

TOWN OF ELLICOTTVILLE NEW YORK WATER SYSTEM IMPROVEMENT PROJECT

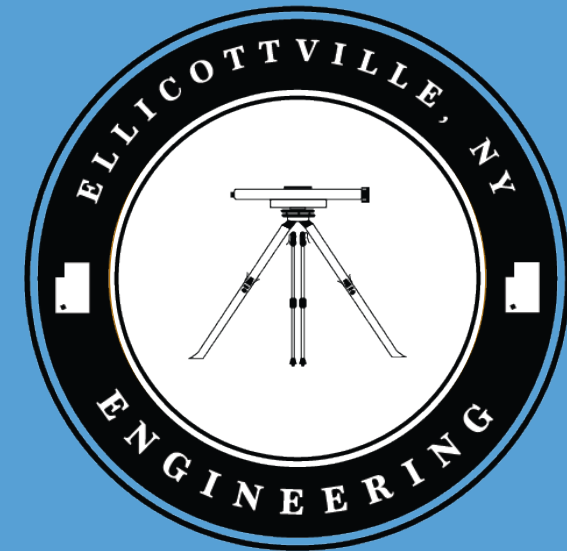
Project Information

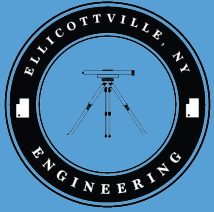
Town Supervisor – Matthew J. McAndrew

Town & Village Engineer - Ben Slotman, P.E.

Project Engineer – Clark Patterson Lee

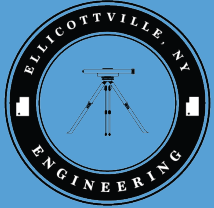
Date: March 2021





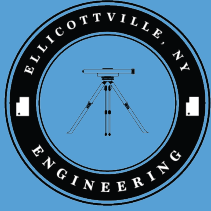
WATER DISTRICT

- A water district is a special use district required by Town Law where a specific area of the Town receives a specific benefit.
- Costs for this benefit are borne solely by the property owners in that specific area who directly receive the benefit.



BACKGROUND

- The Town of Ellicottville began investigating and preparing a Preliminary Engineers Report to identify health and safety concerns with the water system in 2018. The Town submitted an application for funding in 2018 that was unsuccessful. The Engineers Report was revised in 2019 to include the replacement of some aging and deteriorating water main on Holiday valley Road and Elizabeth Street. The report also included the addition of new water mains to service the Holihuts subdivision at the request of the Holihuts HOA. This application for funding was successful providing the community with the funds to move forward with the water system improvements.
- The Town has accepted the award of a \$3 million dollar grant along with a low interest loan to cover the cost of the project.
- In July of 2019 the Town solicited for Engineering Design and Construction Services. The Town hired Clark Paterson Lee (CPL) Engineering in September of 2019 to begin design on the project. CPL is looking to finalize the design and submit to the State for approval.



ADVANTAGES & BENEFITS OF PUBLIC WATER

- Consistent Water Quality and Quantity
- Fire Protection and Lower Insurance Rates
- Increased Property Values and Marketability
- Eliminates Substantial Private well Costs: electricity, pump and well maintenance, water softeners, chemicals, appliance damage
- Ease of mind
- Available during power outages

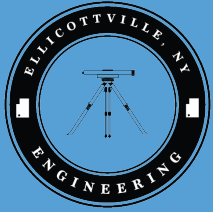




PROPOSED PROJECT

- The Water Project is proposed to address needed improvements to the water system that have been identified by the water department and to address County Department of Health concerns with public health, safety, and security.
- The project includes improvements to the source wells and booster stations. This work includes building improvements, emergency standby power, and electrical upgrades.
- The project includes updating the telemetry system with new controls to monitor and control the operation of the water system.
- The project includes replacing two (2) water storage tanks.
- The project includes replacing approximately 14,000 linear feet of aged water transmission and distribution mains on Holiday Valley Road and along Elizabeth Street.
- The project includes installing new water mains to serve the Holihuts Subdivision.





PROPOSED PROJECT WELL & BOOSTER STATIONS

- The Town of Ellicottville Water Department operates three wells and two booster stations. All five of these sites are proposed to receive emergency standby power systems to allow the water system to operate during power failures.
- The well houses are proposed to get upgrades that include the installation of variable frequency drives on the well pumps, new exhaust fans, new disinfection equipment, and electrical upgrades.
- The Trailer Park Well House is proposed to get some structural improvements to repair building. The building is also slated to get a new roof.





PROPOSED PROJECT TELEMETRY

- The Telemetry System that is used to operate and monitor the water system is proposed to be updated with a new modern internet based system. The proposed system will update security and provide the operators with the ability to operate, control, and monitor the water system efficiently and effectively. The system will connect all components of the water system and provide operational protocols for the system. The Telemetry System is the operator interface to the water system and is used by the operators to control the various components of the water system.





PROPOSED PROJECT WATER STORAGE TANKS

- The Town of Ellicottville operates and maintains five water storage tanks. There are two tanks that are proposed to be replaced as part of this project.
- The Town Upper Tank is approximately 40 years old and the exterior coating is failing. This tank also has several deficiencies that do not meet AWWA and OSHA standards. The tank is proposed to be replaced with a larger tank to meet the demands of the water system as the community expands.
- The Village Reservoir is approximately 85 years old and has major structural deficiencies. This reservoir is proposed to be replaced with a new above grade tank that will operate at the same hydraulic grade as the East Tank located on RT 219 that also serves the Village Pressure Zone.

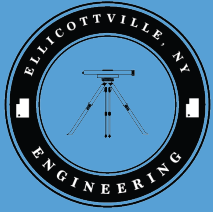




PROPOSED PROJECT WATER TRANSMISSION

- Water is transported throughout the community via water transmission and distribution mains. These pipe lines carry water to homes and businesses and are a vital part of a water system. The soils around Ellicottville have been determined to be corrosive to ductile iron which is a material that water line is made from. Ductile iron pipe was a staple in the water industry for many years as it was easy to install and capable of handling the stresses present within a water system. The corrosive soils react with the pipe and weaken it to a point where it begins to leak. Advances in technology have introduced PVC and HDPE pipe material that compete with ductile iron pipe. These plastic materials are less prone to corrosive soils and are also simple to install.
- The Town of Ellicottville is proposing to replace water transmission mains along Holiday Valley Rd and Elizabeth Street that feed the water storage tanks. This work will replace the existing ductile iron mains with new PVC and HDPE pipe.

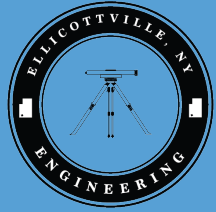




PROPOSED PROJECT DISTRIBUTION MAINS

- The Holihuts subdivision consists of approximately 65 parcels that are within the Ellicottville Water District. The homes are primarily served by wells with some being shared with multiple homes. The project is proposing to install new water distribution mains to serve this area of the water district that will provide safe potable water to the residents along with fire protection to the neighborhood.





ESTIMATED PROJECT COSTS

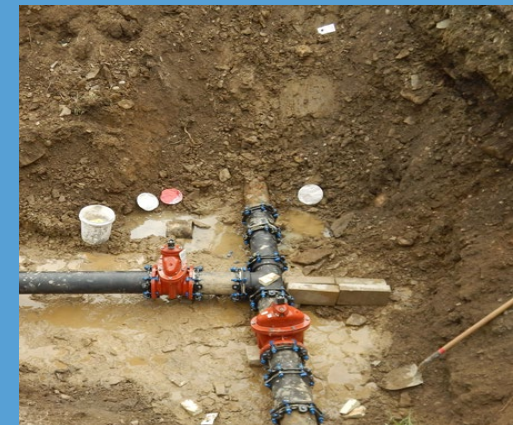


- Construction \$ 4,492,000.00
 - Soft Costs (Engineering, Legal, Admin) \$ 785,000.00
- Total Estimated Capital Cost = \$5,277,000.00**



FUNDING & FINANCING

- The Town was successful in receiving a \$3 Million dollar grant through the New York State Environmental Facilities Corporation (EFC) in the form of a NYS Water Infrastructure Improvement Act (WIIA) Grant.
- The remaining \$2,277,000.00 is being provided through EFC by a low interest loan that will be paid back over 30 years.





EQUIVALENT DWELLING UNIT (EDU)

- The project debt service will be paid back from user fees charged to system users and properties within the Water District.
- A Equivalent Dwelling Unit (EDU) is a means of measurement equivalent to a single family residential establishment.
 - Sample:
 - Single Family Home = 1 EDU
 - Multi Family Home = 1 EDU + 1 EDU per additional living space
 - Commercial 1 = 1 EDU
 - Commercial 2 = 8 EDU
 - Industrial = 4 EDU





EQUIVALENT DWELLING UNIT (EDU)

Class	Description	Examples	Typical EDUs	Accounts	Total EDUs
Residential	Residential Home	Homes/Apartment	1	1813	1813
Senior/Military	Discounted Residential Home	Seniors / Military	1	93	93
Commercial 1	Commercial w/o Food	Shops	1	62	62
Commercial 2	Commercial w/ Food	Restaurants	4	31	124
Commercial 2A	Commercial w/ Food <30,000 gal	Small Restaurants	2.5	7	17.5
Commercial 3	Commercial w/ Food - Large User	Hotels, Resorts, Breweries	15	2	30
Commercial 4	Commercial Large User	Ski Resorts	25	5	125
Industrial	Industrial/Manufacturing	Industrial / Manufacturing	2	6	12

Ellicottville Water District EDUs = 2,276



USER COSTS

Estimated Capital Costs	\$5,277,000
WIIA Grant	\$3,000,000
EFC Loan Amount	\$2,277,000
Estimated Annual Debt Service	\$ 122,700
Estimated Cost per EDU/Year	\$ 54



USER FEES

The Town charges user fees to cover the cost of operating and maintaining the water system. These fees may be altered, amended, or repealed by the Town as it may be deemed necessary. The current user fee per EDU is \$52.50 per qtr. It is anticipated that this project will increase the fee per EDU to approximately \$66 per qtr over the next year or two. The average residence (one EDU) would pay \$264-\$350 per year for water service. All parcels within the Water Benefit District will be responsible for paying the capital costs associated with the water system. It is estimated that parcels would pay approximately \$80-\$300. Benefited properties within the district that do not receive water would still be responsible for capital costs.



NEW CONNECTION COSTS

New Water System Customers

• Installation of Service Line from ROW/Easement to House (\$8-\$25/FT)	\$1,500.00
• Well separation/plumbing modifications	\$ 200.00
• Water service tapping fee (Discounted pending Board Approval)	<u>\$1,500.00</u>
TOTAL	\$ 3,200.00

Existing Water System Customers

- Existing water services will be reconnected to the new water mains as part of the project.
- If the existing water service is found to be in poor shape or leaking, the customer is responsible for installing a new service from the curb stop to the house/building.





RESIDENTIAL WELL COMPARISON

Item	Average Well Scenario			Worst Case Scenario		
	Annual Cost	Monthly Cost	Notes	Annual Cost	Monthly Cost	Notes
Electricity	\$50.00	\$4.17		\$50.00	\$4.17	
Treatment Chemicals	\$150.00	\$12.50	Salt, Chlorine, Filters	\$300.00	\$25.00	Salt, Chlorine, Filters
Bottled Water	-	-	3 Member family	\$400.00	\$33.34	3 Member family
Replace Towels & Linen	-	-	No Damage due to Water Quality	\$20.00	\$1.67	
Laundromat	-	-	Not Necessary	\$120.00	\$10.00	
Fixture Replacement	\$14.29	\$1.20	Est. Replacement every 7 years	\$20.00	\$1.67	Est. Replacement every 5 years
Replace Washing Machine	\$15.00	\$1.25	Est. Replacement every 14 years	\$30.00	\$2.50	Est. Replacement every 7 years
Replace Water Heater	\$42.00	\$3.50	Est. Replacement every 10 years	\$60.00	\$5.00	Est. Replacement every 7 years
Replace Well Pump	\$70.00	\$5.84	Est. Replacement every 10 years	\$100.00	\$8.34	Est. Replacement every 7 years
Replace Treatment System	\$375.00	\$31.25	Est. Replacement every 20 years	\$750.00	\$62.50	Est. Replacement every 10 years
Well Re-Development	\$75.00	\$6.25	Est. Replacement every 40 years	\$100.00	\$8.34	Est. Replacement every 30 years
Total =	\$791.29	\$65.96		\$1,950.00	\$162.53	



PROJECT SCHEDULE & PHASING

Design and Approval: underway with anticipated NYS State approval by August 2021

Permitting: underway with anticipated approvals by August 2021

Bidding and Construction: to be four separate contracts

Phase 1 – Water Transmission Main: Start work March 2022 and operational September 2022

Phase 2 – Well House & Pump Station: Start work November 2021 and operational September 2022

Phase 3 – Storage Tank Replacements: Start work November 2021 and operational September 2022

Phase 4 – Electrical & Instrumentation: Start work November 2021 and operational September 2022

All Phases – minor restoration work such as lawn touchup to be Spring & Summer 2023



FREQUENTLY ASKED QUESTIONS

1. What can I do with my well?

- Abandon the well.
- Keep the well, but separate it from the public water plumbing.

2. Do I have to connect to the water main right away?

- According to the Town Water Use Law, all houses, buildings, or properties used for human occupancy, employment, recreation, or other purposes, situated within the Town Water District and abutting on any street, ally, or right-of-way in which there is now located or may in the future be located a public water line, is hereby required, at the owner's expense to install suitable facilities therein, and connect such facilities directly with the proper public water main, in accordance with the provisions of the law, within 30 day period after official notice by the Town to do so, provided that said public water main is within 250 feet of the property line.

3. Can I reuse my existing meter?

- The Town will inspect existing meters and if found to be properly functioning the customer will be allowed to reuse the existing meter.
- The Town is offering a discount to customers that are reusing an existing meter that are new customers to the water system.

4. Do I have to pay a debt service fee even if I don't hook up to the water system?

- According to state law, all properties within an established water district that are receiving benefits must share equally in that benefit whether using the service or not.

5. How much will public water raise my assessment?

- The existence of a water main or the connection to a water main does not in itself raise assessment values.
- Assessment values are based on the sale price of comparable houses in the area.



QUESTIONS?



Please submit any questions to the Town Engineer at
ben.slotman@evlengineering.com

Engineering Department Phone: (716) 699-9005

Questions need to be received by March 26, 2021