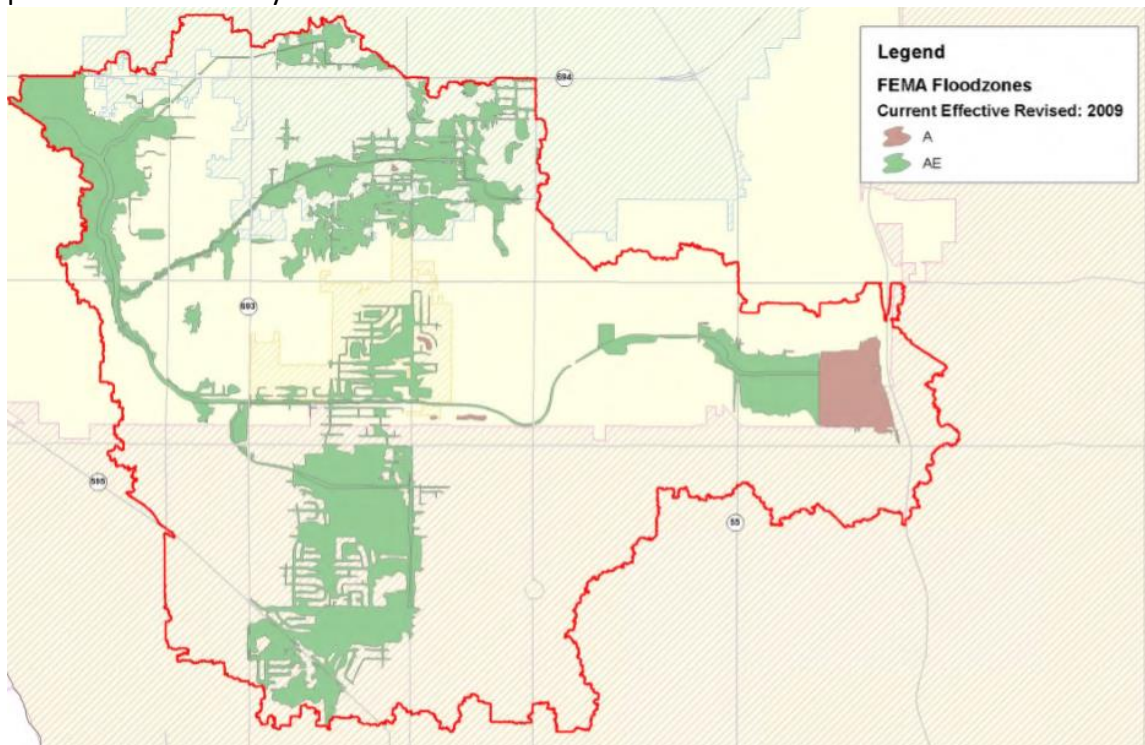


## PROJECT DESCRIPTION

### PROJECT PURPOSE

Pinellas County is seeking funding to improve the resiliency in the Joe's Creek Watershed. This project is for preliminary engineering, design and construction of the Joe's Creek Greenway Restoration, adjacent main channel improvements, regional stormwater facility, multimodal trail, and projects identified by the watershed management plan for watershed-wide flood protection, erosion control, and water quality improvements to minimize risk, improve resiliency, and catalyze redevelopment in the Lealman CRA and in the 54% of the residents in the low to moderate income areas of the watershed. These efforts are highly interdependent and will benefit from a coordinated single project approach.

Projects include the Joe's Creek Greenway Trail, main channel restoration and lower floodplain creation, Lealman regional stormwater facility, culvert restoration and upgrades, channel improvements, erosion control measures, dry retention, and improvements affecting main channel tributary systems. Other projects include local improvements to stormwater management facilities and roadways in Lealman and Kenneth City utilizing low-impact development, green infrastructure, and complete streets. At the end of the improvements, the County will follow through with updated FEMA mapping which should lower flood insurance premiums for County residents.



These planned improvements will lower the 100-year floodplain, increase native habitat, and provide a multimodal trail system for Joe's Creek which spans Unincorporated Pinellas County

## Joe's Creek Greenway Restoration and Mitigation Rebuild Florida CDBG-MIT GIP Proposal

(Lealman), Kenneth City, Pinellas Park, and St. Petersburg. The project will benefit commercial and residential property owners by increasing the flow area of the channel and providing additional overbank storage. The increase in native habitat and multimodal trails will provide Pinellas County residents and tourists more opportunities to have a respite from the highly urbanized nature of the County. Additionally, by effectively decreasing the floodplain, residential and commercial property owners benefit from reduced flood insurance premiums.

### Risk Mitigation

The project will assist in modernizing existing stormwater infrastructure and stormwater conveyance in the right of way along with providing flood mitigation. Large portions of Joe's Creek Watershed were developed from the 1940s-1970s prior to the passage of the Clean Water Act and Southwest Florida Water Management Regulations. Neighborhood stormwater systems are few and far between. Through this project, portions of the infrastructure will be updated to meet and potentially improve existing conditions created by the highly urbanized environment.

### Proposed Project Components & Outcomes

This project will include the following components with respective activities identified:

- 1) **Data Collection & Mapping** – refinement of existing stormwater model with some data collection
- 2) **Flood Modeling** – use of Inter Connected Pond Routing (ICPR) software to refine the flood models and vet the benefits of the recommended Best Management Practices (BMPs) for the watershed as well as design the regional pond and road diet.
- 3) **Adaptation Strategy Development** – Determine the effect of sea level rise on existing and proposed designs. Use this information to select the appropriate solution for portions of the watershed.
- 4) **Plan Design** – design will be based on ICPR modeling results and existing conditions.
- 5) **Construction of Design** – construction will be performed in phases to provide immediate benefits in the different sections of the project.
- 6) **Updated Floodplain Mapping** – updates to the floodplain mapping will help the residents with Low-Moderate income save money on flood insurance.

## Joe's Creek Greenway Restoration and Mitigation Rebuild Florida CDBG-MIT GIP Proposal

### Areas of Benefit

The Areas of Benefit for the project are defined as follows:

- The areas that will benefit from the data collection and mapping component of the project will be all developed land parcels along public streets and roadways within the Special Flood Hazard Area of Pinellas County.
- All critical infrastructure (transportation, sanitary sewer, potable water, etc.) potentially threatened by flooding identified by the county and its municipalities will benefit from the lower floodplain elevations.



### Targeted Risks to Mitigate in this Project

- Tropical Cyclones
- Coastal, Flash, and Inland Flooding
- Severe Storms
- Coastal Erosion
- Social Vulnerability

## PROJECT BACKGROUND

The Joe's Creek Watershed is a 9,256-acre drainage basin located in south-central Pinellas County. This large drainage basin includes parts of the cities of Pinellas Park, St. Petersburg, and Kenneth City. The Joe's Creek system includes a main branch and three tributaries identified as Miles Creek and Pinellas Park Ditch #4 and Ditch #5. Dominant land use categories in the Joe's Creek Watershed include residential, commercial, industrial, and recreational open space. The main channel of Joe's Creek flows from east to west, ultimately discharging into Cross Bayou.



A Watershed Management Plan for Joe's Creek was completed in April 2017. The plan included recommendations for additional projects to provide watershed-wide flood protection, erosion control, and water quality improvements to minimize risk, improve resiliency, and catalyze redevelopment in the Lealman CRA and other low-moderate income areas of the watershed.

By studying the recommended improvements and designing and constructing the vetted projects, residents of the county will benefit from:

- Lower floodplain elevations from the increase in capacity in the main channel of Joe's Creek
- Reducing the potential for surface water to affect wastewater, water supply, transportation, and natural gas and electricity distribution networks.
- Updated stormwater pipes, structures, ditches, and management facilities such as ponds which will meet or improve level of service currently provided
- The opportunity for designs to address sea level rise and storm surge within and adjacent to the main channel of Joe's Creek.
- The opportunity to reduce the footprint of the floodplain and potentially remove homes in the low-moderate income portion of Pinellas County out of the floodplain. This could potentially save a low-moderate income household approximately \$3,000-5,000 on floodplain insurance a year if the improvements remove their home from the 100-year floodplain or lower the floodplain.

## Resilience of Natural Infrastructure

Joe's Creek will be restored within its existing right of way with more volume available for flood storage, with adjacent greenways for recreation and additional opportunities for stormwater treatment and attenuation on other county owned sites. With the use of native plants and man-made hardening built into or under the native plants, the Joe's Creek watershed will become more resilient than it currently exists in its aging gray infrastructure state.

The roots of native forested streambanks are more resilient as they provide more strength to bank soils and provide more resistance to the force of water. In contrast, mowed man-made canals vegetated with only grass cannot protect channels from the various types of erosion that occur in the system. The native plants will require less maintenance.

## WORK TEAM

**Nancy Lamagna, PE, ENV SP**, has experience in stormwater project management. She will serve as the lead for this planning, design, and construction project.

**Rhonda Bowman, PE, CFM, ENV SP**, has experience in stormwater management, stormwater modeling, and portfolio planning.

**Jennifer Shannon, PE, CFM, ENV SP** has 25 years of professional experience with 19 years in project management, stormwater retrofits, site design review, and stormwater operations. She has worked as a consultant and at state, municipal, and county governments.

**Paul Bellhorn, PE**, has 45 years of experience in site development, roadway design, and stormwater management.

**Paul Miselis, PE, CFM, ENV SP**, has 26 years of professional experience in water resources engineering and watershed and serves as a lead stormwater engineer in the Pinellas County Public Works Department.

**Anita Wang, PE**, has professional experience in stormwater management. She has worked at state, municipal, and county governments.

**Paul Berlage, PE, CFM, ENV SP**, has professional experience in stormwater modeling, site review, and stormwater management.

## PROJECT FUNDING METHODOLOGY

The requested funding amount is based on the cost of staff time and salaries, and services needed for stormwater modeling, plan design, construction, and construction engineering inspection. Cost estimates for tasks have been estimated based on past project experience and recent construction costs. Cost estimates were developed in 2019 prior to application for the Cooperative Funding Initiative for the Southwest Florida Water Management District. Costs have been estimated based on past project experience and recent construction costs.

Pinellas County will pay for the project through the Penny for Pinellas tax. Currently, there is a Cooperative Funding Initiative grant with the Southwest Florida Water Management District. The County is also pursuing grants for trails and is exploring other grant opportunities.

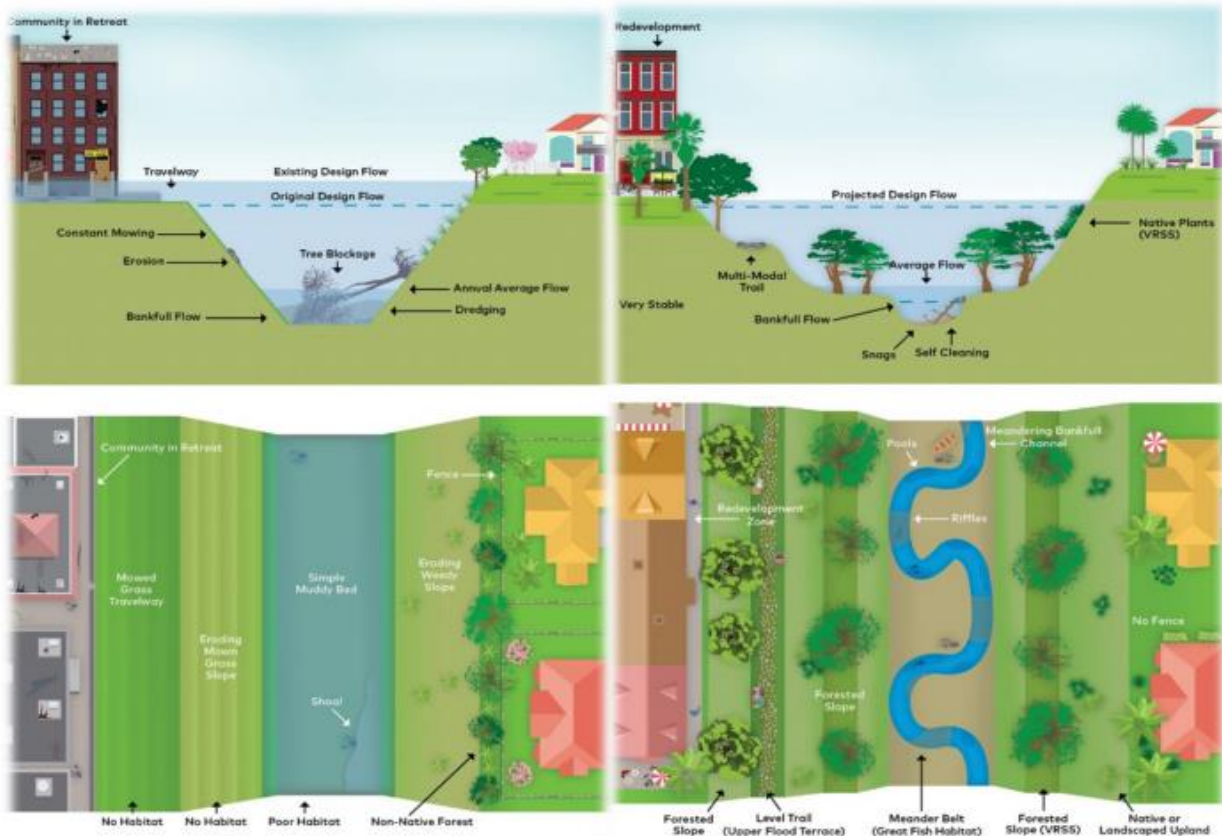
## INTEGRATION WITH COMPREHENSIVE PLAN

The first goal in Pinellas County's surface water master plan is to provide flood protection for the citizens of Pinellas County, to preserve and enhance the water quality of receiving water bodies, and to protect, enhance and restore natural resources, plant and wildlife diversity and estuarine productivity. The goal of stormwater management projects is to complement resource protection and management objectives, with emphasis placed on natural versus structural solutions.

### Anticipated outcomes

The restoration of Joe's Creek will reshape and vegetate the canal right of way using natural processes. The right of way will become a natural stream corridor complete with meandering channels, forested floodplains, and forested and non-forested in-line wetlands and ponds. Where the system cannot rely on nature alone, green technologies will be used to boost the effect of native plants.

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### Maintenance of Joe's Creek

This project will restore the stormwater flow through Joe's Creek to function for the urban landscape we have today while balancing the need for native habitat and natural stormwater functions. Maintenance of the project should be minimal as the design of the project will integrate native plantings with possible man-made reinforcements underneath the plantings. When the canal was constructed approximately 100 years ago, it was dug to drain water which harbored mosquitoes and to increase the amount of land available for development. The banks that remained forested banks are stable and the banks that received spoil and were not planted can fail from groundwater flow alone.

## Joe's Creek Greenway Restoration and Mitigation Rebuild Florida CDBG-MIT GIP Proposal

Sarasota County has studied Phillippi Creek and in tandem with their consultant has developed the Phillippi Canal Improvement Guidance Manual which provides guidance on the type of stabilization and restoration provided for the different kinds of canals that provide flow to the creek. A similar study has been performed on Joe's Creek, with exclusive focus on the main channel. The goal of this study is to include and account for the other flows and improvements throughout the watershed.

Reviewing the watershed holistically with municipal and state stakeholders will provide an opportunity to determine how the watershed will function for the existing built environment and give people an opportunity to add shape to the recreational component of the floodplain environment. The environmental, financial, and social benefits of this project are substantial for the residents and properties in the Joe's Creek Watershed.



Year 0. Edwards Bottomlands, Starke FL.  
(Drainage Area = 25 sq. mi.)



Year 3. Doe Branch 5, Hardee Co. FL.  
(Drainage Area = <1 sq. mi.)



Year 12. Maron Run, Polk Co. FL.  
(Drainage Area = 3 sq. mi.)



Year 25. Hickey Branch, Hardee Co. FL.  
(Drainage Area = 2 sq. mi.)

Stream restoration. Four Florida stream restorations in various states of maturation. Florida rainfall delivers rather extreme seasonal flow variation, leading to fluvial forms with a frequently flooded floodplain encompassing a small meandering low-flow channel. Stability depends on woody plants and continuity of sand transport facilitated by the channel morphology. Kieffer et al. (2015) identified 15 Florida stream types along gradients of watershed size, groundwater inflow, and valley slope. Biophysical integrity relies on understanding how watershed conditions affect those variables.



## **COMMUNITY VALUE**

Pinellas County envisions a radically improved Joe's Creek corridor that offers recreational opportunities, supports multimodal transportation, and restores the naturally adaptive qualities of Joe's Creek providing improved resilience, flood mitigation benefits, and water quality improvements. The **Joe's Creek Lower Floodplain Creation and Greenway Restoration** project combines two major infrastructure improvements that run through the low to moderate income Lealman Community Redevelopment Area (CRA):

- 1) Implementation of the recommendations of the Joe's Creek Watershed Management Plan and
- 2) The completion of the Joe's Creek Greenway, which is a co-located multimodal trail programmed by Forward Pinellas.

This multi-faceted Lower Floodplain Creation and Greenway Restoration project provides numerous benefits to the local low- and middle-income neighborhoods in Pinellas County, as well as regional benefits that extend beyond the project area. The project results in a linear park which provides a safe, inexpensive option for regular recreation and exercise for people living in the surrounding communities. In addition, the trail ties into the Pinellas Trail, as well as provides a brand-new safe multi-modal corridor to commute to both US19 and ALT19 to connect to the Pinellas Suncoast Transportation Authority system.

The streambank improvements and associated facilities, such as improved and added regional stormwater facilities, provide flood mitigation and improved resilience for the entire watershed, as improving downstream flow through these facilities allows for additional projects to be implemented even further upstream.

The restoration of the streambed to a more natural state slows flows, naturally reducing scour and erosion on the streambank, improving water quality, nitrogen reduction specifically, in the process. Since Joe's Creek outflows to Cross Bayou Canal which flows into Boca Ciega Bay, reducing nitrogen is an important water quality parameter and speaks to directly improving water quality in the regionally economically important Tampa Bay Estuary.

The restored greenway will provide what many Americans are currently seeking: close-to-home recreational opportunities, educational experiences, and access to natural landscapes. The trail will also help the surrounding communities build pride by ensuring that their neighborhoods are good places to live, have safe access to first-class recreational amenities, and ensure that children can safely walk or bike to school, or to a neighbor's home.

**Joe's Creek Greenway Restoration and Mitigation**  
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## Community Benefits and Lifelines

Table 1 outlines local and regional benefits and the lifelines they tie to.

Benefit	Local	Regional	Lifeline(s)	Comments
Restoration of Natural Environment				This benefits all rate payers in Pinellas County through implementing a design that has low ongoing maintenance commitments
Reduced Maintenance Design	x	x		
Recreational Area	x			Provides
Multimodal Transportation Corridor	x	x	T,S	
Mitigate Flooding	x	x	F,S	
Connect to Pinellas Trail	x	x	S,T, \$	
Connect to Regional Transit	x	x	S, T	Currently there is no direct connection to the local regional transit systems. The multi-modal trail
Connect to Schools, Afterschool Care	x		S, T	Provides a safe corridor for multi-modal non-vehicular movement within the local area.
Provide New Neighborhood Amenity	x		LMI	Provides a first class- amenity to a community redevelopment area and majority low-and middle-income/minority project area that
Reduce Nitrogen Loading to Tampa Bay		x	T, \$	Protects the ship channel that accesses the port for transport of goods and cruise ship passengers, protects the recreational benefits of the Bay, which is a huge economic driver for the Regional economy.

## Community Involvement

Pinellas County will coordinate with stakeholders including St. Petersburg, Pinellas Park, Kenneth City, the Pinellas Park Water Management District, and the Southwest Florida Water Management District. Partnering with adjacent communities will be necessary for construction of the main project and the smaller components of the project. As seen by the letters of support in the watershed, there is local interest and support in collaborating on watershed improvements. Based on previous flooding in the February 2006 unnamed storm, Tropical Storm Debby, and Tropical Storm Hermine, the communities will benefit from the project.

While a precise outreach approach for public comment is not defined, we do anticipate inclusion of community outreach efforts. The development of the project will be based on known existing flood elevations and drainage complaints. The adjacent communities have information on local flood complaints as well. It is important to include all available and verified information.

The County's work team will fulfill the requirements of 24 CFR 570.486 in developing a compliant citizen participation plan. The plan will accentuate participation from inhabitants in low to moderate areas which are exposed to the flood risks shown in the FEMA flood maps. This plan will be executed with the aid of consultants used for the development and design of the project.

## **CAPACITY PLAN**

Pinellas County envisions a radically improved Joe's Creek corridor that offers recreational opportunities, supports multimodal transportation, and restores the naturally adaptive qualities of Joe's Creek providing improved resilience to flood impacts, stormwater management benefits, and water quality improvements. The Pinellas County Stormwater Division has extensive experience delivering, and maintaining, capital construction projects of this nature.

County staff will manage the implementation of the project tasks and compliance with CDBG-MIT requirements. Upon grant award and execution by the Board of County Commissioners, the Project Manager will work with County Procurement to engage a Consultant(s) to undertake the design and construction of the project. The Joe's Creek Greenway Restoration Project will be completed using the traditional design/bid/build model. A qualified design consultant will prepare the design and bid specification documents in accordance with design criteria and Pinellas County's ACAD standards. Designers will be secured for the project, as necessary, through a Request for Qualifications (RFQ) in accordance with (F.S.) 287.055, Consultants' Competitive Negotiation Act, for projects over the \$4 million threshold. Construction contractors will be procured following Pinellas County purchasing ordinance via an Invitation to Bid (ITB) in accordance with Pinellas County Purchasing ordinances and 84 FR45838. This process will include all required federal and state requirements for construction contracts that include, but are not limited to, Davis Bacon and Section 3. Construction contractors are generally selected on a lowest bid basis.

The proposed team is comprised of ten experienced staff members with an average of 20 years each of capital improvement project execution and delivery and project management experience. The project manager and the combined proposed team have managed implementation of capital improvement projects ranging in dollar value from \$1 million to \$27 million, including feasibility, design, construction, and maintenance/operation. Pinellas County Stormwater Division is experienced in the execution of large capital projects, having delivered approximately \$ xx million of projects in the last five years and possessing a capital improvements plan of over \$yy million from 2010 to 2020. Likewise, Pinellas County Stormwater Division understands the commitment necessary to maintain facilities, budgeting \$17 million annually for maintenance and employing an operations and maintenance team of 77 professionals within the utility with responsibility of maintaining similar projects. The proposed delivery team is:

## **Joe's Creek Greenway Restoration and Mitigation**

### **Rebuild Florida CDBG-MIT GIP Proposal**

**PROJECT MANAGER:** Nancy C. Lamagna, PE, ENV SP, has 24 years of professional experience in project management, stormwater engineering, drainage maintenance and environmental permitting. She currently manages Capital Improvement Program projects, a drainage maintenance program, and provides technical support to the Adopt A Pond program in Pinellas County Public Works Department. She will serve as the lead for this planning, design, and construction project.

**ASSISTANT PROJECT MANAGER:** Jennifer Shannon, PE, CFM, ENV SP has 25 years of professional experience with 19 years in project management, stormwater retrofits, site design review, complete streets, and stormwater operations. She has worked as a consultant and at state, municipal, and county governments.

**DESIGN ASSISTANCE:** Rhonda Bowman, PE, CFM, ENV SP has 15 years of professional experience in water resources engineering and watershed evaluation and serves as the lead planning engineer for stormwater Capital Improvement Program projects for the Pinellas County Public Works Department. She has worked as a consultant and for county and state governments.

**DESIGN AND PRODUCTION ASSISTANCE:** Anita Wang, PE has over 20 years of civil engineering experience in site development and public infrastructure, ranging from planning, modeling, design, construction, to final certification.

**QA/QC:** Paul Bellhorn, PE, has 50 years of experience in site development, roadway design, and stormwater management. He has been with Pinellas County for 22 years.

**QA/QC:** Paul Miselis, PE, CFM, ENV SP, has 26 years of professional experience in water resources engineering and watershed planning, and serves as a lead stormwater engineer in the Pinellas County Public Works Department.

**DESIGN ASSISTANCE/BROWNFIELD ASSISTANCE (if needed):** Dan Nedvidek, PG, MS has 11 years of professional experience in contaminated land remediation, industrial and municipal stormwater permitting and compliance, and TMDL monitoring and development. He has worked for municipal governments, engineering consulting firms, and as a regulatory manager in the secondary aluminum industry.

**QA/QC AND ENVIRONMENTAL ASSISTANCE:** Paul Berlage, PE, CFM, ENV SP, has worked with the County for 33 years designing local ponds, regional stormwater ponds, and wetlands. His background in biology and civil engineering have assisted in habitat restoration. He has maintained the Countywide Stormwater Watershed Master Plans (SWMP) along with performing stormwater modeling, site review, and project management. He has reviewed County Capital Improvement Projects for over 12 years.

**DESIGN ASSISTANCE:** John Carpenter, PE, ENV SP has 24 years of professional experience with 20 years in project management of stormwater improvements, flood control, roadway improvements, and capital improvement work order contracts. He has worked as both a consultant and at county government. He has been with Pinellas County for 20 years.

## **Joe's Creek Greenway Restoration and Mitigation**

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QA/QC: John M. Linton, P.E., ISA Certified Arborist, TRAQ has 21 years of experience of experience in habitat restorations, parks planning and design, and construction management. He spent 3 years with the Southwest Florida Water Management District and has been with the County for 18 years conducting Park Design and Construction Management over a wide range of large Capital Improvement Projects.

Along with the brief staff summaries described in the Project Description section, resumes are attached to this file. The County currently has dedicated project management support through its Project Production Team which includes guidance, oversight, and quality control/quality assurance.

This project takes place wholly within the Pinellas County owned Joe's Creek right of way. Therefore, the Pinellas County Stormwater Division will execute grant award in the following manner:

- (1) Execute grant award (Pinellas County Board of County Commissioners)
- (2) Select qualified consultants for design, or solicit qualifications (depending on project value) (County Purchasing) and select designer via CCNA process and award design project.
- (3) Complete watershed management plan verification, feasibility, and update (Consultant).
- (4) Select qualified consultants for design, or solicit qualifications (depending on project value) (County Purchasing) and select designer via CCNA process and award design project.
- (5) Complete design bid and specification documents. (Consultant)
- (6) Solicit competitive quotes/bids (Project Manager and Purchasing)
- (7) Select a contractor (Project Manager and Purchasing)
- (8) Award the contract for the construction (Board of County Commissioners)
- (9) Monitor compliance with CDBG-MIT (Project Manager and team)

**Joe's Creek Greenway Restoration and Mitigation**  
Rebuild Florida CDBG-MIT GIP Proposal

## BUDGET

Project Name:	Joe's Creek Greenway Restoration and Mitigation Project	Primary Contact Name and Phone Number:	Nancy Lamagna 727-464-3449		Official Applicant Entity Name:	Pinellas County Board of County Commissioners
Project		Budget			Notes	
Description	CDBG-MIT Amount	Other non CDBG-MIT Funds	Source of Funds*	Total Funds (CDBG-MIT and Other)		
<b>Design/Planning</b>						
Plans and Specifications	\$1,600,000	\$535,000		\$2,119,234		
Surveys	\$200,000	\$0		\$200,000		
Testing	\$250,000	\$0		\$250,000		
Environmental Review	\$150,000	\$0		\$150,000		
Land Acquisitions	\$0	\$0		\$0		
Permitting	\$50,000	\$0		\$50,000		
Construction	\$22,000,000	\$0		\$22,000,000		

**Joe's Creek Greenway Restoration and Mitigation**  
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Construction Inspections	\$1,540,000	\$0		\$1,540,000	
Administration	\$0	\$0		\$0	
Totals:	\$25,744,234	\$535,000		\$26,309,234	

All funds identified for use on your project must be fully disclosed and detailed to ensure budget accuracy and no duplication of benefits. Show the sources and amounts of other funds needed to complete the project below, including local funds and grants from other agencies. Any anticipated or committed funds must also be included.

Source of Other Funds	Amount
1. Southwest Florida Water Management District, Cooperative Funding (awarded)	\$180,000
2. Southwest Florida Water Management District, Cooperative Funding (application to be submitted)	\$180,000
3. FY2021 Pinellas County Capital Improvement Program Enterprise Funds	\$360,000