



Coastal Wastewater (Sewer) Project

Town of Old Lyme

Water Pollution Control Authority (WPCA)

August 2017

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: Donna Bednar
- Treasurer: Doug Wilkinson
- Members: Robert McCarthy, Sal Cancelliere, Dimitri Tolchinski, Frank Chan, Joseph Carpentino, Andrea Lombard, Steve Cinami (alternate)



Town Scope:

Sound View (Town)

Misc. Town Area B (Town)

Hawk's Nest further study

Private Beach Association Scope:

Old Colony (Chartered)

Old Lyme Shores (Chartered)

Miami Beach (Chartered)



Typical Septic System Described Reference

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

- Insufficient leach field area
 - B100A Code Requires 20 ft set back but typical lot is narrow, 40 ft wide
 - Typical property 100ftx40ft= 4,000sqft; 3 leach field legs x 8 ft wide x 150 ft long= 3,600sqft
- 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 constructed

Let's explain the details 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, 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
- However, CT DEEP has deemed that sewer avoidance is no longer effective for some areas along the Long Island shoreline



More Recent Efforts

- November 2012** Wastewater management task force formed
- January 2013 RFQ draft approved
- March 2013 Woodard & Curran selected to conduct study
- April – Oct 2013** Wastewater management plan drafted, WPCA takes over
- December 2013 Plan for local solution submitted to CT DEEP
- May/Jun/Nov 2014** CT DEEP states significant additional testing required – Negotiations and major debates
- December 2014 WPCA withdraws the plan to reset and stop avoid incurring additional costs
- January 2015 CT DEEP rejects WPCA's withdrawal
- June 2015** CT DEEP issues administrative order to finish plan
- Dec 2015 CT DEEP agrees to additional testing for Hawks Nest area
- April 2016 WPCA agrees to additional testing on Hawks Nest area
- June 2016 Project plan to sewer Sound View (in conjunction with three chartered beaches) submitted to CT DEEP, 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.



Town Project Area Scope

- 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
 - Possible to repeat this project for Hawks Nest sometime in the future.
 - Future capacity needs included in existing plans



Out of Town Scope

- 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)
 - Funding their sewer projects and partnering with the town on logical shared resources
- Future Expansions due to sewers:
 - Not likely,
 - Capacity plan and agreement with neighboring towns doesn't allow expansion, 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.
- Partner with private beach associations:
 - Agreement with New London, Waterford, & East Lyme as co-owners of the treatment facility & participate in funding long term Operation & Maintenance
 - 1 shared pumping station and sewer lines (out of the town)



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 agree**
 - Same conclusions that water pollution exists in along sections of the Old Lyme shoreline



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”
 - The town has to act in some way to eliminate such a nuisance



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)
 - Nitrogen analysis recommended by DPH for density of greater than 3 bedrooms per $\frac{1}{2}$ acre.
 - $\frac{1}{2}$ Acre = 21,780sqft, typical lot 4,000 sqft
 - 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
 - Private Beach Associations have drafted IMAs with neighboring towns and New London treatment facility that incorporates the volume needed by town areas
 - Developing shared resource agreements with private beach Associations
 - 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
 - Developing land lease for pump station
 - New bathrooms over a pump station at the end of Hartford Ave



Key Sewer Debt Reduction/Funding Concepts

- Facility Connection Charges (FCC)
 - A fee to connect a Equivalent Dwelling Unit (house) to the sewer line
 - One time that can be financed over 20 years at 2%
- Betterment Fees
 - Special assessment on sewer users and main source of construction revenue
 - One time payment or financed over 20 years at 2%



Additional Sewer Costs

- Sewer User Fee
 - Applied to sewer users for on going system maintenance
 - Annually applied
 - Typical user fee \$430/year per 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 conditions)



How Much Will Sewer Project Cost?

- **Total Cost Estimate**

- \$7.23M (2018 costs) considering grants and financing
 - If we delay, the costs could increase \$1M per year

- **Cost Components**

- Collection sewers
- Transmission system (pump station / force mains)
- Conveyance in East Lyme & Waterford
- Treatment capacity in New London

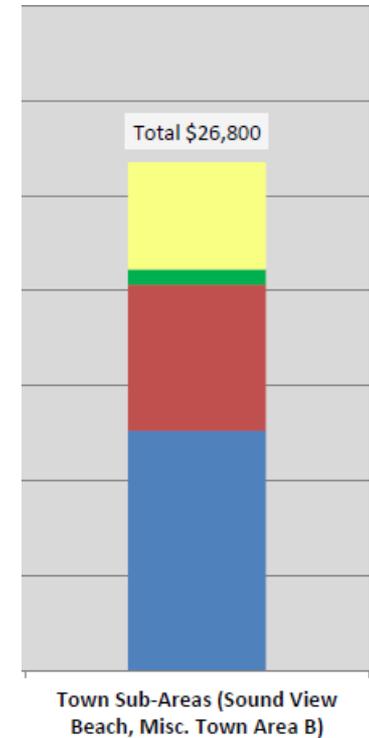
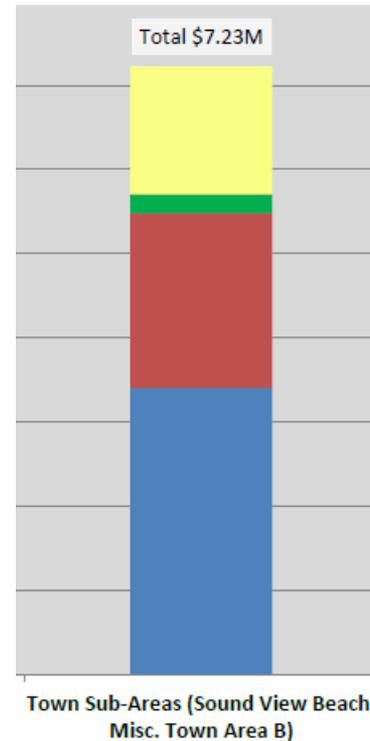
- **Payment & Repayment**

- Town to bond project
- Benefited sewer property owners repay the town's bond



Cost per House or Equivalent Dwelling Unit (EDU)

- Projected Sewer capital costs:
 - Estimated \$7.23 Million or
 - \$26,800 per EDU (229 Sound View and 41 Misc Town Area B)
 - Assumes a 25% state grant to offset the sewer costs
 - Repayment over 20 years on a 2% loan
 - **Estimated \$1,643.40 per year including interest charge**



■ Collector Sewer ■ Common Transmission System ■ East Lyme & Waterford Upgrades ■ Treatment @ New London WPCF



What is the Anticipated Schedule?

- **Town Meeting**
 - Fall 2017 or ?
- **Design**
 - 2019?
- **Construction**
 - 2020 thru 2023?
 - Depends on
 - Finalization of plan, Record of Decision, sharing agreements in place
 - Successful town referendum, bonding of project



What is Purpose of Town Meeting?

- **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 Meeting means:**
 - Residents authorize Town to bond project costs,
 - Financing the debt doesn’t impact the town’s mill rate
 - Benefited project area will repay the debt minus any bad debt



What Does a “No” Vote Mean?

- **A “no” vote at Town Meeting means:**
 - Residents do not authorize Town to bond project costs
 - Existing Health department “Public nuisance” requiring improvement of ground water is NOT resolved
 - 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
- Requires a town wide referendum vote
- More work being done to prepare for eventual vote, additional public meetings like this

Thank you and open questions

