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FISCAL SUSTAINABILITY PLAN

LIFT STATION NO. 16 SERVICE AREA SEWER REPLACEMENT (PHASE 3) CITY OF LAKE WALES, FLORIDA

FEBRUARY 17, 2020

Prepared for:

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
Project Number WW530380

Prepared by:

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I. INTRODUCTION

This Fiscal Sustainability Plan (FSP) has been prepared to meet the requirements of the Florida Department of Environmental Protection (FDEP) State Revolving Fund (SRF) Project Sponsor’s Certification for the Lift Station No. 16 Service Area Sewer Replacement Phase 3 Project for the City of Lake Wales, Florida. The purpose of this document is to develop an inventory of critical assets; evaluate the condition and performance; certify that water and energy conservation efforts have been evaluated and implemented; and prepare a plan for maintaining, repairing, and replacing the assets along with a funding plan for such activities. This FSP will provide the City of Lake Wales with a framework for fiscal management of the assets financed by the SRF over a 50-year planning horizon.

This document should be considered a living document and should be updated periodically to reflect the current condition of the wastewater system.

II. CRITICAL ASSETS

This project included an extension of sanitary sewer pipe in B Street, C Street, and Carver Dr. areas of the City of Lake Wales to be used by lower income families covering approximately 125 parcels. See critical assets below (Table 1).

Asset	Quantity	Condition	Year installed	Probability of Failure	Consequence of Failure
8” PVC Gravity Sewer Lines	5,253 LF	New	2019	Low	Medium
12” PVC Gravity Sewer Lines	19 LF	New	2019	Low	Medium
Sanitary Manholes	27	New	2019	Low	Medium
Conflict Structure	1	New	2019	Low	Medium

From the above, the condition of the piping and probability of failure is low due to the recent installation, materials, testing, construction, and quality control inspection. All gravity sewer pipe has been tested to ensure it passed leakage test requirements. CCTV inspection and deflection testing have been performed to ensure all pipes meet the FDEP standards and project specifications. For a detailed list of the asset inventory, please refer Table 2 provided at the end of the document.

The critical assets are all in new condition and are likely to perform adequately within the next 20 years or more. The assets should be monitored, inspected and maintained periodically as part of a routine operation and maintenance. Some common maintenance repair tasks associated with wastewater collection systems are listed in Section IV of this document.

III. EVALUATION OF WATER AND ENERGY CONSERVATION EFFORTS

Water and energy conservation measures that were incorporated into the project include the following:

- New piping remedied inflow and infiltration reducing flow going to the Wastewater Facilities
- Grit reduction through elimination of inflow and infiltration

Energy conservation efforts will be reflected by the reduction of inflow and infiltration that would impact the energy demand on Lift Station No. 16, which pumps all collected wastewater from the project area, and the wastewater plant.

IV. FISCAL PLANNING

The purpose of a fiscal plan for future replacements is to ensure the City of Lake Wales accounts for the expenses in their annual budgets by planning their Capital Improvement Plan accordingly. To pay for future improvements/replacements of these assets, it is recommended that the expenses be paid by annual revenues, increase utility rates, municipal bonds, and/or state-revolving fund loans.

Future Replacements/Improvements

It is expected that the PVC pipelines have a service life of at least 50 years per Plastic Pipe Institute (PPI) and Unibell, and they could last 100 years or more. Concrete structures including manholes have an expected life span of 100 years per Electronic Journal of Structural Engineering, but due to corrosion from wastewater, rehabilitations are expected to be necessary after 50 years. It is recommended that routine maintenance occur. Recommended routine maintenance includes the following:

- Piping: Cleaning/Pigging of the lines every 5-10 years
- General observation of manholes for dirt and sand accumulation indicating possibly cracked sewers and/or lateral connections
- CCTV inspections to identify defects and appropriate repair/replacements methods

- Grout work around manhole rings and resetting manhole rings
- Epoxy coat paint on manholes if needed

Future Replacements/Improvements Expenses

All costs are listed in present values:

- Replacement of 8" Piping in 50 years: \$656,625.00
- Replacement of 12" Piping in 50 years: \$2,375.00
- Replacement of Manholes in 50 years: \$168,480.00
- Replacement of Conflict Structure in 50 years: \$6,240.00

Table 2 – Asset Inventory

A	B	C	D	E	G	H	I	J	K	L	M
Collection Assets	Quantity	Material	Manufacturer	Original Unit Cost SRF Project	Extended Replacement Cost	Year Installed	Expected Useful life in Years	Remaining Useful Life in Years	Condition	Probability of Failure	Consequence of Failure
8" PVC Gravity Sewer Lines	5,253 LF	PVC	Diamond Plastics	\$ 125.00	\$ 656,625.00	2019	50	49	Good	Low	Medium
12" PVC Gravity Sewer Lines	19 LF	PVC	Diamond Plastics	\$ 125.00	\$ 2,375.00	2019	50	49	Good	Low	Medium
Sanitary Manholes 48" Dia.	27	Concrete	Forterra Pipe & Precast	\$ 6,240.00	\$ 168,480.00	2019	50	49	Good	Low	Medium
Conflict Structure 72" Dia.	1	Concrete	Forterra Pipe & Precast	\$ 6,240.00	\$ 6,240.00	2019	50	49	Good	Low	Medium