

Clean Water State Revolving Fund Green Project Reserve  
- Interim -



**City of West Bonner Wastewater System Project**  
**SRF Loan #WW 1311**  
**\$1,315,000**

**Interim 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.*  
(\$1,000).
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.* (\$10,000).

# 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% (\$1,000)
- Estimated annual energy savings = \$100 per year.

## Background/ Results<sup>1</sup>

- 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.<sup>2</sup>

## 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 = \$	300
LED Lighting = \$	700
Total =	\$ 1,000

- **GPR Justification:** Advanced fluorescent lighting and LED lighting is GPR-eligible by a Business Case per 3.5-7<sup>2</sup>: *Upgrade of Control Building lighting to energy efficient sources such as.....compact fluorescent, light emitting diode (LED).*

<sup>1</sup>10/25/13 Correspondence with Sheila Gormley, City Clerk, West Bonner Water & Sewer District

<sup>2</sup> Attachment 1. April 21, 2010 CWSRF Guidance for Determining Project Eligibility. Page 10.

## 2. SCADA CONTROL TECHNOLOGY

### Summary

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- 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 = \$12,000 per year.

### Background/ Results<sup>3</sup>

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

### Energy Efficiency Improvements

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- Remote SCADA monitoring saves labor costs = 2 people 1 hour per day = \$12,000/yr in labor costs<sup>1</sup>.

### Conclusion

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- Total SCADA savings would be approximately \$12,000 per year in labor costs = payback of 0.83 years, therefore SCADA costs are GPR-eligible by 3.5-8.

- **GPR Costs:**

$$\begin{aligned} \text{SCADA} &= \underline{\$10,000} \\ \text{Total} &= \$10,000 \end{aligned}$$

- **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.*

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<sup>3</sup>10/25/13 Correspondence with Sheila Gormley, City Clerk, West Bonner Water & Sewer District