



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, Fort Wayne,  
Water Utility Improvements  
SRF Project DW 19 02 02 04

FROM: Artemis Nikolaou

DATE: December 5, 2019

RE: Green Project Reserve, Business Cases Summary

1. The Preliminary Engineering Report (PER) for the City of Fort Wayne consists of numerous projects, some of which were identified to contain Green Project Reserve (GPR) components. The business cases were prepared by Hometown Engineering. The projects that have GPR components are as follows:
  - a. The installation of approximately 4,350 lineal feet of a new 12-inch diameter parallel lime sludge force main to convey the lime sludge from the Three River Filtration Plant settling basins to the bio-solids facility. The installation of the lime sludge force main qualifies as an environmentally innovative technology based on its lower end cost for lime sludge handling compared to conventional approaches. The payback on the force main is less than two years based on the differential cost of landfilling vs utilizing the biosolids handling facility;
  - b. The replacement of approximately 89,500 linear feet of 4-inch to 8-inch water main and associated fittings. The water main replacement project meets the water efficiency category because the proposed improvements will result in an annual savings of approximately 4.3 million gallons per year; and
  - c. The installation of two new groundwater wells to supplement the surface water supply of the City of Fort Wayne in the event of extreme rainfall, which can compromise the quality of the surface water. The project qualifies as a climate and extreme weather resiliency green project based on its design, in anticipation of climate change. The payback period, based on the annual chemical cost savings estimated for not treating surface water, compromised by surface water runoff due to extreme rainfall events is 21 years, which is less than the anticipated life of a groundwater source of supply.

## **Conclusions**

The Business Case for each of the projects listed above, was reviewed by internal staff and found to be in accordance with the SRF GPR requirements for the environmentally innovative category, water efficiency and climate and extreme weather resiliency respectively. A summary of the GPR costs associated with each project is given below:

- a. Based on estimates provided in the Business Case for the environmentally innovative project- Parallel Lime Sludge Force Main, the total GPR for this project is \$849,190.00, based on estimates of \$793,650 for construction costs and \$55,540 for planning and design costs;
- b. Based on estimates provided in the Business Case for the water efficiency project- Water Main Replacements. Estimated GPR components for this project is \$11,127,595 for construction; and
- c. Based on estimates provided in the Business Case for the climate and extreme weather resiliency project- Ground Water Wells, the total GPR for this project is \$1,505,600, based on estimates of \$1,355,600 for construction costs and \$150,000 for planning and design costs.

The City of Fort Wayne closed on a SRF loan on August 8, 2019 in the amount of \$29,240,000 and the total GPR portion is estimated to be 36% of the loan amount.