MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Tipton

Drinking Water State Revolving Fund Green Project Reserve
Business Case

State Fiscal Year 2013 Intended Use Plan

Project Number DW291331-01

Loan Date: June 8, 2013

Green Estimated Costs: $606,600

Water System Improvements for Tipton, Missouri
Business Case

Summary

- The purpose of the project is to replace and add approximately 58 feet of four-inch (4") water main, 5,917 feet of six-inch (6") water main and 2,060 feet of eight-inch (8") water main and all the necessary appurtenances to complete the project and have a usable system. The addition and 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: $606,600.00
    - pipe replacement = $606,600 = 100%

Background

- The water source for the city's water system comes from two deep bedrock wells with a total pumping capacity of 1,135 gallons per minute (gpm). The water from the wells meets safe drinking water standards without any treatment. Both wells are provided with chlorine disinfection and fluoride.
- The distribution system also includes two elevated storage tanks with a total usable capacity of 350,000 gallons.
- The city of Tipton currently serves a population of approximately 3,262 with an average daily water demand of approximately 308,889 gallons per day (gpd) and a peak day demand of approximately 463,333 gpd. Recent history indicates that the water customers for the city have been steadily increasing by approximately two percent per year. The future estimated population to be served for the year 2030 will be approximately 3,735 with an average daily demand of approximately 353,679 gpd and 530,518 gpd for peak daily demand.

Results/Conclusion

- Replacing the old, leaking water mains will increase water efficiency by decreasing the amount of water lost.
- Benefits with water main replacement includes reductions in unnecessary pumping and operation and maintenance expenditures, and eliminating potential health hazards associated with waterborne pathogens entering the water distribution system.