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: May 14, 2013

RE: Green Project Reserve (GPR) Categorical Exclusion and Business Case
Middlebury WWTP and Lift Station Improvements
SRF Project WW 12 20 08 02

The Town of Middlebury proposes improvements to its wastewater treatment plant (WWTP) at the existing influent pump station, bar screen, chlorine building, oxidation ditch, UV system, chemical storage and feed, effluent metering, controls, sludge thickeners, digester piping and diffusers, and blower building; and by constructing a new clarifier, new sludge handling system, and new effluent pump station. Lift station improvements will take place at the following collection system lift stations: North, Spring Valley 1, Spring Valley 2, Antler, and Hoover.

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

The green infrastructure GPR components are the permeable pavement at Spring Valley 2 Lift Station and Site Vegetation Replacement. The permeable pavement will collect precipitation from the access easement. Permeable pavement is considered categorical under 1.2-1. A portion of the WWTP site vegetation will be replaced with native grasses and wildflowers to improve permeability. Native site vegetation is considered categorical under 1.2-6. The total Green Infrastructure cost is $29,912. Of this, the construction cost based on bids is $26,950 and engineering cost is estimated at $2,962.

The energy efficiency GPR components are eliminating the Popcorn Lift Station, plant UV disinfection system replacement, energy efficient lighting, SCADA system replacement along with oxidation ditch mixer/aerators and digester blower motors, and VFDs for system lift stations and the plant influent lift station. Replacing the Popcorn Lift Station with an interceptor sewer will save energy from pumping the water, and from operation and maintenance costs. The plant UV disinfection system replacement costs less than rehabilitation, and saves energy by consuming less energy per lamp. Using LED bulbs and high output outdoor lighting will reduce energy consumption. Utilizing VFDs allow motors to operate proportional to the amount of work required, which reduces the actual energy consumed. The project includes replacing standard efficiency motors with new premium energy motors for the oxidation ditch mixer/aerators and for the aerobic digester blowers. The SCADA system replacement, along with replacement of these

motors and mixer/aerators, will provide significant energy and maintenance savings. The business case developed by Donohue and Associates was reviewed and found to meet the GPR requirements for the energy efficiency category. The total Energy Efficiency cost is $1,488,118. Of this, the construction cost based on bids is $1,340,780 and engineering cost is estimated at $147,338.

The total GPR cost is $1,518,030. Of this, the construction cost based on bids is $1,367,730 and engineering cost is estimated at $150,300.

Middlebury closed an SRF loan in the amount of $13,565,000 on April 26, 2013.