

Drinking Water State Revolving Fund
Green Project Reserve Business Case
#4
Artesian Water Company
Sherwood Park

Cleaning & Lining

Summary

- Cleaning & Lining of 6,800 linear feet of pre-1960 unlined cast iron pipe with ductile iron pipe.
- Loan amount: \$311,950
- Water saving (green) portion of loan: 100%

Background

- The water system includes approximately 102 miles of asbestos cement, 26 miles of galvanized and 210 miles of cast iron distribution pipe ranging from 2 inches to 30 inches in diameter. The treatment plant process an average of 19 million gallons per day or 7 billion gallons per year.
- Artesian Water Company has identified several distribution areas in which unlined cast iron mains need cleaning & lining. Cleaning & lining was chosen over replacement due to the area only having a water quality issue and no main break history.

Results

- Due to its reduced strength after 50 or 60 years of service, the asbestos cement, galvanized and cast iron pipes are subject to service interruptions as a result of main breaks.
- Cast iron pipes have been well documented to produce “rust” or iron deposits which create secondary water quality problems and reduce the ability of the transmission main to deliver optimum flows and pressures.

Conclusion

- The cleaned water main will improve both pressure and flow available to customers and for fire protection
- Also the cleaned water main will also greatly reduce the need for flushing to maintain water quality.
- Additional benefits include reductions in unnecessary pumping and operation and maintenance expenditures, and eliminating potential health hazards associated with waterborne pathogens and airborne carcinogens entering the water distribution system.

Drinking Water State Revolving Fund
Green Project Reserve Business Case
#4
Artesian Water Company
Newport Heights

Pipe Replacement

Summary

- Replacement of 1,480 linear feet of pre-1960 galvanized iron and 760 linear feet of pre-1960 cast iron pipe with ductile iron pipe.
- Loan amount: \$416,500
- Water saving (green) portion of loan: 100%

Background

- The water system includes approximately 102 miles of asbestos cement, 26 miles of galvanized and 210 miles of cast iron distribution pipe ranging from 2 inches to 30 inches in diameter. The treatment plant process an average of 19 million gallons per day or 7 billion gallons per year.
- Artesian Water Company has identified several distribution areas in which main replacement needs to occur. It has been determined that the pre-1960's distribution pipe incurred the most repairs throughout the system.

Results

- Due to its reduced strength after 50 or 60 years of service, the asbestos cement, galvanized and cast iron pipes are subject to service interruptions as a result of main breaks.
- Galvanized pipes and cast iron have been well documented to produce "rust" or iron deposits which create secondary water quality problems and reduce the ability of the transmission main to deliver optimum flows and pressures.
- Newport Heights has had several main breaks and a history of service leaks.

Conclusion

- By replacing 1,480 linear feet of galvanized iron and 760 linear feet of cast iron pipe with ductile iron pipe this will eliminate service disruptions due to water main breaks and improve both pressure and flow.
- Also the new ductile iron water main should greatly reduce the need for flushing to maintain water quality.
- Additional benefits include reductions in unnecessary pumping and operation and maintenance expenditures, and eliminating potential health hazards associated with waterborne pathogens and airborne carcinogens entering the water distribution system.

Drinking Water State Revolving Fund
Green Project Reserve Business Case
#4
Artesian Water Company
Marshallton Green

Pipe Replacement

Summary

- Replacement of 2,600 linear feet of pre-1960 asbestos cement pipe with ductile iron pipe.
- Loan amount: \$447,865
- Water saving (green) portion of loan: 100%

Background

- The water system includes approximately 102 miles of asbestos cement, 26 miles of galvanized and 210 miles of cast iron distribution pipe ranging from 2 inches to 30 inches in diameter. The treatment plant process an average of 19 million gallons per day or 7 billion gallons per year.
- Artesian Water Company has identified several distribution areas in which main replacement needs to occur. It has been determined that the pre-1960's distribution pipe incurred the most repairs throughout the system.

Results

- Due to its reduced strength after 50 or 60 years of service, the asbestos cement, galvanized and cast iron pipes are subject to service interruptions as a result of main breaks.
- Asbestos cement creates health and safety concerns because asbestos particles become airborne when the pipe is cut during routine repairs.
- Marshallton Green has had several main breaks and a history of service leaks.

Conclusion

- By replacing 2,600 linear feet of asbestos cement pipe with ductile iron pipe this will eliminate service disruptions due to water main breaks and improve both pressure and flow.
- Also the new ductile iron water main should greatly reduce the need for flushing to maintain water quality.
- Additional benefits include reductions in unnecessary pumping and operation and maintenance expenditures, and eliminating potential health hazards associated with waterborne pathogens and airborne carcinogens entering the water distribution system.

Drinking Water State Revolving Fund
Green Project Reserve Business Case
#4
Artesian Water Company
Llangollen Estates

Pipe Replacement

Summary

- Replacement of 4,180 linear feet of pre-1960 asbestos cement and 500 linear feet of pre-1960 galvanized pipe with ductile iron pipe.
- Loan amount: \$807,500
- Water saving (green) portion of loan: 100%

Background

- The water system includes approximately 102 miles of asbestos cement, 26 miles of galvanized and 210 miles of cast iron distribution pipe ranging from 2 inches to 30 inches in diameter. The treatment plant process an average of 19 million gallons per day or 7 billion gallons per year.
- Artesian Water Company has identified several distribution areas in which main replacement needs to occur. It has been determined that the pre-1960's distribution pipe incurred the most repairs throughout the system.

Results

- Due to its reduced strength after 50 or 60 years of service, the asbestos cement and galvanized pipes are subject to service interruptions as a result of main breaks.
- Asbestos cement creates health and safety concerns because asbestos particles become airborne when the pipe is cut during routine repairs.
- Galvanized pipes have been well documented to produce "rust" or iron deposits which create secondary water quality problems and reduce the ability of the transmission main to deliver optimum flows and pressures.
- Llangollen Estates has had several main breaks and a history of service leaks.

Conclusion

- By replacing 4,180 linear feet of asbestos cement pipe and 500 linear feet of galvanized pipe with ductile iron pipe this will eliminate service disruptions due to water main breaks and improve both pressure and flow.
- Also the new ductile iron water main should greatly reduce the need for flushing to maintain water quality.
- Additional benefits include reductions in unnecessary pumping and operation and maintenance expenditures, and eliminating potential health hazards associated with waterborne pathogens and airborne carcinogens entering the water distribution system.

Drinking Water State Revolving Fund
Green Project Reserve Business Case
#4
Artesian Water Company
Linden Green

Pipe Replacement

Summary

- Replacement of 620 linear feet of pre-1960 cast iron pipe with ductile iron pipe.
- Loan amount: \$106,250
- Water saving (green) portion of loan: 100%

Background

- The water system includes approximately 102 miles of asbestos cement, 26 miles of galvanized and 210 miles of cast iron distribution pipe ranging from 2 inches to 30 inches in diameter. The treatment plant process an average of 19 million gallons per day or 7 billion gallons per year.
- Artesian Water Company has identified several distribution areas in which main replacement needs to occur. It has been determined that the pre-1960's distribution pipe incurred the most repairs throughout the system.

Results

- Due to its reduced strength after 50 or 60 years of service, the asbestos cement, galvanized and cast iron pipes are subject to service interruptions as a result of main breaks.
- Galvanized pipes and cast iron have been well documented to produce "rust" or iron deposits which create secondary water quality problems and reduce the ability of the transmission main to deliver optimum flows and pressures.
- Linden Green has had several main breaks and a history of service leaks.

Conclusion

- By replacing 620 linear feet of cast iron pipe with ductile iron pipe this will eliminate service disruptions due to water main breaks and improve both pressure and flow.
- Also the new ductile iron water main should greatly reduce the need for flushing to maintain water quality.
- Additional benefits include reductions in unnecessary pumping and operation and maintenance expenditures, and eliminating potential health hazards associated with waterborne pathogens and airborne carcinogens entering the water distribution system.

Drinking Water State Revolving Fund
Green Project Reserve Business Case
#4
Artesian Water Company
Centerville Road

Pipe Replacement

Summary

- Replacement of 1,100 linear feet of pre-1960 cast iron pipe with ductile iron pipe.
- Loan amount: \$165,750
- Water saving (green) portion of loan: 100%

Background

- The water system includes approximately 102 miles of asbestos cement, 26 miles of galvanized and 210 miles of cast iron distribution pipe ranging from 2 inches to 30 inches in diameter. The treatment plant process an average of 19 million gallons per day or 7 billion gallons per year.
- Artesian Water Company has identified several distribution areas in which main replacement needs to occur. It has been determined that the pre-1960's distribution pipe incurred the most repairs throughout the system.

Results

- Due to its reduced strength after 50 or 60 years of service, the asbestos cement, galvanized and cast iron pipes are subject to service interruptions as a result of main breaks.
- Asbestos cement creates health and safety concerns because asbestos particles become airborne when the pipe is cut during routine repairs.
- Centerville Road has had several main breaks and a history of service leaks.

Conclusion

- By replacing 1,100 linear feet of cast iron pipe with ductile iron pipe this will eliminate service disruptions due to water main breaks and improve both pressure and flow.
- Also the new ductile iron water main should greatly reduce the need for flushing to maintain water quality.
- Additional benefits include reductions in unnecessary pumping and operation and maintenance expenditures, and eliminating potential health hazards associated with waterborne pathogens and airborne carcinogens entering the water distribution system.

Drinking Water State Revolving Fund
Green Project Reserve Business Case
#4
Artesian Water Company
Brookland Terrace

Pipe Replacement

Summary

- Replacement of 2,450 linear feet of pre-1960 galvanized iron pipe with ductile iron pipe.
- Loan amount: \$475,405
- Water saving (green) portion of loan: 100%

Background

- The water system includes approximately 102 miles of asbestos cement, 26 miles of galvanized and 210 miles of cast iron distribution pipe ranging from 2 inches to 30 inches in diameter. The treatment plant process an average of 19 million gallons per day or 7 billion gallons per year.
- Artesian Water Company has identified several distribution areas in which main replacement needs to occur. It has been determined that the pre-1960's distribution pipe incurred the most repairs throughout the system.

Results

- Due to its reduced strength after 50 or 60 years of service, the asbestos cement, galvanized and cast iron pipes are subject to service interruptions as a result of main breaks.
- Galvanized pipes and cast iron have been well documented to produce "rust" or iron deposits which create secondary water quality problems and reduce the ability of the transmission main to deliver optimum flows and pressures.
- Brookland Terrace has had several main breaks and a history of service leaks.

Conclusion

- By replacing 2,450 linear feet of galvanized iron pipe with ductile iron pipe this will eliminate service disruptions due to water main breaks and improve both pressure and flow.
- Also the new ductile iron water main should greatly reduce the need for flushing to maintain water quality.
- Additional benefits include reductions in unnecessary pumping and operation and maintenance expenditures, and eliminating potential health hazards associated with waterborne pathogens and airborne carcinogens entering the water distribution system.

Drinking Water State Revolving Fund
Green Project Reserve Business Case
#4
Artesian Water Company
Vilone Village

Pipe Replacement

Summary

- Replacement of 3,370 linear feet of pre-1960 asbestos cement and 700 linear feet of pre-1960 galvanized iron pipe and 600 linear feet of pre-1960 cast iron pipe with ductile iron pipe.
- Loan amount: \$875,500
- Water saving (green) portion of loan: 100%

Background

- The water system includes approximately 102 miles of asbestos cement, 26 miles of galvanized and 210 miles of cast iron distribution pipe ranging from 2 inches to 30 inches in diameter. The treatment plant process an average of 19 million gallons per day or 7 billion gallons per year.
- Artesian Water Company has identified several distribution areas in which main replacement needs to occur. It has been determined that the pre-1960's distribution pipe incurred the most repairs throughout the system.

Results

- Due to its reduced strength after 50 or 60 years of service, the asbestos cement, galvanized and cast iron pipes are subject to service interruptions as a result of main breaks.
- Asbestos cement creates health and safety concerns because asbestos particles become airborne when the pipe is cut during routine repairs .
- Galvanized pipes and cast iron have been well documented to produce "rust" or iron deposits which create secondary water quality problems and reduce the ability of the transmission main to deliver optimum flows and pressures.
- Vilone Village has had several main breaks and a history of service leaks.

Conclusion

- By replacing 3,370 linear feet of asbestos cement pipe, 700 linear feet of galvanized pipe and 600 linear feet of cast iron pipe with ductile iron pipe this will eliminate service disruptions due to water main breaks and improve both pressure and flow.
- Also the new ductile iron water main should greatly reduce the need for flushing to maintain water quality.
- Additional benefits include reductions in unnecessary pumping and operation and maintenance expenditures, and eliminating potential health hazards associated with waterborne pathogens and airborne carcinogens entering the water distribution system.