

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

Client Name: Roaring Branch Waterworks Association

Location: Union Township, Tioga County and McNett Township, Lycoming County

Project: Finished Water Storage System Evaluation

Background:

The Roaring Branch Waterworks Association (RBWA) Public Water System serves approximately 95 people through 40 service connections with an average demand of 8,500 gallons per day (gpd). Well No. 1 serves as the only water supply source. Treatment consists of corrosion control and disinfection. Treated water is stored in an underground 25,000-gallon steel tank located in the adjacent Pennsylvania Tiadaghton State Forest.

Public Health Challenges:

Lycoming County completed a Water Supply Plan through a DEP grant program. The plan identified several system improvements to meet minimum system design standards. For RBWA, the County Plan recommends a second well, a blow off for the distribution system, and the replacement of the finished water storage tank (age unknown).

Capacity Issues:

Technical – The existing finished water storage provides approximately 3-4 days of storage. The proposed alternative was to provide the same amount of storage. The system does not provide fire protection.

Managerial – RBWA is a nonprofit organization with five (5) Board Members. RBWA was evaluating the finished water storage tank as a result of the Lycoming County Water Supply Plan.

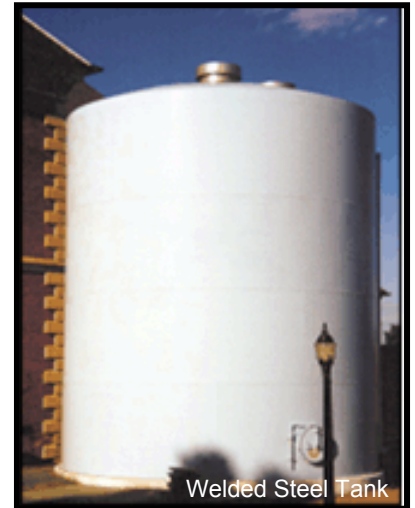
Financial – Due to the small customer base, RBWA had limited financial capabilities to raise capital funds for tank replacement. Funding will need to be pursued to help complete the improvements necessary to bring the system into compliance with current regulations.

Actions:

A Finished Water Storage System Evaluation was completed to determine the most viable alternative to replace the existing water storage tank. Options evaluated included a welded steel tank, a bolted steel tank, glass-fused to steel tank, and a reinforced concrete tank. RBWA utilized this document as an important tool for making decisions concerning the long term viability of the Public Water System.

Outcomes:

The Finished Water Storage System Evaluation provided an assessment of the existing water storage, evaluated technical, managerial, and financial capabilities, projected future consumption and demands, and identified and evaluated alternatives to meet compliance requirements. Due to the limited funding available, RBWA decided to have their existing tank inspected to determine if replacement is absolutely necessary.



Welded Steel Tank



Bolted Steel Tank

