



State Revolving Fund Loan Program
an Indiana Finance Authority Environmental Program

100 North Senate Avenue, Room 1275
Indianapolis, Indiana 46204
www.srf.in.gov

MEMORANDUM

TO: Project File, Fall Creek RWD, Sanitary Sewer System Improvements Project,
SRF Project # WW15 06 87 06

FROM: Jack Fisher

DATE: July 26, 2016

RE: Green Project Reserve (GPR), Business Case

Summary:

- The District's project consists of primarily of sewer rehabilitation work within the area of the system contributing significant infiltration and inflow (I&I) to the Pendleton Main Lift Station. Additionally work is planned to construct a new Bar Screen facility at the Reformatory Lift Station and upgrades are planned at the Baby Farms Lift Station and the wastewater treatment plant (WWTP).
- The sewer rehabilitation work consists of two phases. Phase I includes the rehabilitation/ replacement of existing sewers and laterals (between the sewer and public ROW) for eight areas in the District (i.e., State Street, East Street, McLoy Drive, East Water Street, SR 67, Falls Park Area, South Broadway, and South Pendleton). The rehabilitation will be a mixture of cured-in-place-pipe (CIPP) lining and dig and replace methods. In addition, one sewer main segment will be rehabilitated using the pipe bursting method. Phase II include the sewers in Pendleton's downtown area that will utilize the same rehabilitation methods as Phase I. However, this phase also includes the rehabilitation of private laterals that will be financed using local funds.
- The Reformatory Lift Station headworks improvement will include the construction of a new structure containing two fine screens that will provide preliminary treatment for flows from the Pendleton Correctional Complex prior to entering the District's treatment works system.
- The Baby Farms Lift Station upgrade will increase the capacity of the lift station from 90 gallons per minute (gpm) to 160 gpm. In addition, the downstream sewers contributing flow to the lift station will be lined using the CIPP method in an effort to reduce I&I.
- The WWTP improvements includes: replacing the lining on the original aeration tanks and clarifier tanks due to the existing lining deteriorating; installing new variable speed blowers and dissolved oxygen sensors with control valves that will adjust the amount of air to each tank based on demand; replacing the existing aeration diffusers with new ones; and replacing the existing alum feed system with new chemical feed pumps that will allow the plant to flow pace the alum dose during the phosphorus removal process.
- Estimated State Revolving Fund Loan Amount is \$14,300,000.

- Estimated GPR portion cost of the loan associated with the construction of two of these projects (i.e., Sewer Rehabilitation Phases I & II and Dissolved Oxygen (DO) Control System) is **\$8,614,810** and **\$413,500** for planning and design costs for a total of **\$9,028,310**. This represents 49 % of the estimated loan amount. Sewer rehabilitation work within the system will reduce the amount of rainfall induced I&I entering the system and consequently reduce the amount of power used to run the lift stations. The DO control system will also reduce the amount of power used by the blowers. These GPR projects qualify under **energy efficiency**.

Conclusions

- The sewer rehabilitation work is projected to reduce the lift station electricity cost by approximately 27% per year making these improvements categorical.
- The DO Control system is projected to reduce the annual energy consumption by approximately 45% making these improvement categorical.