



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).

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 Attachment 1. April 21, 2010 CWSRF Guidance for Determining Project Eligibility. Page 10.

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/ Results³

- 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 costs¹.

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:**

$$\begin{aligned} \text{SCADA} &= \underline{\$13,400} \\ \text{Total} &= \$13,400 \end{aligned}$$

- **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.*

³6-23-15 Correspondence with Project Manager Eric Eldenburg P.E., James Sewell & Assoc