

SUGAR CREEK UTILITIES WATERWORKS IMPROVEMENTS

Summary

- This project includes improvements to the water distribution system to reduce water loss in the utility.
 - Replacement of approximately 2,600 feet of 6” diameter water main, 84 service connections, and the installation of water meters in a previously unmetered water utility.
- Estimated Loan Amount: \$483,000
- **GPR amount: \$317,473 [\$261,973 for construction costs, \$10,000 for planning, and \$45,500 for design.] All GPR components fall into the Water Efficiency Category.**
- GPR cost is 66% of the total project cost.

Background

- The Utility’s waterworks system was installed in the 1970’s. The service area includes a residential area, a campground, and a banquet center. Since the original development contained mobile homes, services were installed beneath the structures and did not include shut off valves or meters. Due to the age, the lines have had numerous breaks and leaks, which are occurring with more frequency each year. Because there are no individual shut off valves, the entire system must be shut down for repairs. Boil Water Alerts are then in effect. The lines need to be relocated and increased in size, and individual meters and shut-offs need to be provided.

Water Efficiency Discussion – Pipe Replacement and Meter Installation

- Meters were installed on the wells at the beginning of 2010. The results showed that water loss is over 20% for the residences. This is based on the difference between the water metered from the well serving Riley Village and the theoretical water usage. The water metered computes to 202 gallons per dwelling unit per day. The daily theoretical water usage is 156 gallons per unit (2.4 persons per household x 65 gallons per day), which results in an estimated 23% water loss. There are 84 dwelling units, resulting in a total loss of 3,864 gpd or 1.4 million gallons per year.

- None of the residents are currently metered. The project will install meters on all of the residences.

Conclusions

- By replacing the water lines, valves, hydrants and service lines, the community anticipates that nearly 1.4 million gallons of water could be conserved annually. The cost equivalency is \$13,000, based on \$9.35 per 1,000 gallons of usage.
 - Installation of meters will promote more efficient water consumption and are considered categorical.
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Reference Materials – PER for Waterworks Improvements for the Sugar Creek Utilities dated March 2009, and updated July, 2010 prepared by Triad Associates, Inc.

Business Case for Sugar Creek Utility prepared by Triad Associates Inc, dated September 2010

GPR Breakdown
Proposed Wastewater Improvements
Sugar Creek Utilities

Project Cost

Construction Costs

Replace Watermains & Valves, Install Meters, Replace Service Connections	\$285,000
Contingencies	\$15,425

Legal, Accounting, etc. \$112,714

Engineering

Planning	\$10,000
Design	\$45,500
Construction Services	<u>\$12,000</u>

Total Project Cost **\$480,639**

GPR Components

Watermains, Valves, Meters, Service Lines \$261,973

Engineering Planning and Design \$55,500.00

Total **\$317,473.00**

Percentage of Construction Cost **91.9%**

Percentage of Engineering Costs **82.22%**

Percentage of Project Costs **66.05%**