City of St. Maries Drinking Water System Project  
SRF Loan #DW1803 (pop. 2,428) 
$1,100,000  

Green Project Reserve Technical Memorandum  
Categorical & Business Case GPR Documentation  

Replaces 4,500 lineal feet of lead-jointed steel distribution piping with new 6” & 8” diameter C900 pipe (Water Efficiency). Categorical GPR per 2.4-1: Projects that result from a water efficiency related assessment; Business Case 2.4-4: Proper water infrastructure management should address where water losses could be occurring...fix them...replacing aging infrastructure. ($874,000)
Categorical & Business Case

DISTRIBUTION LINE REPLACEMENT

Summary

- For DW1803, the City of St. Maries identified the priority replacement of 4,500 linear feet of leaking steel waterline.
- Loan amount = $1,100,000
- Pipe Replacement portion of loan = 80% ($874,800) (Design estimate)

Background

- The soft lead joints in the 6-inch and 8-inch distribution pipe in the City’s water system fail on a regular basis. The City must constantly repair these leaks.
- The City’s Master Water Plan was updated in 2018 to recommend the priority replacement of 7,870 linear feet of old and leaking 6” and 8” diameter lead-jointed steel distribution pipe. 4,500 LF will be replaced with DW1803 loan funds.
- The new pipe will eliminate water leaks in the distribution system, prevent entry of contaminated water, provide a more secure water supply, and reduce operation and maintenance costs.

Results

The project will replace existing steel waterline with C900 pipe at these locations:

- 2nd Street (College Ave to Jefferson Ave): Replace 375 linear feet of 8-inch steel waterline;
- 6th Street (College Ave to Jefferson Ave): Replace 375 linear feet of 8-inch steel waterline;
- 10th Street (Railroad to College Ave): Replace 1,300 feet of 8-inch steel waterline;
- Center Avenue (13th St to 20th St): Replace 2,000 feet of 8-inch steel waterline;
- College Avenue (1st St to 2nd St): Replace 300 feet of 6 and 8-inch steel waterline.

1 PER 12-21-18, per Jesse Herndon PE, HMH Engineering
Conclusion

- By replacing the 4,500 linear feet of leaking distribution pipe the City anticipates conserving water and providing a more secure water supply.
- Other benefits include reductions in unnecessary O&M expenditures and eliminating potential health hazards associated with waterborne pathogens entering the water system.
- **GPR Costs:**
  Replacing 4,500 feet of distribution piping = **$874,000** (Engineering estimate)
- **GPR Justification:**
  The project is Categorically GPR-eligible (Water Efficiency) per Section 2.4-1: *Projects that result from a water efficiency related assessment*; also (Water Efficiency) per a *Business Case* by 2.4-4: *Proper water infrastructure management should address where water losses could be occurring...fix them...replacing aging infrastructure*. 

\[ \text{\textsuperscript{2} Attachment 2. EPA Guidelines for Determining FY11 Project GPR-Eligibility.} \]