



Water System Improvements

Town of Diana, New York

April 25, 2022

Agenda

- Background and Existing System
- Project Need and Approach
- Alternatives Evaluation
- Recommendations and Cost Estimate
- Funding and Financing
- Question and Discussion

Background

- Village of Harrisville issued a water withdrawal permit April 3, 1990 - achieve 100 percent metering for all users by April 1, 1992
- Village of Harrisville dissolved in 2019
- Asset Management Plan was performed for the Town
- Town contracted Authority to provide operations and maintenance services for the water system
- Water withdrawal permit issued to the Town 9/22/2020
 - Permit states must achieve 100% user metering within 5 years

Background

- Town performed a water system assessment / evaluation and completed a Preliminary Engineering Report
- Dept of Health has provided approval of the recommended system improvements
- Project currently in design phase



Water System Map



Existing Water System

- Original system dates to early 1900's
 - Wells installed in 1973 (1), 1977 (2), 1990 (3)
- Three Wells w/one active (3)
- Three water storage tanks (two active, one abandoned)
- 8.4 miles of water main distribution
- No customer metering

Well 1

- Constructed in 1973
- Building is in poor condition



Well 2 ---

- Constructed in 1977
- Has not been active in several years
- No disinfection/metering building



Well 3 ---

- Well installed in 1989
- Building constructed in 1990
- Building used for Town Storage as well as disinfection and metering



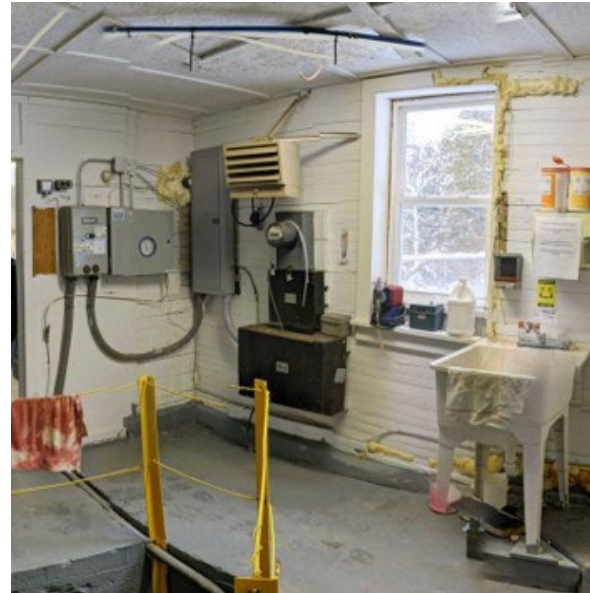
Distribution System

- 8.4 Miles of distribution piping
 - Areas of pressure below minimum
 - Insufficient fire flows
- Three Water Storage Tanks
 - One abandoned, used for storage
 - Two active 200,000 gallon tanks

Project Need

- Asset Management Plan identified water system components, condition / age
- Long term plan (i.e. 30 year minimum) needs identified
- Upgrades necessary to replace equipment and maintain compliance with standards
- System requires a fully redundant water source
- Areas of low pressure (> 35 psi) and insufficient fire flows (min of 500 gpm)
- Maintain same well pump capacities for wells 1 and 3
- Metering required

Existing Conditions



Alternative 1 – Do Nothing

- Risk of environmental impact
- Risk of future catastrophic failure
- Town will be in violation of water withdrawal permit for compliance with installation of water meters
- Alternative not feasible

Alternative 2 – System Improvements Well Sites



- Construct a new facility for metering and treatment at Well 3
- Replace the well pump at Well 3
- Construct a new facility for metering and treatment at Well 1
- Replace the well pump at Well 1
- Demolish the existing building at Well 1

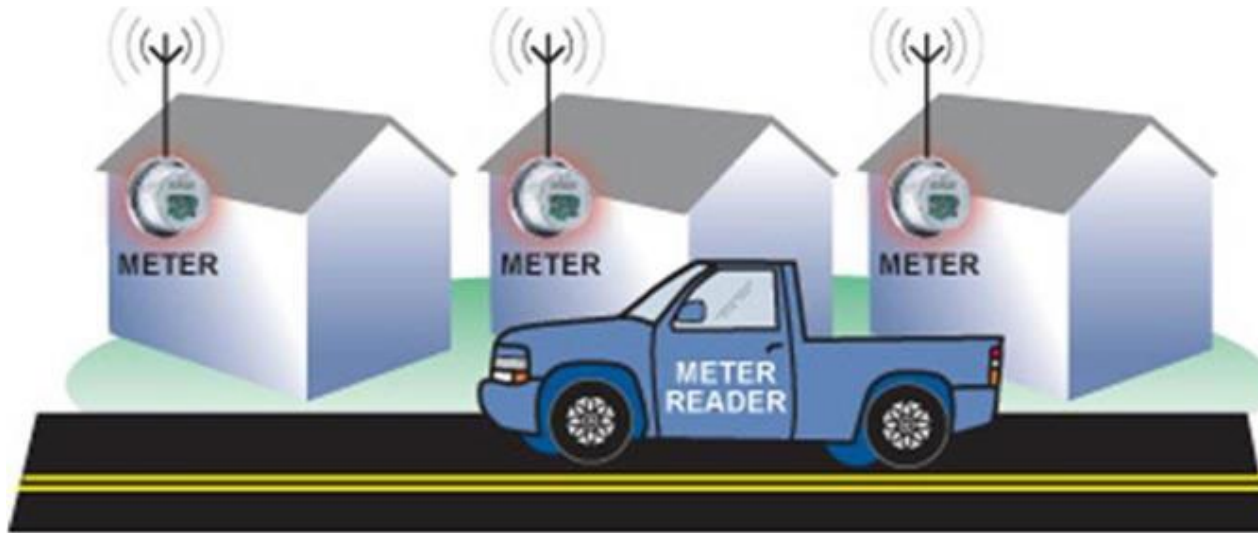
Alternative 2 – System Improvements Distribution System

- Demolish the existing three storage tanks
- Construct a new, 30-ft taller 350,000-gallon tank
- Water distribution:
 - Connect dead-end on Wilder Drive to existing water main on Mill Street
 - Connect dead-end on Mullin Street to existing water main on Route 3
 - Connect two dead ends of Old State Road - includes railroad crossing
 - Connect Foskit and High Streets mains
- Install water meters for all water connections

Distribution System Improvements



Automatic Meter Reading



- Meters installed in basement
- Technology allows the meter to be read by water district staff driving around town with a receiver

Recommended Alt 2 - Cost Estimate

Description	Opinion of Cost
Well 1 Facilities	\$540,000
Well 3 Facilities	\$580,000
New Water Storage Tank	\$1,050,000
Distribution System Improvements	\$370,000
Installation of Water Meters	\$360,000
Total Estimated Construction Cost	\$2,900,000
Contingency	\$570,000
Fiscal, Legal, Administration, Engineering	\$480,000
Total Estimated Project Cost	\$3,950,000

Funding

Description	Amount
Project Capital Cost	\$3,950,000
USDA RD Grant	\$12,400
Town Match	\$258,400
WIIA Grant	\$2,242,560
DOS Grant	\$50,000
GIGP Grant	\$150,000
Terms of Loan (years)	38
RD Interest Rate	1.125%
Loan Amount	\$1,236,640

Financial Projection

Description	Amount
Project Capital Cost	\$3,950,000
Loan Amount	\$1,236,640
Estimated Annual Debt Payment	\$40,173
Estimated Annual Debt Payment / EDU	\$118
Current Annual Cost / EDU	\$188
Estimated Annual Cost / EDU	\$306

Questions and Discussion