West Bonner W&SD FY13 Wastewater System Project
SRF Loan #WW 1311 (pop. 57)
$1,315,000

Final Green Project Reserve Justification
Business Case GPR Documentation

1. **INSTALLS ADVANCED FLUORESCENT LIGHTING** (Energy Efficiency). Business Case GPR per 3.5-7: *Upgrade of lighting to energy efficient sources such as ... compact fluorescent lighting.* ($1,180).

2. **INSTALLS SCADA FOR REMOTE MONITORING** (Energy Efficiency). Business Case GPR per 3.5-8: *SCADA system can be justified based on substantial energy savings.* ($13,400).

State of Idaho SRF Loan Program
July 2015
1. Energy Efficient LIGHTING

Summary

- Energy efficiency from the installation of advanced fluorescent lighting in the interior of the lift station control building.
- Energy efficiency from the installation of light emitting diode (LED) lighting at the exterior of the lift station control building.
- Loan amount = $1,315,000
- Estimated energy efficiency (green) portion of loan < 1% ($1,180)
- Estimated annual energy savings = $100 per year.

Background/Results¹

- The lighting system is part of the project at the lift station control building.

Energy Efficiency Improvements

- Energy efficient T-8 magnetic fluorescent lighting is approximately 28% more energy efficient than standard T-12 magnetic fluorescent lighting for relatively the same light output.
- LED lighting is approximately 58% more energy efficient than typical high pressure sodium lighting for relatively the same light output.²

Conclusion

- The proposed improvements are GPR-eligible as they greater than 20% more efficient than a standard installation; in addition, the proposed improvements qualify as the pay-back period does not exceed the life of the equipment.

- GPR Costs:
  
  Advanced Fluorescent Lighting = $250
  LED Lighting = $930
  Total = $1,180

- GPR Justification: Advanced fluorescent lighting and LED lighting is GPR-eligible by a Business Case per 3.5-7²: Upgrade of Control Building lighting to energy efficient sources such as......compact fluorescent, light emitting diode (LED).

¹6-23-15 Correspondence with Project Manager Eric Eldenburg P.E., James Sewell & Assoc
2. **SCADA CONTROL TECHNOLOGY**

**Summary**
- Energy efficiency from the installation of a SCADA system for remote electronic sensing of the lift station.
- Loan amount = $1,315,000
- Estimated energy efficiency (green) portion of loan < 1% ($10,000)
- Estimated annual energy and labor savings = $13,400 per year.

**Background/ Results**
- The SCADA system is part of the project at the lift station control building.

**Energy Efficiency Improvements**
- Remote SCADA monitoring saves labor costs = 2 people 1 hour per day = $12,000/yr in labor costs\(^1\).

**Conclusion**
- Total SCADA savings would be approximately $12,000 per year in labor costs = payback of 1.1 years, therefore SCADA costs are GPR-eligible by 3.5-8.

**GPR Costs:**

\[
\begin{align*}
\text{SCADA} &= 13,400 \\
\text{Total} &= 13,400
\end{align*}
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**GPR Justification:** SCADA system costs are GPR-eligible by a Business Case per 3.5-8: *SCADA systems can be justified based on substantial energy savings.*

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\(^{6-23-15}\) Correspondence with Project Manager Eric Eldenburg P.E., James Sewell & Assoc