



Coastal Wastewater (Sewer) Project

Town of Old Lyme
Water Pollution Control Authority (WPCA)
2019

Old Lyme Water Pollution Control Authority



**... WPCA is the town's
regulatory body whose
primary concern is water
pollution control ...**



Reference: WPCA Regulations and Bylaws
dated 21 July 2011

Current Old Lyme WPCA Members

We are town residents and volunteers appointed by the Selectman's office

- Chair: Richard Prendergast
- Vice Chair: Frank Chan
- Treasurer: Doug Wilkinson
- Members: Donna Bednar, Robert McCarthy, Dimitri Tolchinski, Joseph Carpentino, Andrea Lombard, Steve Cinami, and alternate James Birge



Town Scope:

Sound View & Misc. Area B
(highlighted in green and yellow)

Private Beach Association Scope:

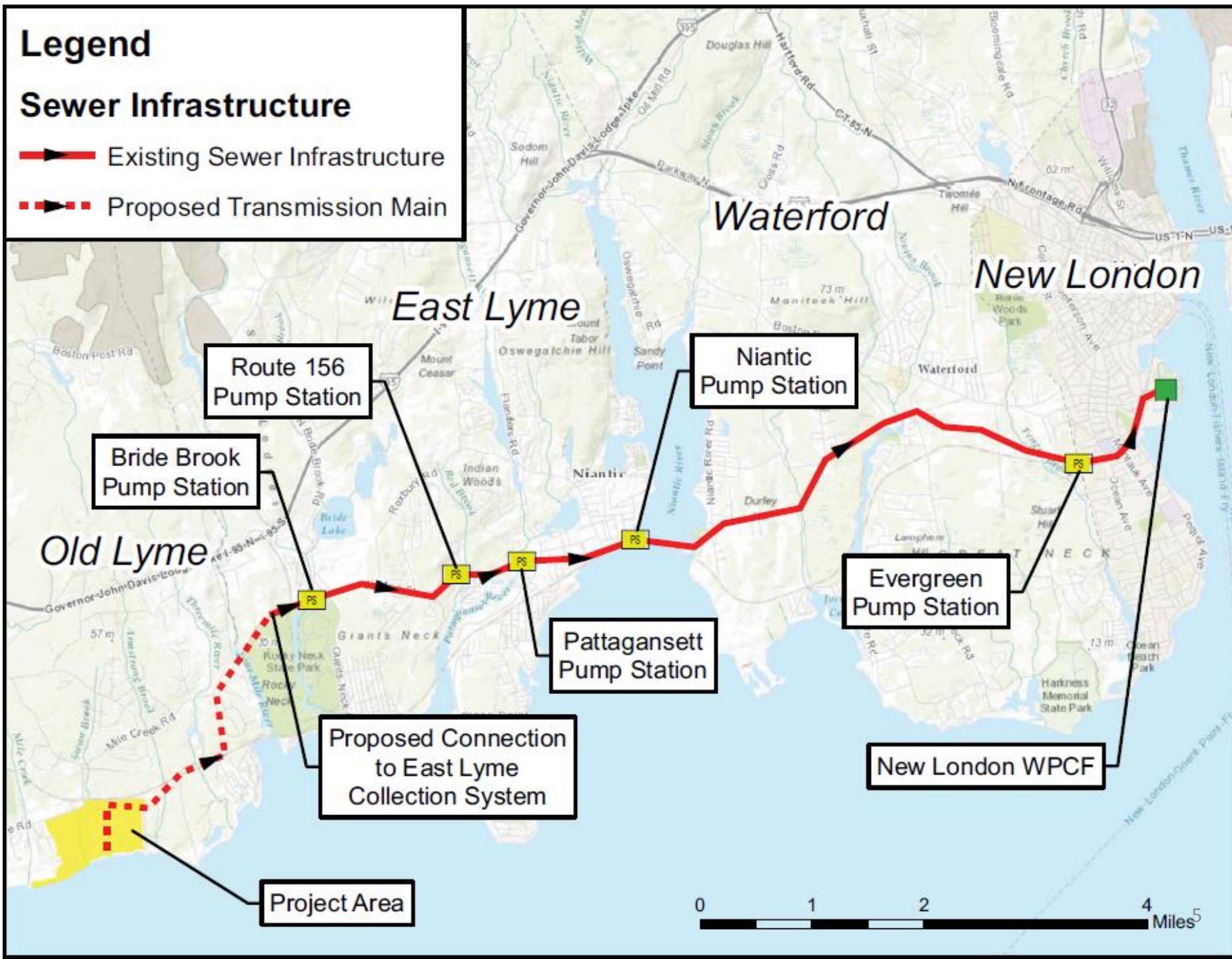
Old Colony (Chartered)
Old Lyme Shores (Chartered)
Miami Beach (Chartered)



Legend

Sewer Infrastructure

- Existing Sewer Infrastructure
- Proposed Transmission Main



Typical Septic System Described

Cess pool – a leaky tank that doesn't treat effluent

Modern septic system

- Main tank – solids
- Secondary tank- gray water and solids overflow
- Leach Field- gray water
 - Pipes/galleries with holes surrounded by stone that filter out the gray water
 - Final remediation through leach field 20 feet in all directions.

Typical Problems in the Project Area

- Insufficient leach field area
 - B100A Code Requires 20 ft set back but typical lot is narrow, 40 ft wide
 - Typical property 100ftx40ft= 4,000sqft; Typical requirement is 3 leach field legs x 8 ft wide x 150 ft long= 3,600sqft - with a building there is not enough room
- Also, the leach field has to be naturally dry, can't be underwater or treatment is incomplete resulting in ground water pollution



What You Get with the Sewer Project

- A more reliable method of handling individual septic, less concern of a holiday backup
- Improvement/reduction of local ground water pollution
- An investment in our environment
- In some cases, less smell, less wet lawn
- Collapse of the onsite tank and abandon of leach field=
More parking
- Upgrade of CT Water main lines, makes sense to install while the roads are opened up during sewer construction

Let's explain some sewer history in Old Lyme in the following slides



Town's Previous Effort to Manage Waste Water

- Since the *1980s*, WPCA focused on Sewer Avoidance, that is, taking positive regulatory steps, such as forming a WPCA, setting pump outs requirements, monitoring, and corrective actions to convince CT Public Health and CT DEEP that the town did not need centralized waste water collection, treatment, and disposal
- Since then, CT DEEP has deemed that sewer avoidance is no longer effective for some areas along the Long Island Sound shoreline



More Recent Efforts

- Nov. 2012** Wastewater Management Task Force formed
- Mar. 2013 Woodard & Curran selected to conduct study
- Oct. 2013** Wastewater management plan drafted, WPCA takes over
- Dec. 2013** Plan for **local solution** submitted to CT DEEP
- May-Nov 2014** CT DEEP states significant additional testing required – major debates- too expensive/no DEEP approval
- Dec. 2014 WPCA withdraws the plan to reset and stop avoid incurring additional costs, **and CT DEEP rejects WPCA's withdrawal**
- June 2015** CT DEEP issues **administrative order** to finish the plan
- Dec 2015 CT DEEP agrees to additional testing for Hawks Nest area
- 2016 **Public Health Nuisance**, Project plan to sewer Sound View with deferred decision for Hawks Nest Beach pending long term test results
- 2017 Development of multi phase testing of Hawks Nest area. Finalize plan submittal to CT DEEP. Testing started July 2018
- 2018 Meetings with other Old Lyme WPCAs, Dpt of Health, DEEP, neighboring towns, CT Water Co. to discuss sewer related issues and agreements. June 19 Environmental Impact Evaluation (EIE) published for public comment, public presentation like this one, and the “Record of Decision” was completed



Town's Project Area

- Service Area Includes
 - Sound View Beach & Miscellaneous Town Area B (North of Sound View to the train tracks)
 - Residential accounts and a small number of non-residential accounts (Town, commercial, other)
- Area known as Hawk's Nest
 - Fierce opposition to sewers as well as some support for sewers. A tough decision but further study makes sense when all factors are considered
 - CT DEEP agreed to further study and based on the results, adjusting the scope
 - Study would suggest what to do for that project area
 - Future capacity needs included in existing plans



Not Included in the Town's Project Area

- Private Beach Associations installing sewers
 - Old Lyme Shores, Old Colony, and Miami Beach Associations formed their own WPCAs (which they can do based on the unique quasi government status of their associations, Sound View doesn't have this option)
 - Private Beach Associations are self funding
- Future Expansions due to sewers:
 - Not likely, capacity plans and agreements with neighboring towns doesn't allow expansion, federal funds don't allow it, requires a new study, new project, and new agreement with neighboring town's



Town of Old Lyme WPCA's Focus

- Construction, operation & maintenance of a wastewater collection & conveyance systems - for the town responsible properties (i.e. Sound View and Misc. Area B)
- WPCA will oversee administrative services, sewer billing, as required inspections & long-term planning for town responsibility properties.
 - Use existing Town resources (e.g. Finance) and outsource for efficiency (maintenance)
- Partner with private beach associations:
 - 1 shared Old Lyme pumping station and forced main sewer line (out of the town) and maintenance of shared resources
 - Agreement with New London, Waterford, & East Lyme as co-owners of the treatment facility & participate in funding long term Operation & Maintenance



Impetus for Project (Why)

- Chartered beach communities have initiated *private* efforts (under order from CT-DEEP) to manage their waste water collection, treatment and disposal
 - Sewers are going in, surrounding Sound View neighborhood
- **Seven Studies by Four Different Experts Conclude:**
 - Water pollution exists in along sections of the Old Lyme shoreline:
 - Point of Woods: RFP Engineering (1), Old Lyme Shores, Miami, Old Colony: Fuss & O'Neil (3), Old Lyme: Woodard & Curran (2) and Lombardo Assoc. (1)



Impetus for Project (Why)

- **CT-DEEP clarified definition of water pollution**
 - Confirmed “community waste water pollution” problems exist (information meeting at town hall on 30 OCT 2014)
- **Town of Old Lyme Dept. of Health**
 - Issued a statement that a “public health nuisance is so identified” 1/2016
 - The town has to act in some way to eliminate such a nuisance
 - Study and eventually develop a solution



Interpretation of Water Pollution (CT-DEEP)

- The Public Health Code defines the minimum criteria for a subsurface sewage disposal system (septic system) which will protect public health and the environment
 - Most older systems (especially around lakes or on the shoreline) don't meet the requirements of the current health code.
 - If the systems are not code compliant, then public health and the environment may be at risk.



Interpretation of Water Pollution (CT-DEEP) Cont.

- When a significant number of small lots are in a neighborhood, even the health code may be insufficient to protect health and the environment (DPH Circular Letter 2000-01)
 - DPH recommends based on Nitrogen analysis for a density of 3 bedrooms (or more) is a $\frac{1}{2}$ acre.
 - $\frac{1}{2}$ Acre = 21,780sqft, typical lot 4,000sqft
 - When a number of properties with similar deficiencies exists in a neighborhood, “...a community pollution problem exists, or... can reasonably be anticipated in the future...” (CGS 22a-428)



Summary Need for Sewers

- It has been coming for a long time
- Aging or non-complaint septic systems
- Notice of public nuisance from the then current town Dept of Health,
 - Like or not, we have to deal with a irreversible legal requirement to do something
- Administration Order(s) from the State Health Department
Department of Energy & Environmental Protection (DEEP)
- **Extreme density (20 ft set backs on 40 ft wide lots)**
- Shallow groundwater (leach field under water)
- Poorly drained soils & soils that rely on tidal movements to drain



IMAs and Cost Sharing

Inter-municipal Agreements (IMA):

- Private Beach Associations installing sewers have completed IMAs with neighboring towns and New London treatment facility that incorporates ***all*** the volume needed by Old Lyme
- The Town is developing shared resource agreements with Private Beach Associations
 - Joining and sharing resources saves everyone significant money \$\$\$\$
 - The intention is to define on a realistic and fair basis who pays for what. Most likely defined by designed capacity with language to adjust over time for actual volume used



Key Sewer Debt Reduction/Funding Concepts

- Facility Connection Charges (FCC)
 - A fee to connect a building to the sewer line
 - One time fee.
 - Pay all at once or finance over 20 years at 2%
- Betterment Fees
 - Special assessment on sewer users and main source of revenue to repay the construction loan
 - One time payment
 - Pay all at once or financed over 20 years at 2%



Additional Sewer Costs

- Sewer User Fee
 - Applied to sewer users for processing of effluent on going system maintenance
 - Annually applied
 - Typical user fee \$430/year per Equivalent Dwelling Unit (EDU)
- Additional Resident Costs
 - Plumbing cost to install line from house to curb line (this cost varies but could be between \$50.00 and \$100.00 per foot depending on soil conditions)
 - Neighborhood bid (to do all houses by one company) planned



How Much Will Sewer Project Cost?

- **Total Referendum Amount: \$9,500,000***
 - Total amount before grants

* Note: Every year we delay, costs increase
- **Estimated Amount after Grants: \$7.44M**
 - 25% state grant offsets eligible sewer costs
 - Eligible costs such as materials and equipment, not Legal services
 - Includes Resident Financing available: 20 year at 2% loan
 - Also CT Water Co's installing new water lines using WICA Program
- **Cost Components**
 - Collection sewers
 - Transmission system (pump station / force mains)
 - Conveyance in East Lyme & Waterford
 - Treatment capacity in New London
- **Payment & Repayment**
 - Town to bond project
 - Benefited sewerred property owners repay the town's bond



Town's Contribution for Cost Assistance

- Town of Old Lyme's contributions:
 - 45% of the project area scope evaluation (Clean Water Funds reimbursed balance)
 - Funding the WPCA
 - Non- reimbursable funding e.g. site planning
 - Years of monitoring fees
 - Additional environmental study expenses
 - Engineering and Legal fees
 - WPCA Members are volunteers, no pay but contributed time
 - Seeking grants, special funding, donations, coordinating other State department efforts e.g. CT Water Wica water mains



Assessment Formula: Sound View Project

- Each dwelling requires 1 facilities connection fee of - \$6,000
- Each dwelling is assigned a minimum betterment assessment of \$15,000
- The average livable building square footage is 1242 ft² or 1 Equivalent Dwelling Unit (EDU)
- Each dwelling is assigned an EDU factor =

Building livable sqft/average neighborhood building livable sqft
(1,242ft²)

- Larger buildings such as multiple family have a EDU greater than 1
- Alternate methods used to equate a reasonable EDU for non-standard buildings like Commercial buildings. Alternate methods include CT Dept of Public Health Technical Standards



Estimated Cost per Equivalent Dwelling Unit (EDU)

- Typical Small House (200-700 building livable sqft) Costs
 - \$6,000 for connection fee + small houses minimum charge of \$15,000 for betterment assessment= \$21,000
 - Financed over 20 years at 2%: \$640 twice year
- Typical average House of 1 EDU (1,242 building livable Sqft)
 - \$6,000 connection fee + \$25,007 betterment assessment = \$31,007
 - Financed over 20 years at 2%: \$944 twice a year



What is the Anticipated Schedule?

- **Town Referendum**
 - August 13th (a Tuesday)
 - 6am to 8pm
 - Absentee ballots available at Town Clerk's office 3 weeks prior to the vote
- **Design**
 - 2020 estimated
- **Construction**
 - 2020 thru 2023 estimated



What is Purpose of Town Referendum?

- **Requesting authorization by voters for the Town to bond project costs**
 - Includes the costs related to the Town project areas
 - Excludes the costs related to the chartered beach associations



What Does a “Yes” Vote Mean?

- **A “yes” vote at Town Referendum means:**
 - Residents authorize Town to bond project costs for **\$9.5M**,
 - Financing the debt shouldn’t impact the town’s mill rate
 - Benefited project area will repay the debt
 - Sound View area will get sewer upgrade and new water main lines



What Does a “No” Vote Mean?

- **A “no” vote at Town Referendum means:**
 - Residents do not authorize Town to bond project costs
 - Existing Health department “Public nuisance” requiring improvement of ground water is NOT resolved, for Sound View
 - State may require the town to either further study (at the town wide expense) or implement sewers
 - Significant delay could trigger loss of state funding increasing the costs for everyone



Conclusion

- Sewers for Sound View have been coming for a long time
- There is a need for sewers, mainly for the density, an investment for the future
- A town wide referendum vote is the right approach to give all residents a say

Thank you and open questions

