State Revolving Fund Loan Program
an Indiana Finance Authority Environmental Program

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Indianapolis, Indiana 46204
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MEMORANDUM

TO: Project File, Town of Newport, Wastewater Treatment and Collection System, SRF Project # WW11 12 83 01

FROM: Jack Fisher

DATE: June 27, 2013

RE: Green Project Reserve (GPR), Business Case

Summary:

- The wastewater treatment and collection system project proposes a low pressure grinder pump system and a wastewater treatment plant for the unsewered community of Newport. The town will install grinder pumps and a low pressure sewer system to collect and convey wastewater via a force main to a mechanical package treatment plant. The treated effluent will discharge to an unnamed tributary of the Wabash River. This business case addresses project components which are considered to meet the requirements of the Green Project Reserve (GPR) Energy Efficiency Category. The GPR components being considered include the use of variable frequency drives (VFDs) and a Supervisory Control and Data Acquisition (SCADA) system for optimal blower control. Since the blowers are typically one of the highest electrical demands at a wastewater treatment plant, the use of SCADA to control the VFDs for the blower operations is included as a part of this project to reduce overall energy consumption.

- The estimated Total Project Cost is $5,855,000.

- Estimated State Revolving Fund Loan Amount is $530,000.

- Estimated GPR portion cost of loan associated with the wastewater treatment and collection system is **$93,800** and **$16,778** for planning and design costs for a total of **$110,578**. This represents 21 % of the estimated loan amount.

Conclusions

- With The SCADA and VFD systems, the four primary blowers will only draw the amount of electricity necessary to match the oxygen demand. This allows the blowers to use approximately 13.4% less energy. This equates to a cost savings of $2,088 per year.