



MISSOURI DEPARTMENT OF NATURAL RESOURCES

Barry County #2

Drinking Water State Revolving Fund Green Project Reserve
Business Case

State Fiscal Year 2011 Intended Use Plan

Project Number DW-291228-01

Loan Date: June 22, 2011

Green Estimated Costs: \$419,925

Water System Improvements for Barry County, Missouri

Business Case

Summary

- The purpose of the project is to provide a new elevated storage tank and replacement of approximately 10,543 feet of old cast-iron drinking water distribution lines throughout the district. The replacement of the water mains for this project is to provide looping, to address system failures, such as water main breaks, and provide the expected capacity due to the forecasted growth.
- SRF Assistance Amount: \$564,000.00
 - pipe replacement = \$419,925 = 74.5%

Background

- The water source for the district's water system comes from one deep bedrock well with a total pumping capacity of approximately 115,200 gpd.
- The distribution system consists of polyvinyl chloride (PVC) pipes, cast iron pipes, and ductile iron pipes that range in size. The distribution system also includes a 20,000 gallon standpipe.
- The existing water supply facilities are serving an estimated population equivalent of 144 people with an average daily water demand of approximately 14,400 gpd and a peak day demand of approximately 21,600 gpd. Recent history indicates that the water demands for the district have been steadily increasing. Future estimated population served for the year 2030 will be approximately 160 people with an average daily demand of approximately 16,000 gpd and 24,000 gpd for peak daily demand.

Results/Conclusion

- The upgrades help reduce the need for flushing by looping the system and reducing the water loss. Replacing the old, leaking water mains will increase water efficiency by decreasing the amount of water lost.