

2015 WATER QUALITY PROJECTS

Project Title: Sewer Piping Rehabilitation Phase II

Funding Request: \$400,000

Project Description: This project is for a designated sanitary sewer basin (No. 1) in the City of Margate. (See Exhibit A). This is the second phase of the Sewer Piping Rehabilitation Project. The Florida Legislature approved \$100,000 for Phase 1 (Sanitary Sewer Basin No. 12) in 2014. The rehabilitation scope will include video survey of the entire basin piping and installation of cured-in-place pipe to repair the leaks. In addition to the water quality protection and general environmental benefits, discussed in more detail below, the cured-in-place lining of sewer pipes is a cost effective alternative to replacement. This process eliminates roadway and private property restoration; does not inconvenience residents; and eliminates environmental impacts typical for a construction site such as Noise, Dust, Traffic Control, etc. The City has committed to spending \$500,000 of budgeted funds for Fiscal Year 2015 for sewer piping rehabilitation, as well as approximately \$50,000 to \$100,000 in in-kind expenses such as engineering and planning. This funding request of \$400,000 will allow for rehabilitation of an additional length of approximately 13,000 linear feet of sanitary sewer piping. The City estimates rehabilitation costs for this basin piping to be between \$950,000 and \$1 million.

Additional Project Information: The sanitary sewer basin no. 1 abuts C-14 canal to the north as shown on Exhibit A. The C-14 canal has high levels of fecal coliform concentrations in excess of the established Total Maximum Daily Loads (TMDL). The C-14 canal will require a 22 percent reduction of sources to mitigate the concentrations that exceed the established criteria. The sanitary sewer systems with leaking underground pipes are some of the primary contributing sources to fecal coliform contamination. Elimination of non-point sewage leaks, source for fecal coliforms, will have a direct impact and contribute significantly towards the region's targeted 22 percent reduction in fecal coliform sources.



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Project Title: Installation of New Force Main (NW 18th Street)

Funding Request: \$500,000

Project Description: Sewer spills from sewer forcemain breaks result in significant impacts to the quality of surface water, since large amounts of sewage is spilled to the ground which ultimately discharges to the nearest catch basins and the surface water canal system. Since forcemains are pressurized, impacts from a sewer spill to the quality of life for the residents in the immediate vicinity are significant in terms of contaminated yards, odor, accessibility and traffic control during clean-up, etc. Breaks in forcemain systems are caused by lines operating over their capacity and deterioration of structural integrity of the pipe due to age. Based on a hydraulic model for the City's force main system, the force main located between Northwest 18th Street and the Waste Water Treatment Plant (WWTP) was identified as a bottleneck in the system and operating well over its capacity. Due to its age and the current operating capacity, the line is susceptible to rupture with potential to cause environmental damage with significant water quality impacts to the surrounding canal system. The canal system is part of the C-14 canal drainage basin which is currently listed as impaired water for fecal coliforms with an established TMDL. Sewage spilled from forcemain breaks is a contributing non-point source of fecal coliforms. To address the deficiency, the City is proposing to install a new force main on Northwest 18th Street to provide additional capacity and redundancy to the system (see Exhibit B). The redundancy in the system will allow rerouting of flows and minimize the quantity spilled from line breaks and other emergency repairs, significantly minimizing the water quality impacts.

Funding:

Planning and Engineering: \$250,000 (City Match) Construction Cost Estimate: \$1.25 million (\$750,000 – City Match)



