

Proposition 84

STORM WATER GRANT PROGRAM – Project Description

Applicant: City of San Marcos

FAAST PIN: 23295

Project: San Marcos Creek Urban Runoff, Pollutant Abatement, and Stormwater Management Project

Contact Information:

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Project Description:

Pollutants associated with stormwater and urban runoff flow without restriction or treatment directly into San Marcos Creek, then downstream to Lake San Marcos, impacting water quality and the beneficial uses of these receiving waters. The City of San Marcos (City) is requesting State funding to implement the San Marcos Creek Urban Runoff, Pollutant Abatement, and Storm Water Management Project (San Marcos Creek Project) to address these problems through the implementation of low impact development (LID) and other onsite best management practices (BMPs). These natural, low-maintenance, and long-lasting stormwater runoff treatment practices, will maintain predevelopment hydrology and make a proactive contribution to achieving TMDL goals nine years prior to State Water Board adoption in the 303(d)-listed impaired waters for San Marcos Creek and Lake San Marcos.

The project will be located on public lands in the Upper San Marcos Watershed, north and south of San Marcos Creek at a key watershed juncture above Lake San Marcos. It will integrate a variety of LID designs to transform blighted lands into functioning treatment systems. The project will construct LID facilities adjacent to Discovery Street (south of the creek) between Via Vera Cruz and Bent Avenue, consisting of a biofiltration swale, landscaping, and permeable pavement walkway. Another permeable pavement walkway (the “Promenade”), a bioretention basin, native landscaping, and flow-through planters are proposed north of the creek. These runoff treatment trains will incorporate varying blends of vegetation and mechanical pollutant treatment (natural settling, cobble velocity reduction, meandering variations, vegetative uptake, etc.) to infiltrate, filter, transpoevaporate, and/or retain runoff as close to the source as possible.

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A water quality analysis was performed to determine the expected treatment from implementation of the proposed LID BMPs. The LID BMPs and techniques selected for this project were based on proven BMP pollutant removal performance from USEPA/ASCE and similar scientific publications. Specifically, the use of grassy swales, bioretention systems, permeable pavements, and disconnecting impervious surfaces have been implemented worldwide with great success for reducing runoff and pollutant loading. Reductions in concentration/load of multiple pollutants including, but not limited to, bacteria, toxicity, sediment, turbidity, nutrients, and metals are anticipated at the following levels: (1) Bacteria – 90% reduction; (2) Total Suspended Solids – 90% reduction; (3) Nutrients – 70 to 76% reduction; and (4) Metals – 93 to 98% reduction. By integrating scientific water quality monitoring equipment with the conveyance infrastructure, pollutant treatment efficiency, discharge water quality, compliance with regulatory requirements, and pollutant load reductions across the LID BMPs can be determined. The City will be able to track the progress of pollutant load reduction with time, while also providing feedback for adaptive management to adjust (if necessary) the treatment system or modify BMP approaches to meet pollutant-removal and runoff-reduction targets.

These watershed efforts are supported by the County of San Diego and San Diego Regional Water Quality Control Board because the project can provide much needed permanent improvement to the beneficial uses of surface waters in the San Marcos Hydrological Unit, specifically targeting the listed impairments of San Marcos Creek and Lake San Marcos. The project also supports Smart Growth, because it implements the stormwater management and water quality components of the San Marcos Creek Specific Plan, while not being a catalyst for development, it rather serves to arrest a variety of ongoing water quality issues as a permanent safeguard to these receiving waters for generations to come. The project has been designed to function without further development, but has been sized to handle any potential development that may occur over the next 20 years. The project also includes public education/outreach components to enlighten the community about the benefits of LID facilities used to protect the environment. With no known risks to water quality, the San Marcos Creek Project presents an innovative approach to helping meet water quality goals and restore and maintain a healthy, sustainable watershed. It will support sustained, long-term water quality improvement, be an excellent use of public funds, and of great value to the watershed.