March 2020

FISCAL SUSTAINABILITY PLAN

CITY OF LAKE WALES
REUSE PUMP STATION MODIFICATIONS, CITY OF LAKE WALES, FLORIDA

Prepared for:
Florida Department of Environmental Protection
Project Number WW53033

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Engineer’s Certification

This is to certify that the enclosed engineering calculations were performed by me or under my direct supervision.

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I. Introduction

This Fiscal Sustainability Plan (FSP) has been prepared as required for the State of Florida State Revolving Fund (SRF) Project Sponsor's Certification for the City of Lake Wales Reuse Pump Station Modifications 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 a plan for maintaining, repairing, and replacing the assets along with a plan for funding such activities.

II. Critical Assets

This project included upgrades to the Lake Wales Reuse Station allowing increased service to potential future development and existing customers serviced by the existing pump station. See critical assets below.

Critical Assets				
Asset	**Quantity**	**Condition**	**Probability of Failure**	**Consequence of Failure**
18" DR 18 PVC Pipe	600 LF	New	Low	Low
18" Gate Valve	1	New	Low	Low
Flow Meter Vault	1	New	Low	Low
Prefabricated Building	1	New	Low	Low
100 HP Pump Assembly	2	New	Low	Low
40 HP Pump Assembly	2	New	Low	Low
Pipe Fittings and Supports	-	New	Low	Low

Please note this assessment excludes the existing infrastructure that was to be used for this project. The existing pump station building, existing 18" reuse watermain, existing overflow and existing tank were not included. There were only repairs associated with this existing infrastructure, therefore these components were not considered to be major factors in this project's funding and were not evaluated by Kimley-Horn and Associates in terms of the fiscal sustainability plan.

From the above, the condition of the piping and probability of failure is low due to the condition, materials, testing, and construction inspection. All reuse mains have been pressure tested to ensure they pass the minimum leakage requirements. A startup test has been performed to ensure the pumps are performing as designed. In the unlikely event that all pumps fail and the tank reaches capacity, the overflow system would allow the city adequate time to repair the system without serious risk of failure or major property damage. For a detailed list of the asset inventory, please refer Table 1 shown at the end of the document.

III. Evaluation of water and energy conservation efforts

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

Selection of quality pumps with a high efficiency, saving operation and maintenance cost.

The use of four pumps which are sized appropriately for the calculated flows now and for the future.

Air release valves were installed high points to release air to decrease the probability of failure due to air pockets.

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 PVC pipelines have a service life of at least 50 years per Plastic Pipe Institute (PPI) and Unibell, even though they could last 100 years or more. Any valve or appurtenance associated with the pipelines will have the same design life, since they will be put out of commission if the pipelines are ever replaced. It is also expected that the pumps will last 15-20 years per Hydraulic Institute, Europump, and OIT. The controls at the pump station should last approximately the same time as the pumps, since they will need to be upgraded when the pumps get upgraded. To ensure the assets last as long as possible, it is recommended that routine maintain occur. Recommended Routine maintenance include the following:

Air Release Valves and Gate Valves– Inspect and exercise valves every year

Pump Station – Inspect condition of pumps (including pump rate), cables, and controls every 6 months-12 months

Piping – Cleaning/Pig the lines every 5-10 years

Future Replacements/Improvements Expenses

Replacement of pumps and controls in 20 years – $239,000.

Replacement of piping, valves, and associated appurtenances in 50 years – $487,400

Replacement of prefabricated building in 50 years – $54,500

Asset Inventory - Table 1												
Collection Assets	**Capacity/Size**	**Material**	**Manufacturer**	**Original Cost**	**Current SRF Project Cost**	**Replacement Cost**	**Year Installed**	**Expected Useful Life in Years**	**Remaining Useful Life in Years**	**Condition**	**Probability of Failure**	**Consequence of Failure**
Prefabricated Building	30' x 30'	Metal	Rhino Steel Building Systems	$ 23,000.00	$ 23,000.00	$ 46,000.00	2020	50	50	Good	Low	Low
Concrete Pad for Building	25 YD	Concrete	A & Materials	$ 4,250.00	$ 4,250.00	$ 8,500.00	2020	50	50	Good	Low	Low
18" Pipe	600 LF	PVC DR 18	JM Eagle/North American Pipe Corp.	$ 85,800.00	$ 85,800.00	$ 171,600.00	2020	50	50	Good	Low	Low
100 HP Pump Assemblies	2 Pumps	-	Pentair	$ 66,400.00	$ 66,400.00	$ 132,800.00	2020	20	20	Good	Low	Low
40 HP Pump Assemblies	2 Pumps	-	Pentair	$ 53,100.00	$ 53,100.00	$ 106,200.00	2020	20	20	Good	Low	Low
Valve Vault	48" Vault	Concrete	A & Materials / USS	$ 18,000.00	$ 18,000.00	$ 36,000.00	2020	50	50	Good	Low	Low
18" Pipe Fittings and Valves	-	DI Fittings	-	$ 139,900.00	$ 139,900.00	$ 279,800.00	2020	50	50	Good	Low	Low