

CFI Application Information

Application Id: 178
 New Project? 0
 Project Name: Study - Joe's Creek Model Update, Alternatives Analysis and Feasibility Study (Q196)
 Counties Benefited: Pinellas
 Available Programs: Springs
 Cooperator Information: Pinellas County
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Project Type and Scheduling

Project Type	Strategic Initiative
Water Quality	Water Quality Maintenance and Improvement
Flood Protection	Floodplain Management
Natural Systems	Natural Systems Identification and Monitoring

Application Milestones

Milestone: Project Commencement	Due Date: 4/1/2021
Milestone: Project Completion	Due Date: 7/31/2023

Description

(This FY22 application is for the 2nd year of a 3-yr PER project) This project involves WMP model refinements & preliminary engineering 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 2016 Joe's Creek WMP's 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 and cost estimates. 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 & 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 by lowering the floodplain to the channel bottom. 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 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" culve rt, 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" culve rt, the level of service in 2 basins is improved. A structure will also be removed from the 100-year floodplain. WQ-1 Silver Lake Pre-Treatment-Using in-situ soils, TN reduction would be 77 kg/yr & TP reduction would be 16 kg/yr. Revisit project WQ-2 Greenway Park Dry Retention Pre-treatment to coordinate with Raymond H. Neri Park.

Benefit

This PER project will provide updated and more detailed analysis, cost estimates, and water quality/flood protection benefit calculations, along with preliminary design, for the selected BMPs recommended in the 2016 WMP and other studies for Joe's Creek watershed. The County intends to move forward with design and construction of these BMPs subsequent to the PER. These BMPs will prepare the BMPs for final design/construction, to help improve water quality and flood protection within the watershed, which is listed on the County's TMDL priority list.

Cost

Total project cost = \$720,000 with the following new funding schedule being proposed: FY21 \$180,000 (SWFWMD \$90k / Pinellas County \$90k) FY22 \$360,000 (SWFWMD \$180k / Pinellas County \$180k) FY23 \$180,000 (SWFWMD \$90k / Pinellas County \$90k) This application is for FY 2022 for the remaining half of \$360,000.

Complementary Efforts

Pinellas County has a CRS ranking of Class 5 per FEMA. 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.

Application Funding

Funding Source	Prior(\$)	FY2021(\$)	FY2022(\$)	Future(\$)
Applicant Share	0	90,000	180,000	90,000
District Share	0	90,000	180,000	90,000

Application Documents

Document Name	Document Type
joescreek-map.PNG	Map
JoesCrk_Maps.pdf	Map
Prioritization Letter - CFI Ranked Projects FY22 - FE(signed).pdf	Ranking Letter
2018 TMDL Prioritization Plan.pdf	Other Document
2016_JoesCreek-Alternative_BMP_Analysis_Final_reduced-part-1.pdf	Project Plan
2016_JoesCreek-Alternative_BMP_Analysis_Final_reduced-part-3.pdf	Project Plan
2016_JoesCreek-Alternative_BMP_Analysis_Final_reduced-part-2.pdf	Project Plan
RE_Grants - Intent to Apply Form Submitted to OMB - CFI_joes-creek-BMP-Imp.pdf	Funding Letter