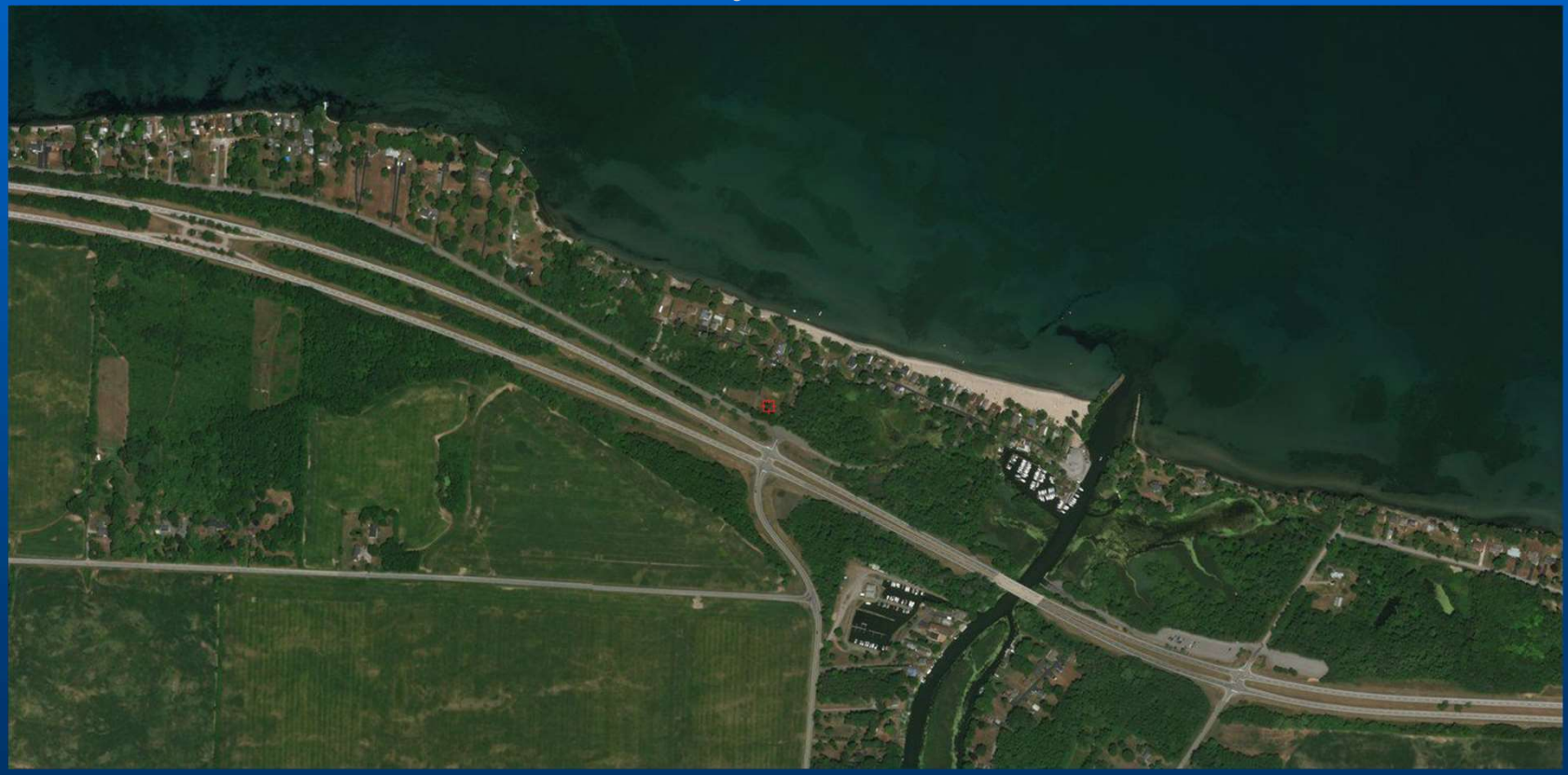
Town of Hamlin
Lakeshore Sewer District

February 20, 2020



John Paul Schepp, P.E.

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Scope of Presentation

- **Background Information**
- **Problem Description**
- **Alternative Solutions**
- **Recommendations**
- **Costs**
- **Next Steps**

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Background

- 2003 - West Wautoma contacted Town to review sewer feasibility
- More areas expressed interest
- 2008 - entire lakeshore was reviewed
- 2009 - Funding Options Explored
- 2012 – Revisited – but considered too costly

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Lake Ontario Resiliency and Economic Development Initiative (REDI)

- 2019 – Preliminary Engineering Report was updated and submitted to NYS
- Project Costs - $7,900,000
- REDI Grant 95% - $7,505,000!

LAKE ONTARIO
ONTEO BEACH
HAMLIN BEACH STATE PARK
LAKE
SANDY HARBOUR BEACH
BENEDICT BEACH
SHORE ACRES
PROJECT AREA
WAUTOMA BEACH
ONTARIO
STATE
PARKWAY
SANDY CREEK
NORTH HAMLIN RD
209
19
LAKE RD W FORK
LAKE RD E FORK
CREEK
CREEK
CHASE RD
COWSUCKER
BRUSH
MARTIN RD
RD
CREEK
EAST
TOWN OF HAMLIN
CHURCH RD
TOWNLINE RD
TOWN OF PARMA
BRICK SCHOOLHOUSE RD
LAKE ONTARIO
WEST CREEK
WILER RD
DUNBAR RD
HAMLIN
WALKER RD
205
WALKER
CREEK

Study Area Details

Total Single Family Homes	230
Total Single Family Homes w/apt	2
Total Rural Residential	1
Seasonal Residential	53
Total Residential Vacant	62
Total Vacant w/improvement	31
Marina (Yacht Club)	1
Water Plant (not in service)	1
Total	381 Parcels
Estimated Population	721

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Problem Description

Problem Description

- Small lots
- High water table
- Low permeability soils
- Season cottages converting to year-round homes
- Increasing sewage flows
- No sanitary sewers in vicinity

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Problem Description

- **Failing Septic Systems**
- **Environmental Concerns**
  - **State and Federal Wetlands**
  - **Lake Ontario**
  - **Sandy Creek**
  - **West Creek**
  - **Many small tributaries**

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Problem Description

- **Illicit Discharges**

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Alternative Solutions

- **On-Site Treatment Systems**
  - **Space constraints**
  - **High water conditions**
  - **Low permeability soils**
  - **Environmental constraints**
  - **Costly engineered systems**

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Sewer Alternatives

- **Conventional Gravity Sewers**
  - **Min. depth of ~ 4.5 feet**
  - **Slope 0.4 feet/100 feet**
  - **4’ Ø manholes every 300 feet**
  - **4” house laterals**
  - **Sewers and laterals must be straight alignment**
  - **Lift stations**
    - **Deep sewers, Bedrock, Groundwater**

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Sewer Alternatives

- **Grinder pumps**
  - **Small size**
  - **Grinder chops sewage**
  - **Small diameter pipes**
    - **1 ¼” for up to 4 homes**
  - **Forcemain may have flexible alignment**
  - **Shallow depth**
    - **Forcemain follows grade**
    - **4 – 5 feet deep**

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Grinder Pumps

- 3’ feet diameter
- 7 ½’ feet deep
- 10 GPM min.
- Up to 80 PSI
- 1 phase - 1 HP
- Electric ~ $3/month

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Grinder Pumps

- Pump Station is close to the house
- 4-inch lateral from house
- 1 ¼” forcemain to system
- Small manhole at surface
- Panel Mounted on post or exterior wall
- Pump to common small diameter mains

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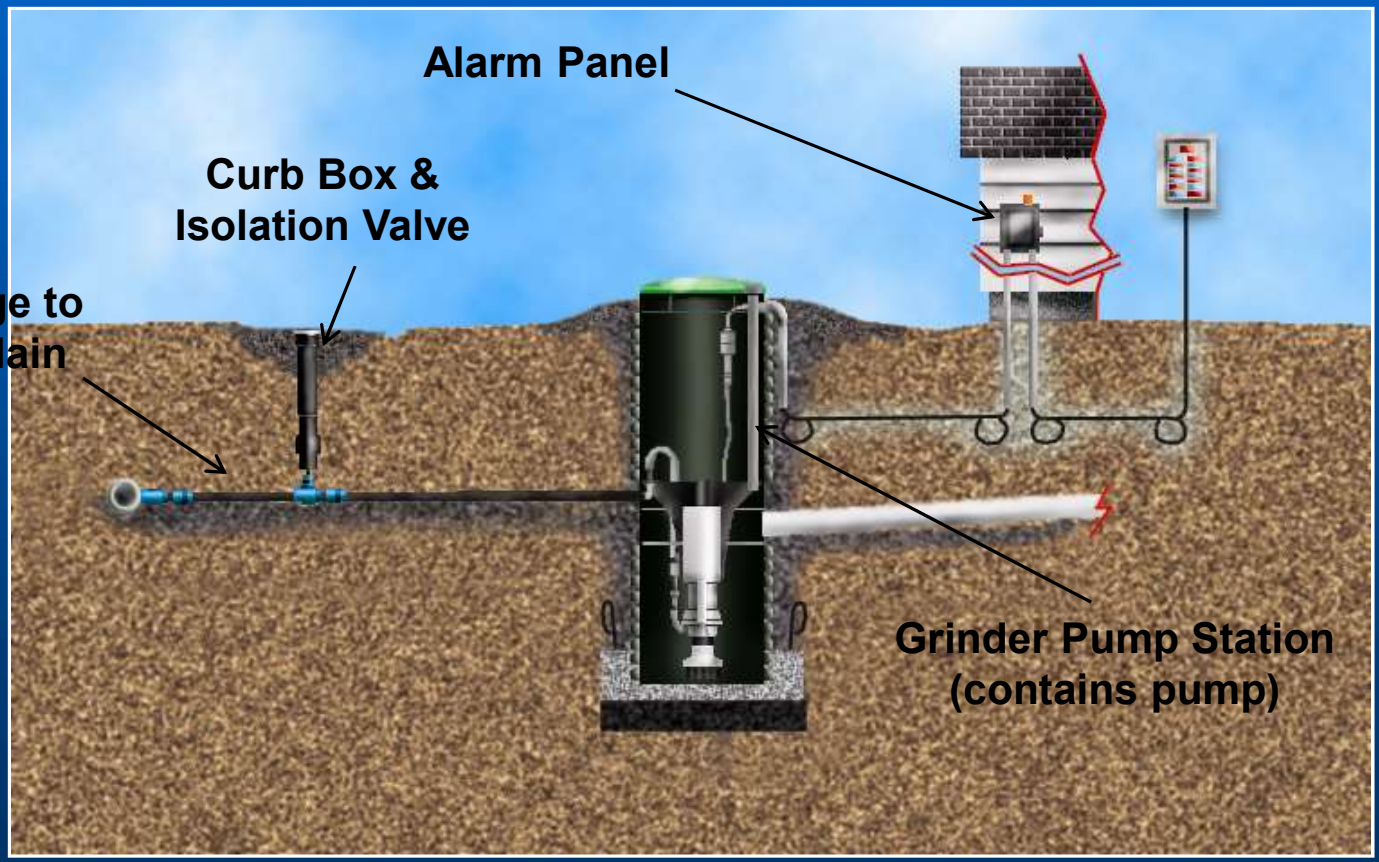
Grinder Pumps



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Grinder Pump System

- **There is a practical limit on pressures and flows for shared forcemains**
- **Will need to discharge to larger lift stations to transfer sewage to the MCPW Trunk Sewer**

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Cover will be elevated above flood levels

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NYS DEC Polices

- **Grinder Pumps to be outside (not in bacement)**
- **Grinder Pump to be min. 10-feet from the house**
- **Grinder Pump to be max. 20-feet from the driveway**

E/One Sewer Systems Case Study: Campers Haven, Dennis Port, Mass.
Watch later
Share
Info
MORE VIDEOS
3:40 / 5:02
YouTube

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Recommend Project

- 287 Simplex Pump Stations
- 3 Duplex Pump Stations
- 120,000’ of 1 1/4” – 6” forcemains
- One main lift stations
- One connection to MCPW Sewer
- Total Project Costs - $7.9 Million
- Less 95% Grant Net Costs – $395,000

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Costs

- **Net Cost to District (313 EDU's)**
  - Assumed loan 4.25% for 30 years
  - EDU per year $75.21
  - Town O&M per year $32.24
  - MCPW Disposal $1.46/1,000 gal
  - 60,000 gal/yr $87.60
  - Electric $36
  - Approx. Annual Cost = $231/Year

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Homeowner Responsibilities

- Sign Permanent Easement to allow Town access for Construction O&M
- Connect and maintain lateral to Grinder Station
- Electric to Pump Control Panel
- New User Connection Fee MCPW $250
- Plumbing changes
- Abandon Septic System
- Annual Electric and Sewer Fees
- Annual Debt Service

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Town Responsibilities

- **System Operation and Maintenance**
  - **All Grinder Pump Stations**
  - **All Forcemains**
  - **Main Lift Station**

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Next Steps

- Finanacing
- Sewer District Formation
- Engineering
- Legal & Administration
- Approvals & Permits
- Easements
- Construction

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Sewer District Formation

- **Formation by Petition**
  - **Formal Petition includes max. costs**
  - **Majority of signatures required**
- **Formation by Town Board**
  - **Subject to permissive referendum (vote)**
- **If project costs are exceeded re-approval is required**

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Questions and Comments

Thank you!

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