



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: Jack Fisher

DATE: January 15, 2016

RE: Green Project Reserve (GPR) Business Case
Middletown Water Treatment Plant Improvements
SRF Project DW 15 06 33 01

Summary:

- Middletown proposes the construction of a new 400,000 gallon per day water treatment plant (WTP) with two new drinking water wells.
- The WTP building will be constructed out of pre-engineered steel. The building envelope will be constructed with a minimum of 90 percent recycled materials. The well pumps and high service pumps will utilize variable frequency drives (VFDs) to regulate motor speed and pump flow based on system demand thus operating more efficiently than constant speed pumps. All of these components would fall under the category of **energy efficiency**.
- The State Revolving Fund Loan Amount is \$2,750,000.
- The GPR cost is **\$343,500** which includes \$315,000 in construction costs for the supervisory control data acquisition (SCADA) system, VFDs and the pre-engineered building. The planning and design costs for the GPR components are \$28,500.

Conclusion:

- The estimated annual energy savings for the VFDs is \$12,592 with an estimated payback period of approximately 11 years. Based on an estimated design life of 15 years the VFDs will provide a savings of \$188,880.
- The proposed VFDs coupled with the SCADA system will result in an annual energy savings of approximately 39 percent for the town's WTP and wells.

