

An aerial photograph of a large body of water, Cayuga Lake, with a shoreline featuring a mix of green fields, dense forests with vibrant autumn foliage in shades of yellow, orange, and red, and a small marina with several boats. The sky is overcast with soft, diffused light.

# CAYUGA LAKE PROTECTION PLAN

CAYUGA COUNTY WATER AND SEWER AUTHORITY  
IN COOPERATION WITH THE VILLAGE OF AURORA



# BRIEF HISTORY



# Cayuga Lake Railroad

Rail service from Ithaca to Auburn

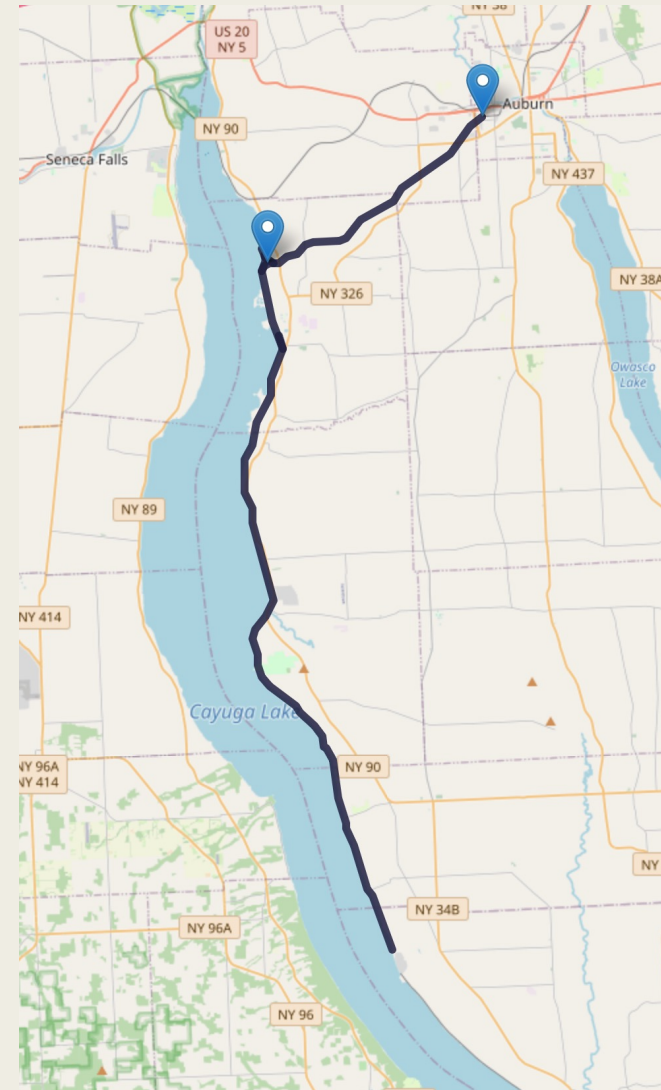
Acquired by Lehigh Valley Railroad

Followed eastern shoreline of Cayuga Lake

Operated from 1872 to 1972

Rail was abandoned and rail bed was gradually sold off

Resulted in development of many individual camps, summer homes and permanent residences



# Present day conditions



- Over 440 lake front properties
- Increasing number of permanent residents
- Increasing investments by property owners
- Growth in work from home jobs
- Lack of municipal sewer and water
- Village of Aurora treatment facility needs updates



# Water Quality Concerns

- ❖ Buried holding tanks with questionable integrity
- ❖ Inadequate septic systems
- ❖ Little to no buffer zone to lake
- ❖ Adding nutrients to lake
- ❖ Privately owned lake water intakes for non-potable





# Changing Conditions

- ❖ Sought after lake frontage
- ❖ Larger new homes
- ❖ Conversion of summer cottages to permanent homes





# Project Description

- ❖ Install low pressure sewers along shoreline of Cayuga Lake
- ❖ Multiple partners: Towns of Ledyard & Genoa, Village of Aurora, & Long Point State Park
- ❖ Collected sewage transported back to Village of Aurora WWTP for processing





# Low Pressure Sewers

- ❖ Sewage is pumped under low pressure
- ❖ Smaller diameter pipelines
- ❖ On site pumps and larger booster stations
- ❖ Almost no infiltration or inflow
- ❖ Commonly used along lake fronts

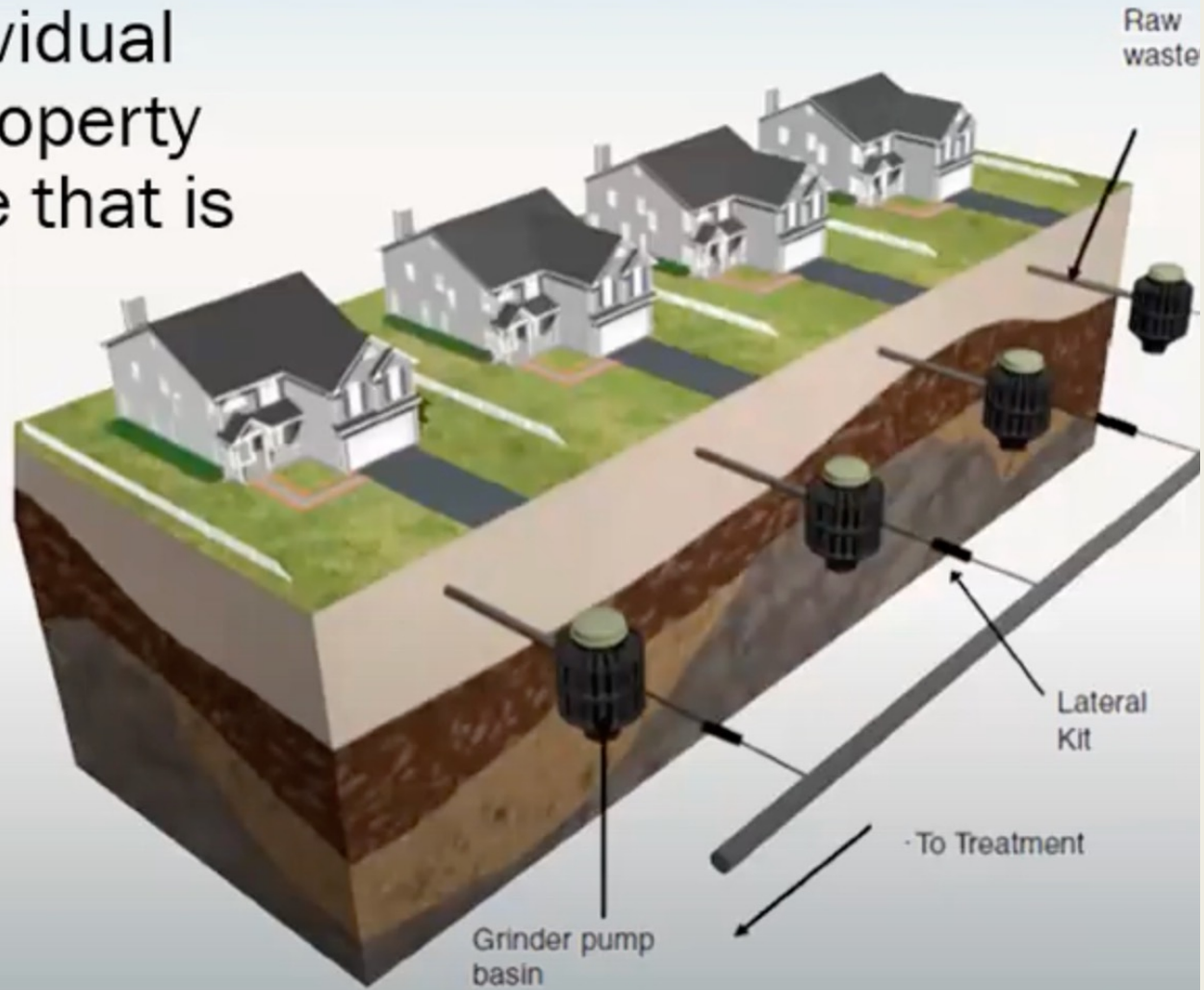




# Pressure Sewers with Grinder Pumps

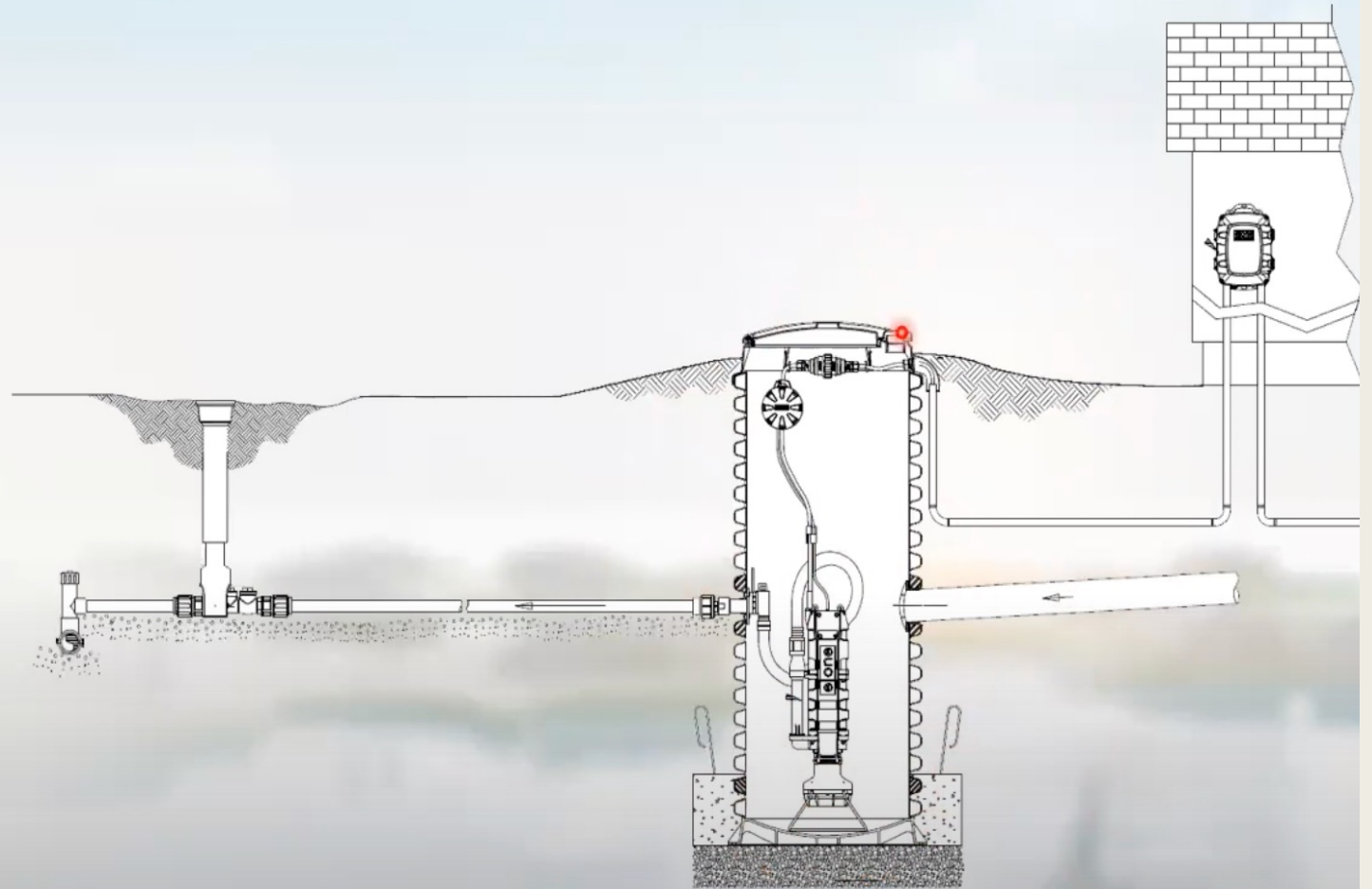
A pressure sewer consists of individual grinder pumps located at each property and small diameter pressure pipe that is buried just below the frost line.

The grinder pump macerates the solids in the wastewater and conveys the flow to a central treatment system, lift station, gravity sewer, or force main.



# Components – Pressure Sewer System

- Grinder Pump Station
  - Grinder Pump
  - Collection Basin
  - Alarm Panel





# Project Specifics

- ❖ Total Project Impact – Approx. 445 EDU's
- ❖ Fire Lane 1 – Approx. 10 EDU's
- ❖ Atwater Rd. – Approx 43 EDU's
- ❖ Powers Rd. – Approx 50 EDU's
- ❖ Clearview Rd. – Approx 60 EDU's
- ❖ Fire Lane 6 – Approx 40 EDU's
- ❖ Honoco Rd. – Approx 157 EDU's
- ❖ Lake & Sunset Beach Rds –
  - ❖ *Approx. 75 EDU's*
- ❖ Long Point State Park
  - ❖ *Possibly 10 EDU's*



# EDU = Equivalent Dwelling Unit



- EPA term
- The typical daily sewer volume from a single-family home is 1 EDU.
- One EDU is typically estimated as 250 gallons per day



# Construction Elements



- ❖ 275 Grinder Pump Stations
- ❖ About 9 miles of underground sewage force main
- ❖ 2 Intermediate booster pump stations
- ❖ Easements and right of ways
- ❖ Upgrades to Village of Aurora WWTP
  - ❖ *Added treatment capacity*
  - ❖ *Upgraded pumps, blowers, and electrical system*

# Details

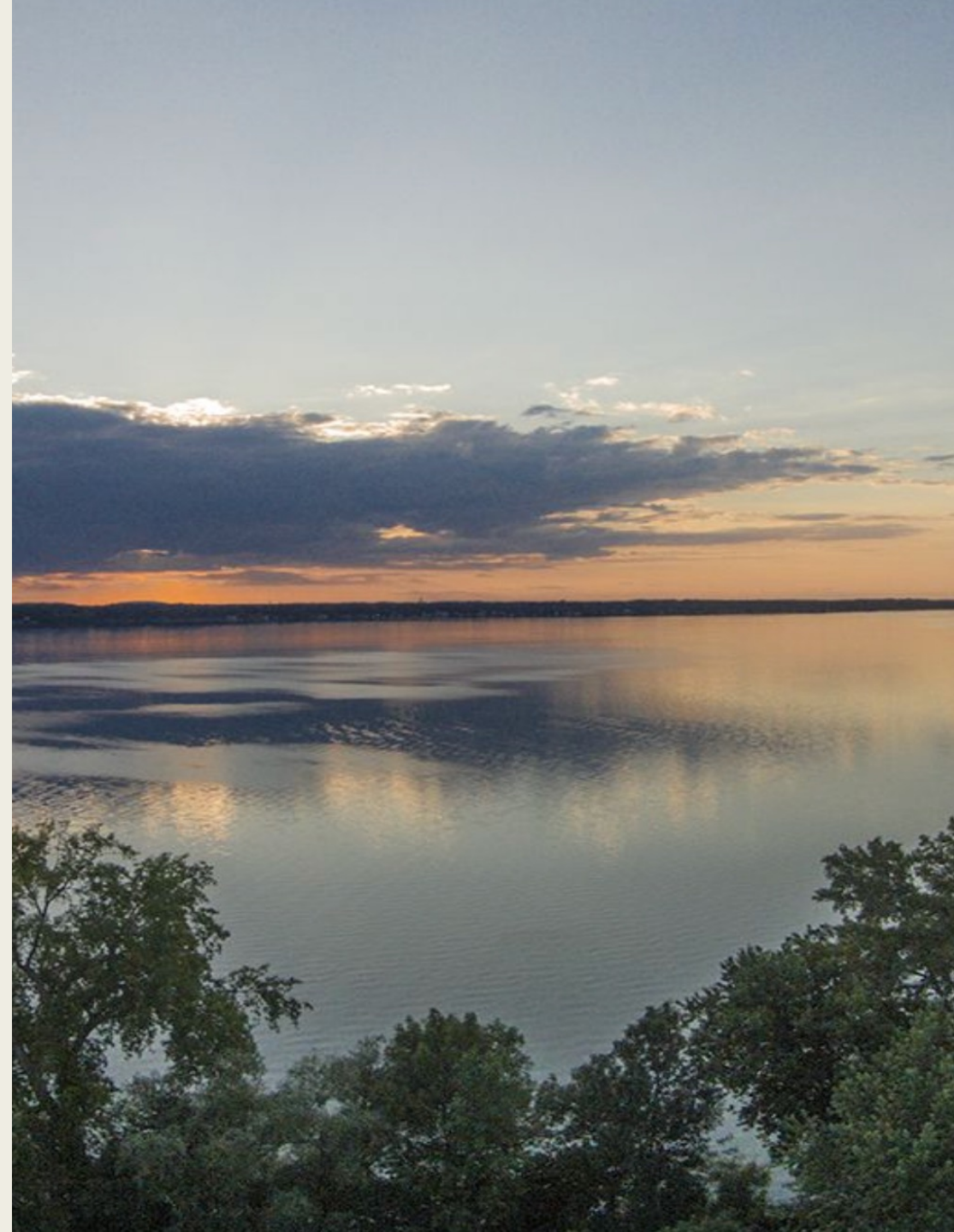
- ❖ Property owners responsible for connecting homes to grinder pumps
- ❖ Grinder pumps will be owned and maintained by CCWSA
- ❖ Roads will be restored to current condition





# Benefits of the Cayuga Lake Protection Plan

- Protects 9 miles of shoreline from impacts of substandard sewer disposal practices.
- Updates the Aurora wastewater treatment plant in preparation for more stringent discharge standards.
- Reduces fossil fuel use, smell and traffic congestion associated with pump trucks servicing holding tanks.





# Next Steps/Timeline

- ❖ Complete SEQR process
  - ❖ *Complete by May 26th*
- ❖ Public outreach
  - ❖ *Ongoing*
- ❖ Pursue grant and other funding commitments
  - ❖ *June-August 2023*
- ❖ Form new district
  - ❖ *Map Plan Report*
- ❖ Design and Build
  - ❖ *March 2025-2026*



# Contact Information

- Director of Operations – Karl Rindfleisch
  - [krindfleisch@ccwsa.us](mailto:krindfleisch@ccwsa.us)
- Administrative Assistant – Susan Phillips
  - [sphillips@ccwsa.us](mailto:sphillips@ccwsa.us)

