

PA DEP Small Drinking Water Systems Engineering Services Program (ESP) Case Study

Client Name: Morea Citizens Water Company
Location: Mahanoy Township, Schuylkill County
Project Name: Distribution System Replacement

Background:

The Morea Citizens Water Company (MCWC) provides public water to approximately 103 homes (297 people) in the Village of Morea, Mahanoy Township, Schuylkill County, Pa. The average daily water demand is approximately 73,600 gpd. The MCWC System is served by Well #2 as the primary source and Well #1 as a secondary source. MCWC also uses a 27,000 -gallon standpipe storage tank in their distribution system to meet daily demand and provide fire protection.

Public Health Challenges:

The MCWC has replaced all but 2,300 linear feet of waterline in their distribution system. The remaining cast iron waterlines are old and deteriorated to the point of collapsing.

Capacity Issues:

Technical – MCWC has experienced periods of low water pressure and no water due to water line breaks. They have had to cover fire hydrants because they could not provide enough pressure during fire emergencies.

Managerial – Operations and maintenance tasks are completed through volunteer efforts by members. The completion of the project has allowed for better water service to the residents through efficient operations and management of a new water distribution system.

Financial – Due to the small customer base (103 homes), the MCWC could not take on a huge financial burden to replace the final portion of the water system.

Actions:

The ESP proceeded with the design and permitting of 2,300 linear feet of 6-inch ductile iron pipe waterline to replace the existing 4-inch waterline. The project was funded using a grant from the Pennsylvania Small Towns Environmental Program (PENN STEP) and funds from MCWC's general fund. Construction was completed by Association members on weekends saving significantly on labor costs.



Outcomes:

The project has provided safe drinking water with sufficient pressures and flows for fire protection to the residents of the Village of Morea. The improvements were made without the need to increase user rates.

