategic Initiatives:**

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

**Indicate All Counties to Benefit From Project:**

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

**Project Description/Benefit/Cost**

**Description:**

This is a water quality project located in the Town of Redington Beach. Activities will include design, permitting and construction of a storm water retrofit project. The Town of Redington Beach outfalls directly to Boca Ciega Bay (part of the Tampa Bay Watershed). This project proposes implementation of Best Management Practices (BMPs) and Low Impact Development (LID) designs to reduce pollutant loads to the outfalls located within the 5.15-Acre project area. The objective of the project is to improve both the water quality of non-point source stormwater which discharges into Boca Ciega Bay and improve the flood protection level of service (LOS) provided by the Town's surface water management system. The proposed project area has four outfall locations that discharge directly into Boca Ciega Bay (part of Tampa Bay). Currently, stormwater runoff from the yards and streets flow directly into the outfall pipes which discharge into the bay with no pre-treatment of any kind. Improvements will include installation of stormwater infiltration trenches along the sides of the streets to collect sediments and pollutants. Tide valves (WaStop Valves) will be installed on the outfall pipes to prevent flooding from high tides events and to prevent salt water intrusion into the infiltration systems and pipe systems used for conveyance. The combination of the infiltration systems with the WaStop valves provides opportunity for infiltration through the native sands and reduces in excess of 90% the pollutant loads otherwise conveyed to the bay through open pipes.

**Benefit:**

The improvements consist of new LID stormwater management improvements and techniques that will provide protection from tidal events and water quality benefits to Boca Ciega Bay, which is designated a "Waters within State Aquatic Preserves" and an OFW. The goals of the SWIM plan includes improvement and expansion in seagrass beds which is accomplished by decreasing the pollutant loadings and increasing the quality of stormwater runoff to Tampa Bay. This project will accomplish all those objectives and increase the overall health, welfare, and safety of the residents living within the project area. In addition, the project will improve and preserve the healthy bay habitat within the measurable benefit area. The Resource Benefit of the Water Quality project is the reduction of pollutant loads to Boca

Ciega Bay (Tampa Bay), a SWIM priority water body, by an estimated 1.6 Tons/yr Total Suspended Solids (TSS), 11.8 lb/yr Phosphorous (P) and 67.2 lb/yr Nitrogen (TN). The contractual Measureable Benefit is the design, permitting, and construction of LID BMPs to treat approximately 5.15 acres of highly urbanized stormwater runoff. Neighborhood workshops will be incorporated into the project activities. The outcomes of the project will reduce sediment and pollutant loadings to Boca Ciega Bay, will reduce flooding impacts during storm events and extreme high tides. Additional benefits of the project will be a better informed and educated public.

**Cost:**

The total cost for the project is \$150,000 for design, permitting, bidding, construction engineering inspections (CEI), and construction. All activities will be completed in one Phase. The Project Cost will be split equally between the Pinellas Anclote Basin and the Town, with \$75,000 requested from the Pinellas Anclote Basin. The estimated cost/lb of TSS and TN removed is lower than the historical average of \$20/lb TSS and \$646/lb TN, and the cost/acre treated is estimated below the historical average of \$46,947/acre treated for Coastal/LID projects. The cost estimates are based on similar projects recently completed on Anna Maria Island, in Manatee County and are included as Contractual Costs. No other funding types are requested in this application.

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

The Town of Redington Beach has an adopted Stormwater Utility Fee which is collected annually and is designated for new stormwater-related capital improvement projects. With the Stormwater Utility Fee as the revenue source, the Town has earmarked \$100,000 per year for Stormwater Improvements which incorporates LID measures to reduce pollutant loads to Tampa Bay, and to plan and prepare for sea level rise scenarios and severe climate events. These measures are a part of the Town’s 5-Year Capital Improvement Plan.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share			75,000		75,000
Pinellas Anclote			75,000		75,000
Total			150,000		150,000

**Matching Fund Reduction**

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

**Timelines**

**FY2021**

Milestone	Projected Date
Design	01/29/2021
Permitting	02/26/2021
Bidding	04/30/2021
Construction	10/29/2021
Final Certifications	12/31/2021

**Data Collection Assessment:**

No data will be collected for this project

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Port Richey Alternative Outfall - Northern Outfall Project  
**Project Number** Q156  
**Cooperator** Pasco County  
**Department** Stormwater Management  
**Contact Person** David Sua  
**Address** 4454 Grand Boulevard  
**City State Zip** New Port Richey, FL 346525402  
**Phone #** 727-834-3611 ext1041  
**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 is a project to construct collection and conveyance system improvements to the existing Port Richey Watershed storm water management system from Ridge Road to a tidal outfall located west of US19. This project is being moved expeditiously toward construction due to the historically flood-prone nature of the area. The project will greatly improve regional outfall capacity beneath Ridge Road and Springer Drive, and includes a new 48"x76" ERCP along Rees Street. Improvements to local collection systems along Ridge Road, Rees Street, and Springer Drive will integrate local drainage and reduce flooding of streets and commercial areas. All storm water runoff from the area will pass through a storm water detention pond to be constructed on the east side of US19.

**Benefit:**

The project will enhance water quality while providing flood protection. The proposed collection and conveyance system modifications will improve performance of the primary outfall of the regional drainage system serving the Port Richey watershed including the upstream Magnolia Valley community. The improvements will reduce the frequency, depth, and duration of flooding of roads, residential structures, and commercial properties in the downstream portion of the watershed and should eliminate the occurrence of flooding of Ridge Road and its intersection with US19, both highly traveled roadways. Flood reductions associated with the project will reduce the need for emergency responders to evacuate hundreds of area residents in response to large rainfall events. Addition of the stormwater detention pond provides for water quality improvement through collection of sediment, trash, and debris immediately prior to the system discharging into Werner-Boyce Salt Springs State Park. Together with other components of N901 and improvements associated with N865, the Northern Outfall will reduce pollutant loading to the State Park. The preliminary (30% design) flood protection benefit/cost ratio is 0.9, calculated using the Stormwater Improvement Flood Protection (SIFP) Benefit Cost Analysis Tool (attached). This BC ratio will be refined during final design. FY21 funds will be used for construction of the proposed improvements, to begin on about October 1, 2020.

**Cost:**

Preliminary (30% design) Engineer's Opinion of Probable Construction Cost is \$2M. Total cost for budgeting (including \$600K construction cost contingency and other administrative costs) is \$3M.

**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 2017, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2018, the bulk rate charged for the use of reclaimed water is \$0.33 per 1,000 gallons for customers that have storage capability. All other bulk customers that feed directly off of the system will be charged \$0.65 per thousand gallons used. Residential irrigation customers will be billed a flat rate of \$15.05 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.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share			1,500,000		1,500,000
Coastal Rivers			1,500,000		1,500,000
Total			3,000,000		3,000,000

**Matching Fund Reduction**

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

**Timelines**

**PRAO Northern Outfall Drainage Improvements**

<b>Milestone</b>	<b>Projected Date</b>
Begin Construction	10/01/2020
Complete Construction	10/01/2021

**Data Collection Assessment:**

No data will be collected for this project

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** River Landing Reclaimed Water Transmission Main Extension  
**Project Number** Q158  
**Cooperator** Pasco County  
**Department** Utilities  
**Contact Person** Pamela Lynch  
**Address** 19420 Central Blvd.  
**City State Zip** Land O'Lakes, FL 34637  
**Phone #** 813-235-6191  
**Email** plynch@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 the construction of approximately 14,950 linear feet of 16-inch reclaimed water transmission main that will extend south along Morris Bridge Road from the intersection of S.R. 54 to S.R. 56 and will continue west on S.R. 56 to the western project limits of River Landing. River Landing is an approved MPUD located on S.R. 56 just west of Morris Bridge Road. This Fiscal Year 2021 request is for an approximate total project cost of \$3,386,600.00 (\$1,693,300 - District share and \$1,693,300 - County share). The River Landing community will eventually consist of 1,011 single family homes, 416 multi-family homes, and approximately 20 acres of common areas. Furthermore, future development to the east and 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 reclaimed water demand for the River Landing community is estimated to be approximately 293 million gallons per year or 0.80 million gallons per day (mgd). This will create an offset of potable water use of approximately 0.49 mgd. Customers to be served are anticipated to be receiving project benefits by 2021. This project will enable the continuation of concurrent reclaimed water construction with roads and other utilities. River Landing 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 reducing the need for utilizing ground water for irrigation purposes.

**Cost:**

The total project cost is \$3,386,600.00. District Share = \$1,693,300.00 - County Share = \$1,693,300.00

Projected Commencement Date: 10/01/2020

Projected Completion Date: 9/30/2022

**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 2018, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2018, the bulk rate charged for the use of reclaimed water is \$0.34 per 1,000 gallons for customers that have storage capability. All other bulk customers that feed directly off of the system will be charged \$0.67 per thousand gallons used. Residential irrigation customers will be billed a flat rate of \$15.39 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.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share			1,693,300		1,693,300
General Fund-District Wide			1,693,300		1,693,300
Total			3,386,600		3,386,600

**Matching Fund Reduction**

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

**Timelines**

**Commence**

**Milestone**

Commence project

**Projected Date**

10/01/2020

**Completion**

**Milestone**

Project Completion

**Projected Date**

09/30/2022

**Data Collection Assessment:**

Mapping/GIS data

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** McIntosh Park Indirect Potable Reuse - Detailed Design of Treatment System and Construction of Aquifer Recharge Well  
**Project Number** Q161  
**Cooperator** Plant City  
**Department** Utilities Department  
**Contact Person** Lynn Spivey  
**Address** 1802 Spooner Dr.  
**City State Zip** Plant City, FL 33523  
**Phone #** 813-757-9288 ext4811  
**Email** lynn11cs@gmail.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 purpose of this project is to build upon a previously conducted (FY2020) feasibility study of an indirect potable reuse concept involving aquifer recharge. Overall, the aquifer recharge concept has the potential to benefit the City in several ways, including reduced contaminant loads to surface waters, reduced flooding, and the generation of potable water supply. The concept includes the discharge of reclaimed water to a natural and constructed wetland system in McIntosh Park; the reclaimed water will serve to keep the wetlands hydrated when needed and the wetlands will improve the quality of reclaimed water. Following wetland treatment, blended reclaimed water/surface water flows will be subjected to advanced treatment and injected into aquifer recharge wells, as needed. The ability to practice aquifer recharge with high quality water will prevent flooding, as well as augment potable water supplies.
- The purpose of the prior feasibility study was to verify reclaimed water treatment requirements for aquifer recharge, considering reclaimed water quality, wetland treatment, and target water quality. The feasibility study includes pilot testing to simulate full-scale treatment, Underground Injection Control (UIC) permitting, groundwater modeling, and water quality sampling.
- This project, proposed for Fiscal Year 2021, includes engineering services for detailed design of the advanced treatment system for indirect potable reuse via aquifer recharge, peer review of the detailed design, and construction activities for a new aquifer recharge well. The advanced treatment system and aquifer recharge well have a minimum assumed capacity of 1.5 million gallons per day (mgd); the aquifer recharge well is assumed to be 1,500 feet deep. The selection of treatment processes to be included in the advanced treatment system will be informed by the results of the Feasibility and Pilot Study, as pilot testing is being conducted specifically to confirm treatment requirements and inform full-scale design.

**Benefit:**

The benefits of aquifer recharge in the McIntosh Park area with high quality water include groundwater augmentation and increased potable water supply availability in the Northern Tampa Bay and Dover/Plant City Water Use Caution Area. This recharge could play a critical role in the future water supply of the local agricultural community, many members of which are citizens of Plant City. Furthermore, the ability to practice aquifer recharge with excess surface flows will minimize flooding potential and the advanced treatment of surface flows will reduce contaminant loading to downstream surface waters.

**Cost:**

The total cost for this project is \$7,000,000, including detailed design of the advanced treatment system (minimum 1.5 MGD firm capacity) and construction of an aquifer recharge well (minimum 1.5 MGD capacity; 1,500 ft depth). A total of \$3,500,000 is being requested from the SWFWMD over the course of two fiscal years, all of which will be matched by the cooperator, City of Plant City. The basis of this cost estimate is projected time and materials required for the efforts noted above. The estimated quarterly expenditure plan is as follows.

- Fiscal Year 2021
  - Quarter 4, 2020 - \$100,000
  - Quarter 1, 2021 - \$400,000
  - Quarter 2, 2021 - \$1,000,000
  - Quarter 3, 2021 - \$2,000,000
- Fiscal Year 2022
  - Quarter 4, 2021 - \$2,000,000
  - Quarter 1, 2022 - \$750,000
  - Quarter 2, 2022 - \$550,000
  - Quarter 3, 2022 - \$200,000

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

The City of Plant City drinking water system is supplied by groundwater from the Floridan Aquifer. The City recognizes the importance and limited nature of this groundwater supply, thus striving for responsible withdrawals and potable water offsets through the use of alternative water supplies. As one example, the City's Water Reclamation Facility treats wastewater to meet public access reclaimed water standards. The reclaimed water is used for industrial applications, cooling towers, and irrigation, as a substitute for potable water; however, non-potable reclaimed water demands are insufficient for the cost effective use of the entirety of the City's reclaimed water supply. Accordingly, excess reclaimed water is discharged to receiving surface waters. An aquifer recharge project that enables indirect potable reuse would allow reclaimed water to be beneficially reused as an augmentation to potable water supply.

Conservation is also an important element of the City's water supply. The primary mission of the Water Conservation Program is to monitor and report municipal, residential, commercial, industrial, agricultural, and reclaimed water usage. This effort assists the City in meeting and exceeding water conservation and regulatory compliance requirements set forth by the SWFWMD. The Water Conservation Program emphasizes the importance of saving water through an education/information-based program. The City also restricts outdoor irrigation by adopting SWFWMD rules to provide sufficient time to water and maintain the health of lawn and landscape, while minimizing water wastage.

Additionally, the City is pursuing construction of a 150 acre wetland at the Plant City McIntosh Park site and enhancements to the existing 45 acre wetland treatment system. The City's intent is to expand the capacity of the existing McIntosh Park wetland project to capture larger volumes of stormwater for additional water quality treatment, thus further protecting nearby surface waters and underlying groundwater. The proposed indirect potable reuse project and this wetland project are closely related. These wetlands will be able to remain hydrated during the dry season with the use of reclaimed water. Furthermore, after wetland treatment, excess surface water flows will be directed to advanced treatment and subsequent aquifer recharge. Reclaimed water maintains wetland hydration during the dry season; wetland treatment reduces the required capital/operational requirements of downstream engineered treatment; aquifer recharge prevents surface flooding during the wet season and augments potable water supply.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share	250,000	300,000	1,750,000	1,750,000	4,050,000
Hillsborough River		300,000	1,750,000	1,750,000	3,800,000
Total	250,000	600,000	3,500,000	3,500,000	7,850,000

**Matching Fund Reduction**

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

**Timelines**

**McIntosh Park IPR - Treatment Design and Well Construction**

Milestone	Projected Date
Engineering services scope approval	10/12/2020
Aquifer recharge well construction completion	09/17/2021
Detailed design completion	07/22/2022
Closeout	09/29/2022

**Data Collection Assessment:**

- Groundwater or Surface Water Level measurements  Groundwater or Surface Water Quality measurements
- Lithologic/Geophysical data  Aquifer Testing
- Mapping/GIS data

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Chesnut Park Managed Aquifer Recharge System  
**Project Number** Q162  
**Cooperator** Pinellas County Utilities  
**Department** Utilities  
**Contact Person** David Adams  
**Address** 14 S. Ft. Harrison Ave.  
**City State Zip** Clearwater, FL 33756  
**Phone #** 727-464-4441  
**Email** dadams@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 County proposes to construct one MAR Well System capable of recharging the Avon Park High Permeability Zone (APHPZ) of the Upper Floridan aquifer (UFA) outside of the USDW. This MAR well will be sited at Chesnut Park, 2200 East Lake Rd, Palm Harbor, FL 34685, which is owned and under the institutional control of the County. The MAR system components include one recharge well capable of receiving up to 10 MGD of excess surface water and/or excess local storm water, one recharge zone monitoring well, one shallow zone monitoring well, and the necessary surface facilities. The recharge well is proposed to be 24-inches in diameter and will be cased to approximately 600 feet below land surface. The surface facility and treatment components were identified in the feasibility study which shows that an Aquifer Recharge Well is conceptually feasible for the County location and can provide multiple benefits by using the alternative water supply during wet weather periods. The multi-year project tasks include the FDEP UIC Permit to Construct and Test the wells, the construction of the wells, professional geologist and engineering services during the construction of the wells, preliminary engineering design of the surface facilities (30% design and permitting, third party review), final engineering design of the surface facilities (60%; 90%; 100% design and permitting, and bidding), construction of the surface facilities and related services during construction, an FDEP Environmental Resource Permit, and an FDEP UIC operation permit following acceptable startup and testing.

**Benefit:**

Project benefits anticipated include: assisting in restoring declining water level elevations within the NWUCA; facilitating an increase in ground water quality through freshening to prevent upconing of salt water into a USDW aquifer; reducing up to 15 tons/yr of Total-Nitrogen nutrient loading to Upper Tampa Bay from surface water discharge from the Lake Tarpon Bypass Canal; providing a regional demonstration of recharge wells that other utilities within the District can mimic; and, the potential to provide future groundwater withdrawal opportunities to the County and other regional entities by supplementing the groundwater supply in the UFA.

**Cost:**

The total funding request from the District for this multiyear project is \$3,446,500. The funding request from the District for FY2021 totals \$1,377,500 for construction of the wells and CEI services, and preliminary engineering design of the surface facilities (30% design and permitting and third-party review). This project is fully funded in the County's Capital Improvement Program, and the County plans to reallocate funds in FY2021 during the upcoming budget cycle..

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

The County promotes environmental awareness through progressive, industry-leading water conservation initiatives that provide for the protection and preservation of our water resources by enacting ordinances and supplying residential and business water conservation guidelines. The County also uses several approaches to protect its natural floodplain areas and water resources through various management plans, strategies, and monitoring programs.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share			1,377,500	2,069,000	3,446,500
Pinellas Anclote			1,377,500	2,069,000	3,446,500
Total			2,755,000	4,138,000	6,893,000

**Matching Fund Reduction**

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

**Timelines**

**10/1/20 - 9/30/2021**

**Milestone**

Surface Facilities 30% Design and 3rd Party Review  
Well Construction and CEI

**Projected Date**

09/30/2021  
09/30/2021

**8/30/19 - 9/30/2020**

**Milestone**

Well Permitting

**Projected Date**

09/30/2020

**Data Collection Assessment:**

- Groundwater or Surface Water Level measurements       Surface Water Flow (Discharge) measurements
- Groundwater or Surface Water Quality measurements       Monitor Well Installation
- Aquifer Testing       Land Survey

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Seminole Stormwater Master Plan Update and Infrastructure Assessment  
**Project Number** Q163  
**Cooperator** Seminole  
**Department** Public Works  
**Contact Person** Rodney Due  
**Address** 9199 113th Street North  
**City State Zip** Seminole, FL 33772  
**Phone #** 727-397-6383 ext249  
**Email** rdue@myseminole.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 City of Seminole is committed to improving water quality and flood protection within the City's jurisdictional limits. This is the first time the City of Seminole has applied for CFI funding for a Stormwater Master Plan. The original Master Plan was completed in 2000. The plan did not include the Southwest Florida Water Management District (SWFWMD) Guidelines and Specifications (G&S) for watershed modeling and planning. The Districts G&S will be used as the basis for the scope of work and deliverables schedule for the City's stormwater master plan update.

The CONSULTANT shall compile the hydraulic and hydrologic information and develop a surface water model. The main components of the Stormwater Master Plan Update include; Project Development, Digital Topographic Information, Watershed Evaluation, Floodplain Analysis and Best Management Practices (BMPs) Alternative Analysis, and also address the Community Rating System (CRS), and Infrastructure Condition Assessment. Recent CFI projects with Pinellas County have focused on improving the quality of stormwater discharged into Lake Seminole, McKay Creek, and Starkey Basin. All of these watersheds are within the jurisdictional limits of the City of Seminole. Each watershed has multiple FDEP-recognized impairments. Pinellas County recently completed a McKay Creek TMDL Monitoring and Assessment Plan to fulfill the requirements of its NPDES MS4 permit. The monitoring consists of three program elements; ambient water quality monitoring, BMP monitoring, and nutrient source monitoring. The City is required to take part in a monitoring plan in conjunction with Pinellas County and its municipalities; however, specific performance data unique to the City of Seminole's stormwater system is sought in order to make key decisions on upgrades, improvements, and maintenance. Another goal of the Stormwater Master Plan Update is the infrastructure assessment. While archived information is present, there are contradictions with these records and field observations. There have been multiple occurrences when piping shown on City records has been abandoned, re-routed, absent, or shows incorrect direction of flow. There is a need to utilize the aforementioned information to identify future maintenance obligations and schedules. With an interconnection between the city's lakes, ponds, ditches, and swales, the performance of the system directly correlates to the level of service (LOS) of the City's roadways. Improvements to the system would also be coupled with recommendations on improvements to stormwater piping; whether this be upsizing, replacing in-kind or re-routing piping. There are many locations where additional stormwater collection structures are needed. Understanding where newly collected flows could be routed and treated will greatly serve the City in improving the safety of its roadway network. The Stormwater Master Plan Update shall include an Alternative BMP Analysis Report to reduce flooding, address sea level rise, reduce pollutant loads, and improve water quality. This Analysis Report shall include, where feasible, the conceptual design for the recommended structural drainage improvement alternatives, determine permitting, construction feasibility, and cost effectiveness at the planning level. Emphasis will be placed on BMPs that provide regional benefits, qualify for cooperative/grant funding, and provide a potential for improving water quality to

address the FDEP TMDL program. Once projects are developed and costs for said improvements are established, the City may evaluate the feasibility of a stormwater fee.

**Benefit:**

Develop a long-term stormwater management plan that will allow for the City to identify more refined water quality and flood protection improvement projects. Funding for these projects will be requested in future Cooperative Funding Initiative cycles. Additionally, this study will also inventory the City’s existing infrastructure and verify existing records streamlining future maintenance, improvements, and NPDES annual reporting efforts.

**Cost:**

The cost for the study (\$500,000.00) includes a Stormwater Master Plan and an Infrastructure Assessment. With a land mass of approximately 5.7 square miles, the cost of the study is estimated to be \$87,719 per square mile.

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

The City has aggressively pursued ways to control erosion, minimize street and structural flooding while enhancing water quality. Ordinances have been developed and enforced to comply with State and Federal requirements. Furthermore, the City schedules educational forums, published educational materials, coordinates an annual community cleanup event and encourages and supports volunteer initiatives.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share			250,000		250,000
General Fund-District Wide			250,000		250,000
Total			500,000		500,000

**Matching Fund Reduction**

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

**Timelines**

Begin project development/start infrastructure condition assessment	10/01/2020
Complete infrastructure condition assessment and begin Topo	02/01/2021
Complete Topo/begin mapping and model development	03/01/2021
Complete watershed evaluation/floodplain analysis/BMP Alt/begin draft plan	07/05/2021
Submit draft report	08/02/2021
Complete responses to District and City/submit final report	09/30/2021

**Data Collection Assessment:**

- Groundwater or Surface Water Quality measurements     Land Survey  
 Mapping/GIS data

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Zephyr Creek Feasibility Study  
**Project Number** Q169  
**Cooperator** Pasco County  
**Department** Stormwater Management  
**Contact Person** David Sua  
**Address** 4454 Grand Boulevard  
**City State Zip** New Port Richey, FL 346525402  
**Phone #** 727-834-3611 ext1041  
**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:**

The PROJECT is for a feasibility study to evaluate periodic structural and access flooding along Zephyr Creek. The Lake Zephyr Watershed is approximately 8,000 acres in size. The requested study will address effects of previously designed conveyance improvements as well as proposed conveyance improvements along the flow-way of Zephyr Creek and their impact on flood abatement along the flow-way. The study covers Zephyr Creek Units 1 & 2 which received SWFWMD permit No. 43010396.004 on April 19, 2019, and for which less than favorable Benefit/Cost ratios were computed using the the SWFWMD's Stormwater Improvement Flood Protection (SIFP) Benefit-Cost Analysis Tool . Many, but not all of the structures along the creek, in the Units 1 and 2 project area had actual surveyed finished floor and driveway elevations. Zephyr Creek Unit 3 improvements consist of cross-culverts at C Avenue and Lagoon Court, along with drainage flow-way improvements near the old S.R. 54 crossing. The Unit 4 improvements will include cross-culvert improvements at 8th Avenue, Wooden Bridge (upstream of 8th Avenue) and Plant Street, in addition to approximately 6,500 linear feet of channel maintenance, as required. Upgraded cross-culverts have already been designed and installed under US 301 and Dean Dairy Road. The existing Benefit/Cost calculations for Units 3 and 4 were not high, but not based on actual surveys of finished finished and driveway elevation. Actual survey data will be required in this study, and used with updated project cost estimates to re-evaluate a new Benefit/Cost estimate for the entire Units 1, 2, 3 and 4 project. The study will need to reflect use of ICPR4 since the recent Units 1 and 2 effort used that software for the existing and proposed conditions. New cost estimates for the Units 3 and 4 projects and their effect on the overall Benefit/cost ratio for the project will be required, using the the SWFWMD's Stormwater Improvement Flood Protection (SIFP) Benefit-Cost The resulting updated East Pasco Watershed model will also be used for the study. In the event the resulting results still show a less than acceptable benefit cost ratio, alternative BMP analyses and flood abatement may be considered and evaluated as may be necessary to achieve an economically feasible and effective project for the entire Zephyr Creek Units 1, 2, 3 and 4 project.

**Benefit:**

This study will result in a determination of the economic viability and flood abatement effectiveness for future submittal of Zephyr Creek Units 1, 2, 3 and 4 project for possible cooperative funding for the FY22 funding year. The expected flood abatement effectiveness will serve the citizens in the watershed and possibly result in positive reductions in insurance rates for homeowners.

**Cost:**

The study is expected to cost approximately \$150,000.00, shared equally (50-50) by Pasco County and the SWFWMD.

**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 2018, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2018, the bulk rate charged for the use of reclaimed water is \$0.34 per 1,000 gallons for customers that have storage capability. All other bulk customers that feed directly off of the system will be charged \$0.67 per thousand gallons used. Residential irrigation customers will be billed a flat rate of \$15.39 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	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share			75,000		75,000
Hillsborough River			75,000		75,000
Total			150,000		150,000

**Matching Fund Reduction**

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

**Timelines**

**Zephyr Creek Regional Flood Abatement**

Milestone	Projected Date
Retain Consultant	02/01/2021
Kick-off Meeting	03/01/2021
Data Collection Survey	06/01/2021
Draft / Preliminary Report on Findings, Including BC Calculations	11/01/2021
Final Report	01/03/2022

**Data Collection Assessment:**

- Land Survey       LIDAR/Elevation data
- Mapping/GIS data

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** McKay Creek Watershed Management Plan Recommendations  
**Project Number** Q171  
**Cooperator** Pinellas County  
**Department** Public Works  
**Contact Person** Josie Benwell  
**Address** 22211 Us Hwy 19 N.  
**City State 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:**

McKay Creek is the number one and number five priority TMDL (tidal and freshwater segments, respectively) for Pinellas County as of the 2018 prioritization plan. As such, the County will conduct a Preliminary Engineering Report (PER) to evaluate the McKay Creek watershed management plan recommendations (from the 2014 report) and assess the best management practices (BMPs) in further detail to better define water quality/flood protection benefits, property rights/acquisition needs, permitting/mitigation requirements, and project costs. In addition, the PER will provide some preliminary engineering with regards to proposed implementation of the BMPs. The PER will serve to evaluate the recommended BMPs in further detail to better define

**Benefit:**

The PER will provide updated analysis, cost estimates, and water quality/flood protection benefit calculations, along with preliminary design, for the BMPs that were originally recommended in the 2014 watershed management plan for McKay Creek. The County intends to move forward with design and construction of those BMPs subsequent to the PER. These BMPs will serve to improve water quality and flood protection within the McKay Creek watershed, which is a high priority area for Pinellas County, and has a TMDL for DO/Nutrients in the tidal segment (WBID 1633) and nutrients in the freshwater segment (WBID 1633B).

**Cost:**

\$520,000, with half in FY21 and the other half in FY22

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

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

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share			130,000	130,000	260,000
Pinellas Anclote			130,000	130,000	260,000
Total			260,000	260,000	520,000

**Matching Fund Reduction**

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

**Timelines**

**Anticipated PER Completion**

**Milestone**

Anticipated PER Completion

**Projected Date**

10/31/2022

**PER Commencement**

**Milestone**

PER Commencement

**Projected Date**

10/01/2020

**Data Collection Assessment:**

Land Survey  Mapping/GIS data

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Bluff Restoration and Erosion Abatement  
**Project Number** Q175  
**Cooperator** Town of Belleair  
**Department** Public Works  
**Contact Person** David Jones  
**Address** 324 South Hyde Park Avenue  
**City State Zip** Tampa, FL 33606  
**Phone #** 813-258-0703  
**Email** dtjones@jonesedmunds.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 bluff shoreline along Bayview Drive at Hallett Park is eroding. Dr. Robert Dean, former Professor Emeritus at the University of Florida, estimated the erosional rate at around 1 to 1.5 feet per year (Dean, 2011). With current minimum distances between the bluff's edge and Bayview Drive as short as 20 feet, further erosion could cause the road to fail. The Town has already had to take remedial measures to secure sanitary sewer facilities in Bay Front Park that have been undermined by erosion. N.S. Nettles & Associates conducted a study in 2012 and listed the causes of erosion as wave activity, groundwater discharge, still consolidating relic sinkholes, and stormwater discharge, with stormwater discharge cited as the dominate erosive force and groundwater discharge as the second largest expected component.

The stormwater discharge problem has been addressed by an earlier project (N434, FY2013) constructed to direct all stormwater discharges to one new outfall engineered to reduce erosive energy. This FY2021 application is to develop the design to address the other two erosion sources – wave activity and groundwater discharge.

Co-funding was approved for an earlier project (N045, FY2009) that would have replaced the eroding bluff with a 2800 linear feet engineered shoreline with a maintainable slope and erosion protection; however, this project was rejected by the Town's citizens because it would change the character of the bluff. The project design resulting from this FY2021 project must address the erosion problem while maintaining the bluff's natural form to the greatest extent practical – the resulting solution will likely align more with the SWFWMD's strategic objectives than the earlier proposed project.

The erosion solution will contain elements to address the coastal and groundwater discharge components. Coastal design elements may include living shorelines or other more-natural wave breaks, and/or re-establishment of native vegetation. Groundwater discharge design elements may include groundwater capture or other methods to reroute flow paths such as cutoff walls or horizontal drainage wells. Captured groundwater would be redirected for beneficial use, potentially to the adjacent Belleair Country Club. A remnant spring is located near the County Club's golf course, north and downgradient of the bluff. The former spring has become clogged with debris over the years, and restoration of this spring may assist in restoring flow gradients that could potentially reduce seepage at the bluff face. Targeted bank protection using boulders, plants, or other natural breaks may be needed to supplement the coastal and groundwater discharge measures. Once stabilized the existing exotic species, which currently provide stabilization, will be cautiously replaced over time with native vegetation.

The design will be conducted in three phases beginning with a study phase to establish the basis of design followed by preliminary and final permitting and design phases. Several existing studies provide much of the needed design information; thus, new study will focus on filling several data gaps such as the quantity and quality of groundwater discharged through the bluff. Testing will also be conducted for potable water and sewage markers to rule out utility contributions to groundwater from failing infrastructure.

**Benefit:**

Immediately quantifiable benefits include 2,800 LF of shoreline restoration and six acres of exotic species removal. Benefits yet to be quantified include the quantity of captured groundwater redirected for use as well as the nutrient loads contained in the groundwater discharge. The 2012 Nettles report made a "very gross" estimate that 15.6 million gallons from each inch of rainfall over the watershed discharges through the bluff. While the estimate was based on a simple water balance calculation that did not include all of the hydrologic losses, the estimate does indicate that the captured groundwater is potentially a significant water source and an outstanding opportunity to reduce nutrient loads even if groundwater concentrations are at background. This proposed project will also reduce the impacts of waves on the bluff leading to increased flood protection.

**Cost:**

The total cost for this project is estimated at \$400,000. The project includes a Basis of Design Study (\$160,000), Preliminary and Final Design (\$185,000), and permitting (\$55,000).

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

Specific to the bluff, the Town obtained a conservation easement to protect the seagrasses and mangroves in the project area. See Conservation Easement under Documents Tab. Additionally, through an earlier cooperative funding agreement (N434, FY2013) the Town installed a new outfall designed to minimize erosive velocities to replace seven outfalls responsible for significant erosion. The new outfall contains a baffle box to reduce pollutant loadings, particularly sediment, in the discharge.

In other parts of the community, the Town is upgrading its stormwater infrastructure to reduce flooding and improve water quality. Recent stormwater improvements for flood control include Eagles Nest Drive, Druid Road/Corbett Street, and Rosary Road (N661, FY2015). The Eagles Nest Drive and Rosary Road projects also included water quality improvement via baffle boxes installed at the outfalls. As funding becomes available, the Town anticipates making similar improvements to their existing stormwater infrastructure at Ponce De Leon Blvd., Barbara Circle/ Sunny Lane, Indian Rocks Road, Eastleigh Drive/ Woodland Ave., Palmetto Road and the Bayview Drive II project. The outfall for each of these future improvements discharges stormwater runoff into freshwater creeks or directly into Clearwater Harbor. Consequently, the Town anticipates that each of these systems will include a sediment and/or nutrient removal BMP, if appropriate.

Programmatically, the Town's additional complimentary efforts for flood protection and water quality include operating a stormwater maintenance program with stormwater utility fee, street sweeping program for its local roadways, and an active stormwater education campaign (drain labels, etc.). Additionally, the town has adopted Southwest Florida Water Management District requirements and Pinellas County ordinances related to water quality and water conservation.

Further to encourage water conservation, the Town promotes water conservation through education, only allows irrigation one day a week year round, has adopted an aggressively tiered rate structure for water use, uses a state of the art metering and billing system that notifies the Public Works Department and individual customers if water use rates increase beyond the norm, and has adopted the District's Water Shortage Language. Additionally, the Town has substantially reduced its withdrawal quantities during the previous 20+ years, including a reduction in the permitted withdrawal quantity from 1,160,400 gpd to 885,900 gpd in 2017. The Town has also removed two production wells, backplugged a third well, and installed three new wells that are further from the coast and further from other production wells. An optimized pumping schedule is also used to minimize drawdowns due to superposition of well influences.

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share			80,000	120,000	200,000
Pinellas Anclote			80,000	120,000	200,000
Total			160,000	240,000	400,000

**Matching Fund Reduction**

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

**Timelines**

**Basis of Design Study**

Milestone	Projected Date
Basis of Design Study	10/01/2021

**Final Design & Permitting**

Milestone	Projected Date
Final Design & Permitting	09/30/2022

**Preliminary Design & Permitting**

**Milestone**

Preliminary Design & Permitting

**Projected Date**

04/30/2022

**Data Collection Assessment:**

Groundwater or Surface Water Level measurements  Groundwater or Surface Water Quality measurements

Monitor Well Installation

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# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Ibis Stormwater Pond Improvements  
**Project Number** Q183  
**Cooperator** Pinellas County  
**Department** Public Works  
**Contact Person** Josie Benwell  
**Address** 22211 Us Hwy 19 N.  
**City State Zip** Clearwater, FL 33765  
**Phone #** 727-464-3519  
**Email** jbenwell@pinellascounty.org

**Project Type:**

Water Supply  Water Quality  Flood Protection  Natural Systems

**Strategic Initiatives:**

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

**Indicate All Counties to Benefit From Project:**

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

**Project Description/Benefit/Cost**

**Description:**

This project occurs within the Pelican Creek subdivision whereby untreated stormwater runoff flows into Ibis Pond prior to discharging to Pelican Creek and ultimately into Bear Creek and Boca Ciega Bay. Recently the pond has had issues with cyanobacteria, prompting an investigation to discover whether the outfall was functioning adequately and what could be done to reduce conditions conducive to causing cyanobacteria blooms, which are a health concern, while improving stormwater treatment and creating habitat via bioswales and littoral shelf. The PER recommended certain water quality improvements, out of which several were selected to move forward. The project will include construction of two nutrient baffle boxes, 16 rain bioswales, a replacement outfall with control structure (not included in this request-funded separately), and a littoral shelf planted with submerged aquatic vegetation.

**Benefit:**

The proposed improvements are estimated to remove 30.9 pounds per year of Total Nitrogen and 5.8 pounds per year of Total Phosphorus, along with reducing potential for cyanobacteria blooms. This project also represents a great opportunity to showcase green infrastructure and include some community education components, along with creating habitat by way of the bioswales and littoral shelf.

**Cost:**

Estimated construction cost is \$400,000.

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

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

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share			145,000		145,000
Pinellas Anclote			145,000		145,000
Total			290,000		290,000

**Matching Fund Reduction**

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

**Timelines**

**Anticipated Construction Commencement**

**Milestone**

Anticipated Construction Commencement

**Projected Date**

10/01/2020

**Final Design & Permitting**

**Milestone**

Final Design & Permitting

**Projected Date**

07/31/2020

**Data Collection Assessment:**

Land Survey  Mapping/GIS data

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Tammy Lane/Timber Lake Estates Feasibility Study  
**Project Number** Q189  
**Cooperator** Pasco County  
**Department** Stormwater Management  
**Contact Person** David Sua  
**Address** 4454 Grand Boulevard  
**City State Zip** New Port Richey, FL 346525402  
**Phone #** 727-834-3611 ext1041  
**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 involves the Timber Lake Estates Alternative 3 and Tammy Lane Alternative 1 projects, which represent BMP recommendations in the New River BMP Analysis Report. The two projects are mobile home communities for which high benefit cost ratios were computed using the SWFWMD's Stormwater Improvement Flood Protection (SIFP) Benefit Cost Analysis (BCA) Tool. Because actual mobile home finished floor elevations were not available, the effectiveness of structural removal from flooding has become uncertain, in that the reported number of structures removed from flooding does not appear to reflect actual inundation of the finished floor of each structure, so much as removal of flood waters from under each mobile home structure. This study will obtain and use actual finished floor and driveway elevation data and use the SIFP Tool to obtain representative benefit cost ratios for the two mobile home park projects. The resulting B/C ratio will be used to assess each project's qualification for possible future Cooperative Funding. Nodal data from the Governing Board approved New River Watershed Model will be used. The study will assess the existing New River Watershed specifically in the vicinity of the study areas, and correct/adjust, as may be necessary, to reflect an accurate representation of the movement of runoff through the study areas and reflect surveyed finished floor elevations of the structures to be removed from flooding and their addresses. Model runs for the Mean Annual, 10yr/24hr, 25yr/24hr, 50yr/24hr and 100yr/24hr design rainfall events are expected accompanied by existing/proposed flood maps. In the event that even with actual surveyed Finished Floor and driveway elevations, the projects result in B/C ratios that are less than 0.50, then alternatives to the BMPs may be considered that result in more acceptable B/C ratios. Supporting supplemental project cost estimates and revised B/C calculations will need to be provided to support such alternative projects.

**Benefit:**

The study will use actual finished floor and driveway elevation data to re-evaluate BMP Alternatives project viability for the selected two mobile home park projects and assess their qualification for future CFI funding for flood abatement.

**Cost:**

The total project cost is estimated to be \$150,000.00.

**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 2018, 100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2018, the bulk rate charged for the use of reclaimed water is \$0.34 per 1,000 gallons for customers that have storage capability. All other bulk customers that feed directly off of the system will be charged \$0.67 per thousand gallons used. Residential irrigation customers will be billed a flat rate of \$15.39 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.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share			75,000		75,000
Hillsborough River			75,000		75,000
Total			150,000		150,000

**Matching Fund Reduction**

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

**Timelines**

**Study of Mobile Home Flood Abatement Project**

<b>Milestone</b>	<b>Projected Date</b>
Consultant Selection	02/01/2021

**Tammy Lane/Timber Lake Estates MHP Study**

<b>Milestone</b>	<b>Projected Date</b>
Kick-off Meeting	03/01/2021
Data Collection / Survey	06/01/2021
Watershed Model Review and Revised BCA Calculations	09/01/2021
Draft / Preliminary Report on Findings	11/01/2021
Final Report	12/31/2021

**Data Collection Assessment:**

- Land Survey       LIDAR/Elevation data
- Mapping/GIS data

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Lower Peninsula Stormwater Improvements – Southeast Region  
**Project Number** Q190  
**Cooperator** City of Tampa  
**Department** Stormwater  
**Contact Person** Ben Allushuski  
**Address** 306 E Jackson St, 6n  
**City State 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 is a Stormwater Improvements and Best Management Practices (BMPs) Implementation project located within the Lower Peninsula Watershed in the City of Tampa. The Lower Peninsula Watershed is approximately 5,508 acres in area. This project is the next step for the recently completed Lower Peninsula Watershed Management Plan (N710) in which the City of Tampa has identified, through the BMP Alternative Analysis phase, two (2) priority sub-basins within the Lower Peninsula Watershed to implement flood protection and water quality improvements. During the Alternative Analysis phase of the WMP, the City of Tampa identified a total of eight (8) Capital Improvement Projects to address flood protection and water quality improvements throughout the Lower Peninsula Watershed. The City of Tampa has selected two of those projects and has decided to combine them and call the project the "Southeast Region" project. The City of Tampa intends to construct all eight projects in the future, however, this application is only for the Southeast Region project at this time. An overall watershed map is attached to this application for further clarification. Chronic and widespread flooding occurs currently and historically within the Lower Peninsula Watershed. With the exception of a few man-made features (i.e. bridge structures and landfills that reach a high elevation of 42.0 feet North American Vertical Datum of 1988), most of the peninsula lies below elevation 20.0 feet. Topography varies from a high of elevation 20.0 at the center of the Peninsula along Euclid Avenue, to a low of sea level along the coastline of the peninsula. The limited topographic relief contributes to major street flooding and repetitively-flooded structures within the Lower Peninsula Watershed. This project aims to alleviate those issues.

**Benefit:**

This project will decrease the 5-year/8-hour Critical Duration floodplain for streets and structures, as well as remove approximately 622 lbs/year TN, and 178 lbs/year TP within the Southeast Region of the Lower Peninsula Watershed. The measurable benefit of this project will be the construction of approximately 4,700 LF of 4'x6' box culvert, 3,000 LF of 38"x60" ERCP, and a 15-acre flood storage area with passive park amenities. A benefit/cost analysis was performed for this project using SWFWMD's benefit/cost spreadsheet tool. The benefit/cost ratio of this project is 0.80.

**Cost:**

The total project cost for this multi-year project is approximately \$25,000,000. This application is for the first year of funding for the Third Party Review at \$70,000. Design costs are estimated to be \$4,000,000 and construction costs, based on an Engineer's Preliminary Opinion of Probable Construction Costs, to be \$21,000,000. The City of Tampa will be completing the 30% Design Phase on its own with the intention of further refining the current cost estimates, benefit/cost ratio, and water quality nutrient removal amounts as the design progresses.

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

As of October 1, 2019, the City of Tampa will now be a Class 5 Community Rating System (CRS) community. This improved rating through the National Flood Insurance Program (NFIP) provides resident's in the City with a 25% discount on their flood insurance policies. 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. The City of Tampa also has a Stormwater Assessment Program that includes a Service Assessment and an Improvement Assessment. The Service Assessment has been in existence since 2003 as described in Resolution 2003-937. The Improvement Assessment was adopted in 2016 as described in Resolution 2016-706. The Service Assessment is an annual non-ad valorem assessment that pays for operations and maintenance of the existing stormwater system. Services include street sweeping, pond maintenance, pipeline system cleaning, outfall cleaning, ditch maintenance and miscellaneous micro-projects ancillary to maintenance activities. The Improvement Assessment is an annual non-ad valorem assessment that pays for capital improvements associated with the stormwater system in the City of Tampa. Improvements include system capacity increases, treatment facilities such as ponds, ditches and baffle boxes, new pipelines and box culverts, pump stations, backflow valves, inlets, curb and gutter systems, as well as roadway regrading to improve flow patterns.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share			35,000	12,465,000	12,500,000
Hillsborough River			35,000	12,465,000	12,500,000
Total			70,000	24,930,000	25,000,000

**Matching Fund Reduction**

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

**Timelines**

Begin Third Party Review of 30% Design	10/01/2020
Complete Third Party Review of 30% Design	06/01/2021
Begin Construction	12/01/2021
Complete Construction	12/01/2023

**Data Collection Assessment:**

No data will be collected for this project

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Joe's Creek BMP and Lower Floodplain Creation  
**Project Number** Q196  
**Cooperator** Pinellas County  
**Department** Public Works  
**Contact Person** Jennifer Shannon  
**Address** 14 S Ft. Harrison, 4th Floor  
**City State Zip** Clearwater, FL 33756  
**Phone #** 727-464-5674  
**Email** jshannon@pinellascounty.org

**Project Type:**

Water Supply  
  Water Quality  
  Flood Protection  
  Natural Systems

**Strategic Initiatives:**

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

**Indicate All Counties to Benefit From Project:**

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

**Project Description/Benefit/Cost**

**Description:**

This project involves WMP model refinements & study to develop the BMPs of the Joe's Creek WMP & evaluate improvements to the Joe's Creek main channel, which flows to Cross Bayou & Boca Ciega Bay, a SWIM priority waterbody. While the December 2016 Joe's Creek WMP Updated ICPR model meets SWFWMD's G & S, large sub-basin areas fail to account for surface storage within surcharged collection systems & contribute excessively high inflows to the channel. This will allow for better information to vet flood control & water quality projects & better predict proposed flood stages. The deliverables will include a more detailed ICPR model in the regions of the proposed projects with a PER reviewing each of the following projects: Joe's Creek Lower Floodplain Creation, Greenway Trail & Channel Improvements— Joe's Creek main channel is within a 150-foot-wide right of way with a 15-foot-deep trapezoidal grassed typical section with maintenance berms at the top of bank. This project involves reshaping Joe's Creek with a wider channel cross section with by lowering the floodplain to the channel bottom & a recreational trail on the top of bank. Reshaping the main channel is anticipated to increase storage, provide more habitat, & improve the tailwater conditions for contributing systems thus reducing floodplain extents & stormwater inflows into the sanitary system. This project will be designed to include a trail on one top of bank, trail & habitat forest creation on the lower floodplain, & a wider channel for conveyance & storage. Modeling will evaluate the effects of forested (stream or lake bottom land swamp) & herbaceous wetland revegetation over time, determine requirements for interim flow restrictors to prevent downstream impacts prior to formation of denser forested stream vegetation. This PER & stormwater model will provide the basis of design for the improvement of this intermediate system.55th St Stormwater Conveyance & Water Quality Improvements--This project involves design of the pipe & ditch system within the unimproved 55th St right of way within Pinellas County & Kenneth City from 54th Ave N to Joe's Creek. The project goals are to provide water quality treatment in the 55th St ditch right of way, reduce/remove erosive conditions, improve slope stability, replace pipes under roadways, & improve connections with tributaries & the conveyance system. This will be the basis for design & construction of the unimproved 55th St Ditch Conveyance Improvements. WQ-5 Joe's Creek Dry Detention Pond—this upland space adjacent to Joe's Creek provides diversion of stormwater flows from high density residential areas & commercial & residential areas. Potential water quality improvements are TN reduction of 107 kg/yr & TP reduction of 22 kg/yr. WQ-6 Joe's Creek (Tidal) 70th Ave N Pond Pre-Treatment—this BMP would accept diverted inflow from a nearby piped system. Potential water quality improvements are TN reduction of 108 kg/yr & TP reduction of 19 kg/yr. FC-7 Construction of pond on 62nd Ave N—May include pollutant reduction. FC-3 Improving the bridge opening at 34th St—there are 2 existing 84" by 120" culverts under 34th St N & Channel 1(RD0150A & RD0150B). By adding a third 84" by 120" culvert, 81 structures are removed from the 100-year inundation polygon. FC-4 Improving the bridge opening at 49th St—there are 2 existing 108" by 120" culverts at 49th St N & Channel 1 (RD0570A & RD0570B). By adding a third 108" by 120" culvert, the level of service in 2 basins is improved. A structure will also be

removed from the 100-year floodplain. WQ-2 Greenway Park Dry Retention Pre-treatment—The anticipated load reduction would be 607 kg/yr for TN & 113 kg/yr for TP. WQ-1 Silver Lake Pre-Treatment—Using in-situ soils, TN reduction would be 77 kg/yr & TP reduction would be 16 kg/yr.

**Benefit:**

This project will provide the following benefits to the watershed:

- Increase in stormwater storage for an intermediate stormwater system
- Create lower tailwater conditions for contributing stormwater systems
- Decrease in flood stages
- Decrease number of structures in the 100-year floodplain
- Increase in water quality
- Natural habitat creation
- Creation of multi-modal transportation (walking, cycling, kayaking/canoeing).

**Cost:**

\$360,000 for FY 2021. FY 2022 funding application for another \$360,000 will occur next year.

**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 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.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share			360,000	360,000	720,000
Pinellas Anclote			360,000	360,000	720,000
Total			720,000	720,000	1,440,000

**Matching Fund Reduction**

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

**Timelines**

Hydrologic and Hydraulic Model Refinement	09/24/2021
Preliminary Engineering Report	09/16/2022

**Data Collection Assessment:**

- Land Survey
- Mapping/GIS data
- Other data collection: Geotechnical

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Starkey Road WMP Update  
**Project Number** Q199  
**Cooperator** Pinellas County  
**Department** Public Works  
**Contact Person** Paul Miselis  
**Address** 22211 Us Highway 19 North  
**City State Zip** Clearwater, FL 33765  
**Phone #** 727-464-8921  
**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 update to Starkey Road watershed management plan update (WMP) that results in recommendations for drainage, water quality and natural systems improvement projects. The Starkey Road Watershed covers approximately 11.6 square miles of central Pinellas County.

A formal watershed management plan was completed in 2013. With Pinellas County being a highly urbanized area with continuous redevelopment, the watershed has seen major alterations to hydrology and hydraulics. These changes would be captured by the continued effort to keep the watershed management plan up to date.

**Benefit:**

The contractual Measurable Benefit will be the completion of an updated WMP that identifies floodplains, establishes LOS, and evaluates BMPs to address flooding concerns, water quality and natural systems in the watershed.

**Cost:**

This request is for the first year of a three-year project, whose total project amount is estimated to be \$500,000.

**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 include stormwater maintenance and related public outreach and 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	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share			75,000	175,000	250,000
Pinellas Anclote			75,000	175,000	250,000
Total			150,000	350,000	500,000

**Matching Fund Reduction**

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

**Timelines**

**Watershed Management Plan**

Milestone	Projected Date
Procurement	01/31/2021
Project Development	03/31/2021
Watershed Evaluation	09/01/2021
Floodplain Analysis	05/01/2022
FPLOS and BMP Alternatives Analysis	11/01/2023
SWRA and BMPs for Water Quality	06/01/2024

**Data Collection Assessment:**

Land Survey

Mapping/GIS data

Other data collection: LiDAR, rain, flow and water quality data will be sourced from existing monitoring efforts.

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Plant City McIntosh Park Integrated Water Management Plan Phase III  
**Project Number** Q206  
**Cooperator** Plant City  
**Department** Utilities Department  
**Contact Person** Lynn Spivey  
**Address** 1802 Spooner Dr.  
**City State Zip** Plant City, FL 33523  
**Phone #** 813-757-9288 ext4811  
**Email** lynn11cs@gmail.com

**Project Type:**

Water Supply  
  Water Quality  
  Flood Protection  
  Natural Systems

**Strategic Initiatives:**

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

**Indicate All Counties to Benefit From Project:**

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

**Project Description/Benefit/Cost**

**Description:**

McIntosh Park Integrated Water Master Plan provides additional stormwater treatment and the beneficial reuse reclaimed water. This funding application takes project from 30% peer reviewed design to final design, construction documents, and begin construction. The next task will be the Detailed Design phase and will include design drawings and specifications. Includes 100% bid-ready design package and permitting and agency coordination will proceed concurrently with the design phase and include Environmental Resource Permit (ERP) and 404 Dredge and Fill permitting support. The project will begin to construct over 100 acres of new wetlands on the remaining land within McIntosh Park to improve hydroperiods in the existing approximately 30 acres of the existing wetlands treatment system previously ditched through the construction of additional wetlands, their interconnections, and reclaimed water inputs. Construction also includes stormwater pump station (s) as necessary to route water from East Side Canal system to the western portion of the park's newly created wetland system to increase the storage capacity and improve flooding. Construction costs also include wetland planting and construction inspection observation to ensure planting and grading plans are constructed to design. Anticipated approximately three months of construction will occur in fiscal year 2021.

**Benefit:**

Over 100 acres wetland treatment nutrient reduction 1000 lb/yr TP, 2,000 lbs/yr of TN. Fecal coliform bacteria reduction through capture a larger volume of first flush. Improve Hydrologically Impacted Natural Wetlands, Ecological Restoration, Surficial Aquifer Recharge. A quantification of the resource benefit includes; 100-150 Acres of treatment wetlands, 30 acres of improved hydrologically impacted natural wetlands, 1.5 MGD of reclaimed water beneficially reused. Cost benefit; \$75,000 Acre of treatment/restoration, \$803 Per pound TP, \$401 Per pound TN. Benefits Blackwater Creek, Hillsborough River, Tampa Bay

**Cost:**

Take project from completed 30% peer review design to final design, permitting, and project management \$750,650  
 Begin construction of over 100 acres of wetlands (grading, planting, control structures) estimated for FY 2021 \$3,600,000  
 Future Funding FY2022 \$10,775,000  
 Project total \$14,375,000

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

McIntosh Park Integrated Water Master Plan Phase I feasibility study investigates a 100 to 150-acre expansion of the wetland system to increase stormwater storage to increase stormwater treatment capacity. The project will investigate the feasibility of creating additional wetlands to accommodate excess surface water and all or some of the available reclaimed water flow. In addition to the improvement in water quality, the project would result in wetland enhancement. The study will include a literature review to gather existing data, wetland delineation and classification, preliminary geotechnical investigation, preliminary water quality sampling, surface water modeling, and water quality modeling. The project will advance a preferred project alternative that will be modeled to determine the layout of the proposed wetland system.

In Phase IIa, completed simulation modeling, preliminary design (30% design) will be prepared detailing the wetland footprint. The preliminary design will include the development of drawings and specifications for all proposed components, including wetlands and conveyance infrastructure. The preliminary design package will include a Preliminary Design Report (PDR) describing the Basis of Design for the Project. An Opinion of Probable Construction Costs will be included. A meeting will be held to discuss the Draft PDR and drawings. Comments will be incorporated, and a Final PDR package submitted to Plant City and the SWFWMD.

Phase IIa includes 100% bid ready design package . Permitting and agency coordination will proceed concurrently with the design phase and include Environmental Resource Permit (ERP)and 404 Dredge and Fill permitting support. To facilitate the public access to McIntosh park the project would include improvements through educational kiosks boardwalks and walking trails. The project deliverables would include Final design documents for the proposed project, and all appropriate submittals and correspondence with the permitting agencies.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share	250,000	337,175	2,175,325	5,387,500	8,150,000
Hillsborough River		337,175	2,175,325	5,387,500	7,900,000
Total	250,000	674,350	4,350,650	10,775,000	16,050,000

**Matching Fund Reduction**

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

**Timelines**

**FY 2021**

**Milestone**

Final Design

**Projected Date**

10/29/2021

**FY 2021-2022**

**Milestone**

Construction

**Projected Date**

12/30/2022

**Data Collection Assessment:**

No data will be collected for this project

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Griffin Park Flood Abatement Project  
**Project Number** Q210  
**Cooperator** Pasco County  
**Department** Stormwater Management  
**Contact Person** David Sua  
**Address** 4454 Grand Boulevard  
**City State Zip** New Port Richey, FL 346525402  
**Phone #** 727-834-3611 ext1041  
**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:**

Griffin Park is an older medium-density residential community that is located in the southeast quadrant of the intersection of SR 52 and Little Road. The community floods each year, primarily due to a lack of adequate storage in shallow depressions in the terrain, as well as inadequate conveyances throughout the community. Retention storage in natural depressions within the community do not have positive outfalls to Bear Creek and appear to function as a minor closed sub-basin. Some roads in Griffin Park become impassable during small and large flooding period and generally result in numerous complaints from the residents. The historic method of flood abatement remains, to date, the use of water tanker trucks and pumps which can take several days. The Griffin Park Flood Abatement Project will abate flooding in the Griffin Park community by creating new storage and new storm runoff conveyance facilities in the community, that connects directly to Bear Creek, after some water quality treatment. The goal is to provide positive outfall for Griffin Park runoff to the southerly Bear Creek, using a series of new roadside ditches, pipes, inlets and new stormwater quality treatment system that will hydraulically connect to Bear Creek.

**Benefit:**

The project will abate flooding in the Griffin Park community, especially during smaller frequency events and eliminate the need for repeated water tanker truck trips.

**Cost:**

Total project cost is estimated to be \$1,8000,000.00, with a benefit/cost ratio of 4.0.

**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 2018,

100% of Pasco County Utilities' wastewater was reused. Effective October 1, 2018, the bulk rate charged for the use of reclaimed water is \$0.34 per 1,000 gallons for customers that have storage capability. All other bulk customers that feed directly off of the system will be charged \$0.67 per thousand gallons used. Residential irrigation customers will be billed a flat rate of \$15.39 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	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share			900,000		900,000
Hillsborough River			900,000		900,000
Total			1,800,000		1,800,000

**Matching Fund Reduction**

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

**Timelines**

**Griffin Park Flood Abatement Project**

Milestone	Projected Date
Start Design and Permitting	02/03/2021
Complete Design and Permitting	06/01/2021
Bidding	09/01/2021
Commence Construction	10/01/2021
Complete Construction	01/01/2022
Statement of Completion and As-built Submittal	03/01/2022

**Data Collection Assessment:**

- Lithologic/Geophysical data     Land Survey
- Mapping/GIS data

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Hillsborough County SCADA System Long Term Planning (Stream/Lake Warning System Installation)  
**Project Number** Q213  
**Cooperator** Hillsborough County  
**Department** Public Works  
**Contact Person** Jie Tong  
**Address** 601 E Kennedy Blvd 22nd Floor  
**City State 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:**

FY 21: Install 60 SCADA system at existing staff gages locations (\$400,000). Future (FY 22): Installation of the remaining 150 proposed gages with SCADA after the completion current study & planning (FY 19-20): 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:**

Continuation of FY19 CFI (SWFWMD Q001): 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 full-time 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.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
Applicant Share	100,000		200,000	700,000	1,000,000
Hillsborough River	100,000		200,000	700,000	1,000,000
Total	200,000		400,000	1,400,000	2,000,000

**Matching Fund Reduction**

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

**Timelines**

**Construction Complete**

<b>Milestone</b>	<b>Projected Date</b>
9/30/2022	09/30/2022

**Kick - off meeting**

<b>Milestone</b>	<b>Projected Date</b>
10/30/2020	10/01/2020

**SCADA System Design Plan**

<b>Milestone</b>	<b>Projected Date</b>
9/30/2021	09/30/2021

**Data Collection Assessment:**

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

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Conservation - TBW Demand Management  
**Project Number** Q215  
**Cooperator** Tampa Bay Water  
**Department** Planning And System Decision Support  
**Contact Person** Ivana Kajtezovic  
**Address** 2575 Enterprise Road  
**City State Zip** Clearwater, FL 337631102  
**Phone #** 727-791-2345  
**Email** ikajtezovic@tampabaywater.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:

Tampa Bay Water, as part of its Long-Term Water Supply Plan update, is required to evaluate and update their Demand Management Plan (DMP) every five years. An update to a 2013 DMP in 2018 determined that demand-side efficiency opportunities can cost-effectively defer supply capacity development in the Tampa Bay region and sustain existing supply capacity. In December 2018, after submittal of the a funding grant for 2020 implementation of the DMP, the Tampa Bay Water Board officially approved the DMP as part of its long term water supply plan. The 2018 DMP evaluated water use and savings potential in the three main sectors of demand in the region; single family, multi-family and non-residential water uses. Technologies and programs specific to end uses within those sectors, originally developed for the 2013 report, were evaluated successfully to illustrate application can increase efficiency of water use and cost effectively defer the need for capacity development based on programs beginning in WY2020 and ending in WY2030 using the Alliance for Water Efficiency's Conservation Tracking Tool (version 3). The following 11 major activities were identified in the evaluation: • Residential HE Toilets, SF (DMP) • Residential HE Toilets, MF (DMP) • CII Valve-Type HET Rebate- 20 yrs (DMP) • CII Tank-Type HE Toilet • CII 1/2 Gallon Urinal - 20 yrs (DMP) • CII Spray Rinse Valve (DMP) • CII Dishwasher\_Conveyor (DMP) • CII Cooling Tower (DMP) • SMS/ET Irrigation Controller, SF (DMP) • Landscape Modification – Florida Water Star (DMP) • SF, Alternative Irrigation Source (DMP) Alternative irrigation source activities (shallow well point systems currently) are limited to defined areas where impacts to the upper Floridan Aquifer will not occur. Since August 2018, Tampa Bay Water staff has worked with its Member Governments to develop an acceptable implementation strategy consistent with Tampa Bay Water governing requirements. Program element implementation was agreed to by the Tampa Bay Water Board and the Agency is moving forward with incentive program implementation beginning in March 2020. DMP program elements specifics include: • The DMP accounts for increases in efficiency that have occurred passively (toilets) and those due to active implementation by Member Governments to eliminate double counting issues and helps to eliminate the potential of free riders and installation where savings might be minimal. • Market penetration rates of programs were consistently applied across Tampa Bay Water's member service areas and sectors. • Where programs were anticipated to have slow uptake, penetration rates were lowered (ex: Cooling Towers). • Within the 11 program elements identified, implementation rates can and will vary while the total costs will not exceed quantities identified. • Overhead costs are average estimated costs and will vary based on year one values. • Actual program implementation will start in spring of 2020. • A Demand Management Working Group represents Member Governments and their interests in the implementation process from a regional perspective. Individual Member issues are dealt with between the Member and the selected 3rd Party Administrator. The objective of this effort is to increase the likelihood active demand management measures provide at least 11 mgd of potential savings between 2020 and 2030. Most of the 11 programs identified cost less than \$0.50/1000 gallons and are about 1/10th the cost of new conventional supply projects identified for the

2018 Master Water Plan update. Therefore, they provide a greater financial benefit to utility customers than development of water supply sources and optimizes use of existing potable water supplies in the region.

**Benefit:**

This project is designed to increase the efficiency of existing potable water resources in the Tampa Bay region through and with Member Government participation. Anticipated savings are up to 0.48 mgd in 2020 (6 months implementation initial year) accelerating to about 1 to 1.1 mgd per year between 2021 to 2030, with an overall cumulative total of around 11 mgd by the end of 2030. The Alliance for Water Efficiency Conservation Tracking Tool was used to calculate benefit to cost ratios and program elements to the utility (in this case Tampa Bay Water’s cost to its Member Governments). The overall ratio is varying from 1.7 at 2.0, based on some variation in potential cost (Meaning for every dollar spent on these programs overall approximately 2 dollars will be saved in potable water costs to Tampa Bay Water Member Governments). These numbers do not include the value of reducing greenhouse gas emissions associated with production and pumping of water sources from Tampa Bay Water or its Member Governments. Measure implementation was estimated amongst Tampa Bay Water’s Member Government service areas based on consistent application of market penetration rates to specific types of water use (categories within three sectors- SF, MF and NR) as identified in Tampa Bay Waters’ demand forecasting database. Although there is an option to opt out of conservation implementation by Member Governments in the current plan, offsetting any potential demand savings through increased market penetration in other areas, development and adoption of other cost-effective demand management programming will be identified in future years to offset these potential longer term shortages in savings. Based on current water demand forecasts these savings will defer the need to develop about 12.5 mgd source of supply from 2030 to 2045. Program element implementation will begin just prior to the spring dry season in early 2020. The goal is to create an understanding of opportunity with the benefitted public prior to the program beginning so potential applicants will be ready to use resources once they become available. It is anticipated the Agency and Member Governments will work through the selected 3rd Party Administrator to promote programs in the non-residential and multi-family sectors, the Florida Irrigation Society in the outdoor programs in the single-family sector, and the Tampa Bay Builders Association (through SWFWMD leadership on Florida Water Star) when dealing with new home development. Marketing and advertising will also occur through interaction between a 3rd party Program Administrator and Member Governments to applicable parties on a recurring basis to clearly incent customers to implement changes that will save them money and water resources.

**Cost:**

The program are broken down into 11 one-year funding breakdowns. The first year of the program is designed to begin around the middle of the water year ( 6 months implementation initial year) with estimated incentives less than ½ proposed for future years. Modification of costs were made for two elements after final submittal to SWFWMD and are not part of the 2020 SWFWMD funding: 1. Florida Water Star implementation costs were raised from \$725 to \$1025/incentive due to lack of success occurring in other markets, and 2. Dedicated marketing costs were added for 2020 (\$275,000) and are proposed at ½ that rate (\$137,500) from 2021 forward . These occurred after submittal of first year costs. Total year 2 (2021) costs are estimated at \$3,238,224 with a 50% split between SWFWMD and Tampa Bay Water proposed (\$1,619,112). Estimated program activities with costs savings rates and other ancillary information is provided in Table 1 (attached). The range of savings associated with different penetration of programming (high and low) are provided in Table 2.

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

N/A

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share		643,213	1,619,112		2,262,325
General Fund-District Wide			1,619,112		1,619,112
Total		643,213	3,238,224		3,881,437

**Matching Fund Reduction**

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

**Timelines**

**Demand Management**

Milestone	Projected Date
Staff develops formal structure for program implementation with member governmen	04/30/2020
Board includes budget for funding programs	04/30/2020
Implementation strategies for individual programs developed	06/30/2020
Implementation of incentive programs	09/30/2020
Closeout	10/30/2020

**Data Collection Assessment:**

Other data collection: Conservation metrics and regional water use & savings

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** FY2021 Tampa Bay Environmental Restoration Fund  
**Project Number** W024  
**Cooperator** TBEP  
**Department** Executive  
**Contact Person** Maya Burke  
**Address** 263 13th Avenue S., Suite 350  
**City State 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 9 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 program open to public entities (including SWFWMD) and NGOs, with project awards from \$25,000 to \$250,000 to support habitat restoration, water quality improvement and environmental education. Project proposals will be solicited through a widely-distributed Request for Proposals early in 2021, 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 2021. All funded projects will be initiated by September 2021, and are generally 1-3 years in duration. In the first seven years (2013-2019), SWFWMD CFI funds were matched with other public and private sources to provide nearly \$5.6M for 65 competitively-awarded projects. \$1.45M has been awarded to nine 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 seven years (2013-2019), SWFWMD CFI funds were matched with other public and private sources to provide funds for 65 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; 2200 linear feet of living shoreline; 89.5 acres of wetland habitat enhanced through hydrologic restoration; 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 eighth year of the TBERF grant program (projects are scheduled to be selected in spring 2020) 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 FY2020 TBERF. Restore America's Estuaries (RAE), a 501(c)(3) non-profit organization, 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

FY2021, the CFI request of \$350,000 is expected to be met with funds from Hillsborough County, Pinellas County, The Mosaic Company Foundation, TECO, and FDOT. 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 since the program has no regulatory authority or ability to pass ordinances. 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 an internationally-recognized restoration effort in Tampa Bay. The CCMP also addresses water conservation and management issues.

<b>Funding Source</b>	<b>Prior Funding</b>	<b>FY2020 Budget</b>	<b>FY2021 Budget</b>	<b>Future Funding</b>	<b>Total Funding</b>
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	02/28/2021
RFP Evaluation and Award	05/31/2021
NTP Issued to Contractors	09/30/2021
FY21 Projects Closed Out/Measurable Benefits Achieved	09/30/2024

**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

## FY2021 Cooperative Funding Initiative Application Form

**Project Name** Weedon Island Preserve Salt Marsh Restoration  
**Project Number** W211  
**Cooperator** Pinellas County  
**Department** Parks And Conservation Resources Department  
**Contact Person** Jennifer Calvert  
**Address** 12520 Ulmerton Road  
**City State Zip** Largo, FL 33774  
**Phone #** 727-582-2866  
**Email** jcalvert@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 Weedon Island Tidal Wetland Enhancement is a proposed cooperative funding initiative project between Pinellas County and the Southwest Florida Water Management District (SWFWMD). Located within Pinellas County, the Weedon Island Preserve (Preserve) is an approximately 3,190-acre site with more than five miles of frontage to Tampa Bay, a SWFWMD Surface Water Improvement and Management (SWIM) Program priority water-body. The preserve consists primarily of estuarine habitats with some supporting uplands and is a sanctuary for many species of fish, birds, and small mammals. Intensive mosquito ditching has resulted in a loss of wetland area, altered local hydrology, and provided opportunities for establishment of invasive species. A feasibility study was conducted in 2018, under SWFWMD Project W217, to evaluate potential opportunities for habitat enhancement projects throughout a 1,100-acre portion of the Preserve. Enhancement projects fell under three categories: spoil mound removal, nuisance species removal, and hydrology/water quality improvements. Areas identified for potential enhancement were broken down into study units allowing for a review of involvement with access restrictions, cultural resources, and permit complexity. Multiple techniques were reviewed for each enhancement to identify the most effective spoil mound removal and mosquito ditch filling approach. Ultimately, an approach termed "Walk In, Dig Out" (WIDO) was determined to be effective in achieving proper elevations for spoil mound removal with acceptable costs. Hydrology improvements will include the dredging of impounded ditches and desilting ditches. Additional improvements include the use of spoil mound material to fill ditches in areas of stagnant water and to facilitate sheet flow of the tidal waters during the diurnal regime. A 42.4-acre pilot project area was identified within the northern portion of the preserve. Pinellas County seeks cooperative funding from SWFWMD for the enhancement of the pilot project area. This project is being considered a large-scale restoration project incorporating multiple elements. This will be a multi-year project with fiscal year 2021 funding serving as the design and permitting phase and fiscal years 2022 funding and beyond serving as the construction phase.

Based on District's strategic goals, the proposed project aligns with the District's core mission relating towards natural systems whose goal is to preserve, protect, and restore natural systems to support their natural hydro-logic and ecological functions. To meet the strategic goals, the District is implementing strategic initiatives. The proposed project contributes to the conservation and restoration strategic initiative in which the goal is the restoration and management of natural ecosystems for the benefit of water and water-related resources. In regard to regional priorities and objectives, the Tampa Planning Region is focused on Minimum Flows and Levels (MFLs) recovery, improving water-bodies, and flood protection. The proposed project will contribute towards improving Tampa Bay which is a SWIM priority water-body and has been designated as an "Estuary of National Significance." The three main challenges faced in the Tampa Bay watershed are altered and lost coastal uplands and wetlands, nonnative species

spread, and water quality degradation. The proposed project will aim to restore altered wetlands and reduce nonnative plant species. A full breakdown of project details is included in the enclosed application document.

**Benefit:**

This large-scale restoration project incorporates multiple elements and will include ecosystem enhancement through the mechanical removal of spoil mounds and hydrology improvements including the dredging of impounded ditches and desilting ditches. Additional improvements include the use of spoil mound material to fill ditches in areas of stagnant water and to facilitate sheet flow of the tidal waters during the diurnal regime. The Uniform Mitigation Assessment Method (UMAM) was used to assess the measurable benefit of the project. Figures 5 and 6 in Appendix A depict the project area pre- and post-construction. The removal of an estimated 8.7 acres of upland spoil mounds will result in a relative functional gain of 6.87 units. Temporary impacts resulting from the placement of fill in wetlands for the temporary access road will result in approximately 2.80 acres of impacts for a functional loss of 2.52 units. Once the temporary access roads are removed and grades restored, these areas will naturally revegetate and self-mitigate for a relative functional gain of 2.21 units. The net result of removal of upland spoil mounds, temporary impacts from access roads, and removal of the access roads is 6.56 units of functional gain. Hydrology improvements will provide restoration to existing ditches and remaining black mangrove areas. The filling of 3.0 acres of ditches with poor circulation will re-establish a proper diurnal sheet flow of tidal waters and will result in a relative functional gain of 0.72 units. The dredging of 2.1 acres of impounded ditches and the creation of deep water refugia during periods of very low tides and cold weather events will result in a relative functional gain of 0.50 units. The existing 25.4 acres of black mangrove will benefit from the removal of the upland spoil islands and reestablishment of proper diurnal tidal sheet flows and results in 1.52 units of relative functional gain. Large-scale restoration projects incorporating multiple elements are focused on acres restored and the cost effectiveness is based on the cost per acre restored. Based on a project area of 42.4 acres with an estimated project cost of \$938,000 in which the entire project area will receive benefit from the ecosystem enhancement and hydrology improvements, the cost effectiveness of the project is approximately \$22,118 per acre restored. For further detailed benefits please see the attached full application on pages 5 to 7.

**Cost:**

The proposed project is an expansion of the Weedon Island Tidal Wetland Restoration Feasibility Study with SWFWMD Project #W217 funded in FY2017. The next two phases of the project will include the design and permitting phase and the construction phase for a total project cost to completion of \$937,801. Pinellas County Parks and Conservation Resources will be splitting the last two phases of the project into fiscal years 2021 for design and permitting and fiscal years 2022-2023 for the construction phase. With this grant proposal a request is only being made for fiscal year 2021 funding for the design and permitting phase with a total project cost of \$112,536. Pinellas County is proposing a 50/50 split of the proposed cost estimate for the design and permitting phase and has committed \$56,268 for a match in fiscal year 2021. The design will be broken into three phases, 30% plans or conceptual design, 60% plans suitable for permit applications, and final design plans. After design and permitting is complete, Pinellas County will construct the enhancement project. The proposed cost for construction is \$825,265 and Pinellas County will seek a funding match of \$412,632.50 from SWFWMD for Fiscal Year 2022 or 2023 during upcoming grant funding cycles. It is anticipated that with the success of the enhancement of the pilot project area, Pinellas County will seek cooperative funding from SWFWMD for future phases of enhancement within Weedon Island Preserve. For a detailed budget breakdown please see the attached full application on pages 7 to 11 as well as Appendix B.

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

A feasibility study was previously conducted under SWFWMD Project W217 and Pinellas County PID 000083A. The project was to conduct a study to identify and determine the feasibility of natural systems restoration projects within an approximately 1,100-acre portion of the Preserve. The project evaluated all potential opportunities for future habitat restoration/enhancement projects with attention paid to environmental conditions, permitability, estimated costs, and other considerations as deemed appropriate. Specific restoration/enhancement activities included spoil mound removal, nuisance species removal, and hydrology improvements. Currently in place to meet requirements of Section 253.034, F.S., is the 2012 Weedon Island Management Plan. Outlined within the management plan are a series of goals and objectives classified under the following categories: Habitat Restoration and Improvement, Hydro-logic Preservation and Restoration, Exotic and Invasive Species Management and Control, Imperiled Species Habitat Maintenance, Enhancement, Restoration, or Population Restoration, Cultural and Historical Resources, Public Access and Recreational Opportunities, Capital Facilities and Infrastructure: Weedon Island Preserve Cultural and Natural History Center. The next update to the management plan will occur in 2022. Within the Weedon Island Management Plan there is a long-term goal to reduce the extent and abundance of exotic invasive species in the Preserve. An annual maintenance schedule is in place to use herbicide to treat exotic vegetation. In addition to the Preserve, Pinellas County maintains additional nature parks and preserves within its park system such as Fort De Soto Park and Brooker Creek Preserve. The Weedon Island Preserve is managed "... only for the conservation and protection of natural and historical resources and for resource-based public outdoor recreation which is compatible with the conservation and protection of these public lands."

Funding Source	Prior Funding	FY2020 Budget	FY2021 Budget	Future Funding	Total Funding
Applicant Share	50,000		56,268	412,632	518,900
Pinellas Anclote	50,000		56,268	412,632	518,900
Total	100,000		112,536	825,264	1,037,800

**Matching Fund Reduction**

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

**Timelines**

**Permit and Design FY2021**

**Milestone**

**Projected Date**

Notice to Proceed  
30% Design and Permit Application Preparation  
60% Design and Permit Application Submittal  
90% Design and Final Design

10/01/2020  
03/01/2021  
05/01/2021  
10/01/2021

**Data Collection Assessment:**

No data will be collected for this project

*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](mailto:ADACoordinator@swfwmd.state.fl.us)*