



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, Town of Waynetown, Drinking Water Utility Improvements Project, SRF Project # DW15 08 89 01

FROM: Jack Fisher

DATE: February 14, 2017

RE: Green Project Reserve (GPR), Business Case

Summary:

- The proposed project will address the following deficiencies with the town's drinking water system: only one water main transporting water from the north side of the town to the south side; several dead ends and very few shut off valves; water mains not large enough to serve several areas; and high iron and manganese content in the drinking water.
- The water treatment system improvements include: installing approximately 850 feet of 8-inch water main at the East Fork of Coal Creek on State Road 25 and Holman Road; replacing 3,450 feet of 8-inch water main in an alley between Washington and Walnut Streets; installing approximately 1,350 feet of 6-inch water main along Garfield, Holman, and South Streets between McClure and Hancock Streets; installing approximately 850 feet of 8-inch water main on State Road 25 between Vincent and Race Streets; replacing two flushing hydrants, three fire hydrants and associated gate valves and boxes; installing approximately 1,350 feet of 6-inch water main along Orchard Street between Vernon Street and Centerville Road; replacing approximately 1,100 feet of 6-inch water main on Vine Street between Pyle and Garfield Streets; and installing a 720,000 gallons per day package WTP that will remove iron and manganese. The WTP will include: induced draft aeration; a backwash tank; chlorine gas for disinfection; supervisory control and data acquisition system (SCADA) system; two 15 horsepower high service pumps with variable frequency drives (VFDs); high efficiency heating, ventilating and air conditioning (HVAC) system; and LED lighting.
- The estimated Total Project Cost is \$2,532,000.
- Estimated State Revolving Fund Loan Amount is \$2,082,000.
- Under the category of **Energy Efficiency**, the GPR for construction cost is **\$131,295** while the GPR for engineering cost is **\$9,485** producing a total cost of **\$140,780**.
- Under the category of **Water Efficiency**, the GPR for construction cost is **\$242,904** while the GPR for engineering cost is **\$82,042** producing a total cost of **\$324,946**.

Conclusions

- Estimated GPR portion cost of loan associated with the drinking water system improvements is **\$374,199** for construction and **\$91,527** for planning and design costs for a total cost of **\$465,726**. This represents 22% of the estimated loan amount.
- By replacing 7% of the town's total water lines, this will **reduce the systems water loss by 7%**. The **annual cost savings are estimated at \$660**. This component would fall under the category of water efficiency.
- Installing two high service pumps with **91 % NEMA premium efficiency motors at 75% speed** will yield and **annual savings of \$35 per pump or \$70 for both pumps**. This component would fall under the category of energy efficiency.
- Installing an air conditioner with a Seasonal Energy Efficiency Ratio (SEER) of 18.00 as opposed to a standard air conditioner with a SEER rating of 13.00 will yield a **40% cost savings or an annual cost savings of \$840**. This component would fall under the category of energy efficiency.
- Installing a furnace with a **high efficiency of 95%** as opposed to a standard furnace with an efficiency of 65% will yield a **30% energy cost savings or an annual cost savings of \$1,160**. This component would fall under the category of energy efficiency.
- Installing VFDs with SCADA control for the two high service pumps as opposed to standard pumps without VFDs and SCADA control will yield a **44 % energy cost savings or an annual savings of \$1,144 per pump or \$2,288 for both pumps**. This component would fall under the category of energy efficiency.
- Installing energy efficient LED lights as opposed to fluorescent bulbs will yield a **72% energy cost savings or an annual savings of \$347**. This component would fall under the category of energy efficiency.