



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: Official Loan File

FROM: Amanda Rickard

DATE: July 17, 2014

RE: Green Project Reserve (GPR) Categorical Exclusion and Business Case
Whitestown Wastewater Improvements Project
SRF Project WW 12 06 26 03

Whitestown proposes a new South Wastewater Treatment Plant (WWTP), replacement of the Indianapolis Road Lift Station and Force Main, replacement of the Royal Run Lift Station and Force Main, modification of the Walker Farms Lift Station and Force Main, and a new force main connecting the Original Whitestown Lift Station to the Walker Farms Lift Station. The proposed improvements will address the currently undersized wastewater system components.

Components of this project are considered to be green under four GPR categories, as outlined below.

The green infrastructure components are the proposed bioretention area and prairie planting areas at the South WWTP site. The bioretention area will capture runoff from the site. Bioretention areas are considered categorical under 1.2-2. A prairie planting area will be planted with a wet mesic prairie seed mix to preserve the existing drainage patterns leaving the site and help maximize groundwater recharge. In addition, the prairie planting area will serve as a vegetative buffer to help filter nutrients and sediments from the runoff leaving the site. The prairie planting area is considered categorical under 1.2-9.

The water efficiency components are the water efficient plumbing fixtures. All new plumbing fixtures at the South WWTP will be designed as low-flow, including all showerheads, toilets, and faucet aerators. This work is considered categorical under 2.2-1.

The environmentally innovative component is use of recycled materials. Ductile iron pipe will be used for much of the WWTP yard piping, interior plant process piping, and buried force main piping. Over 90% of the raw material used for the manufacture of ductile iron is recycled material. The business case developed by GRW Engineers was reviewed and found to meet the GPR requirements for the environmentally innovative category.

The energy efficiency components are VFDs for the Walker Farms, Royal Run, and Indianapolis Road Lift Stations; and the dissolved oxygen control system. Utilizing VFDs allows lift station pump motors to operate proportional to the amount of work required, which reduces the actual energy consumed. The new WWTP will be equipped with Sequencing Batch Reactors, which will include a dissolved oxygen (DO) control system. The control system includes DO sensors and blowers with VFDs, and will maintain DO levels at a minimum level at all times by ramping up, slowing down, or shutting off the blower air flow through the VFDs. This type of system provides a reduction in energy consumption compared to non-DO controlled systems. The business case developed by GRW Engineers was reviewed and found to meet the GPR requirements for the energy efficiency category.

The total GPR cost is \$1,527,590. Of this, the construction cost based on bids is \$1,444,590 and engineering cost is estimated at \$83,000.

Whitestown closed an SRF loan in the amount of \$14,210,000 on July 9, 2014.