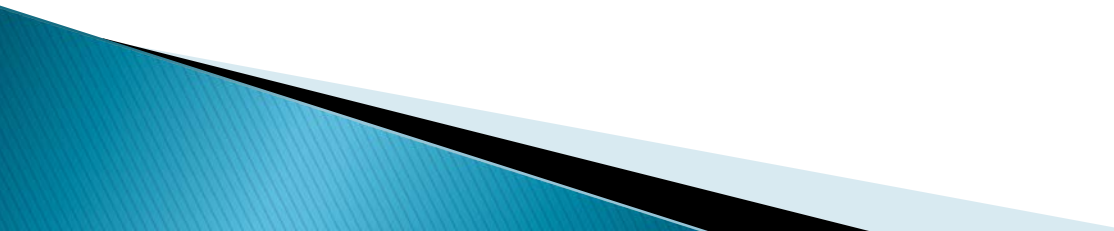


Old Saybrook Wastewater Management District Septic System Upgrade Process for Oyster River East

Presented by the
Old Saybrook Water Pollution Authority
December 2010

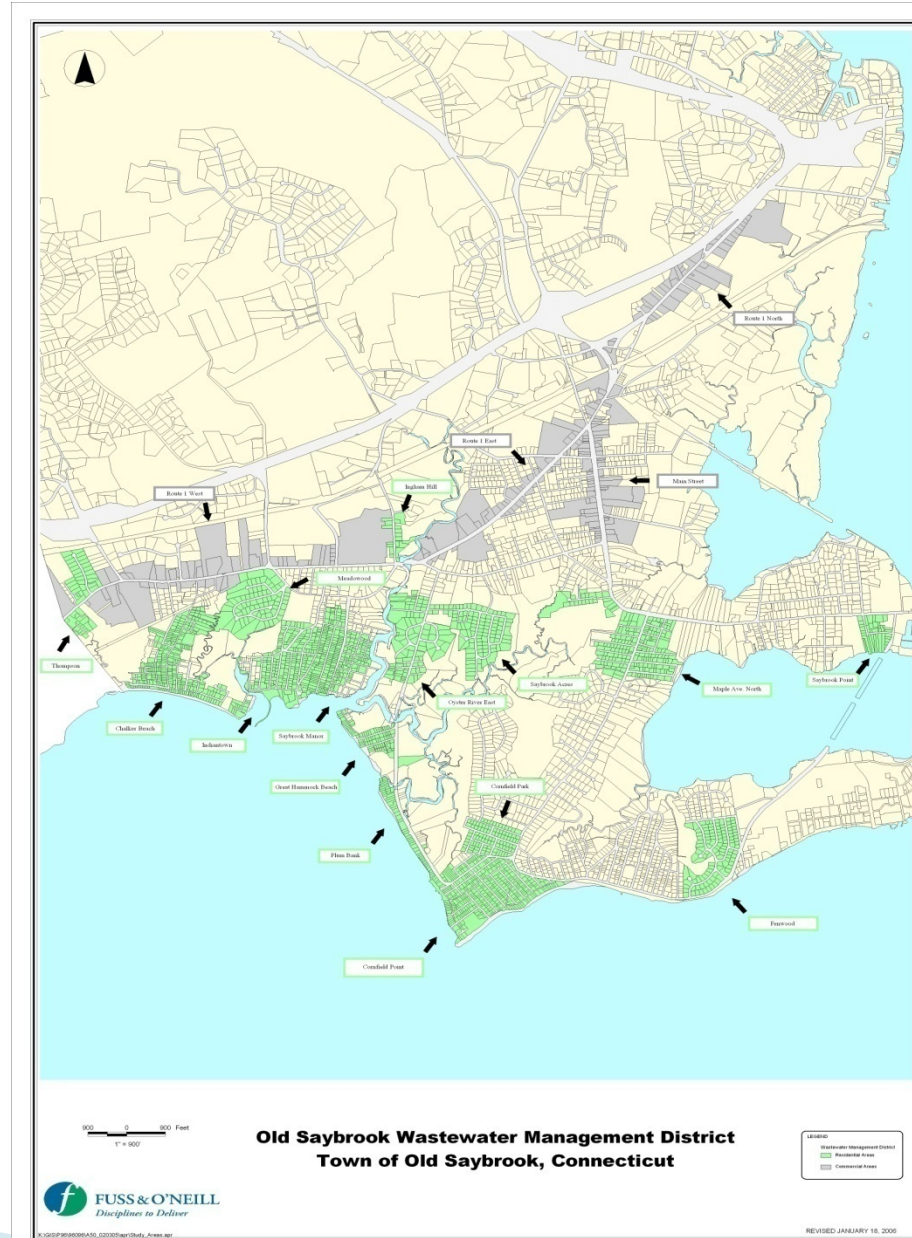


Agenda

- ▶ Introduction
 - ▶ Brief Overview of Project
 - ▶ Implementation Process
 - With Clean Water Fund grants and loans
 - Privately funded
 - Comparison of approaches
 - ▶ Expected Upgrades for Oyster River East
 - ▶ Preliminary Schedule
 - ▶ Questions
- 


Wastewater Management District (WWMD)

- Approximately 1900 Lots
- 15 Focus Areas
- Based on preliminary information, approx 16% of existing septic systems may be compliant, but still require confirmation
- Approx. 300 Advanced Treatment systems required
- 9 Year Build-out



WWMD Implementation Process

Using Clean Water Fund Grants and Loans

1. Property owner application process
 2. Initial Investigation
 3. Determine upgrade requirements
 4. Design of upgrades
 5. Bidding and contractor selection
 6. Order to Upgrade
 7. Construction
 8. Permit to Discharge
 9. Operate system
 10. Benefit Assessment
- 

1. Application Process

- ▶ Homeowner receives application package
 - “Notice of Entry” Letter
 - Actual letters will be available tonight
 - Conventional Systems, not AT
- ▶ Sign application for entry into the program
 - Or waive Clean Water Fund grant and loan funding (more on this later)
- ▶ Signed Application must be returned to the WPCA office in Town Hall within 30 days

YOU MUST CHECK ONE OF THE FOLLOWING BOXES REGARDING CLEAN WATER FUND PARTICIPATION. CHECKING BOX A MEANS YOU WILL ACCEPT CLEAN WATER FUNDS. CHECKING BOX B MEANS YOU WAIVE CLEAN WATER FUNDS .

Box A. ☐ I **accept** Clean Water Funds to investigate and implement upgrades as necessary on my property, and acknowledge and agree such implementation will involve access to my property for an initial investigation and may require construction by the Town to meet Town Ordinance requirements. I understand an assessment will be made against my property in accordance with § 7-249 et. seq. of the Connecticut General Statutes.

Box B. ☐ I **decline** Clean Water Funds to implement and pay for upgrades to my septic/sewerage system under Town Ordinances. I will undertake to pay for and implement all required upgrades. The Director of Health or the Water Pollution Control Authority will issue an order with a schedule to implement the upgrades, as applicable.

Applicant Signature: _____ Date: _____

Print Name: _____



Sample Data Form – Exhibit B

| | | | | |
|-------------------|--------------------|----------------------------|---------------|-------------------------|
| | | EXHIBIT B | | |
| | | SEPTIC SYSTEM DATA ON FILE | | |
| | | | | |
| NEIGHBORHOOD | ADDRESS | OWNERS NAME | MAP/LOT | DESIGNATION |
| CONTRACT | | | | |
| | | | | |
| OYSTER RIVER EAST | 12 OYSTER SHELL RD | SEAGULL JONATHAN L | 020/000 | NEEDS NEW TANK/LEACHING |
| OR-1 | | | | |
| | | | | |
| | | | | |
| # OF BEDROOMS | PUBLIC WATER | SEPTIC TANK SIZE (GALLONS) | TANK MATERIAL | LEACHING SYSTEM |
| | | | | |
| 4 | YES | 1000 | CONCRETE | DRYWELL |
| | | | | |
| LAST PUMPOUT | | | | |
| | | | | |
| 9/1/2002 | | | | |

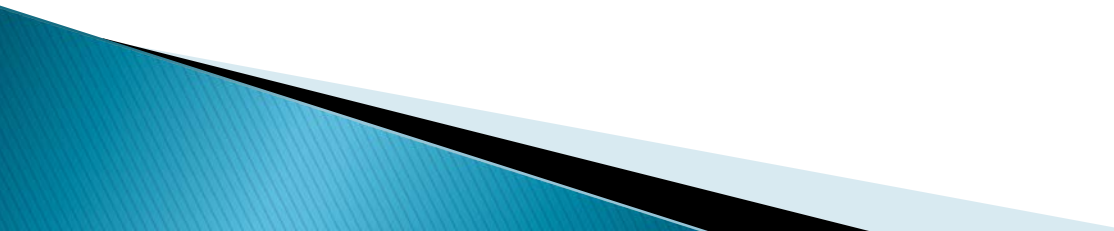
2. Initial Investigation

- ▶ WPCA prepared topographic mapping
- ▶ CRAHD and WPCA conduct file review
 - CRAHD will issue WWMD permit if system is already Upgrade Compliant
- ▶ Conduct Initial investigation
 - WPCA provides backhoe; schedules by block
 - CRAHD witnesses testing
 - Test pits, perc test, locate existing septic system
 - Location and elevation of building sewer
 - WPCA representative(s) are available to talk with property owners





3. Determine Upgrade Requirements

- ▶ CRAHD reviews available information
 - If system is already Upgrade Compliant a WWMD permit will be issued
 - If conventional system upgrade is needed, the major upgrade elements will be identified
 - In certain cases an advanced treatment system will be required
 - ▶ Findings will be summarized in writing
 - ▶ Order to Upgrade will be issued
- 

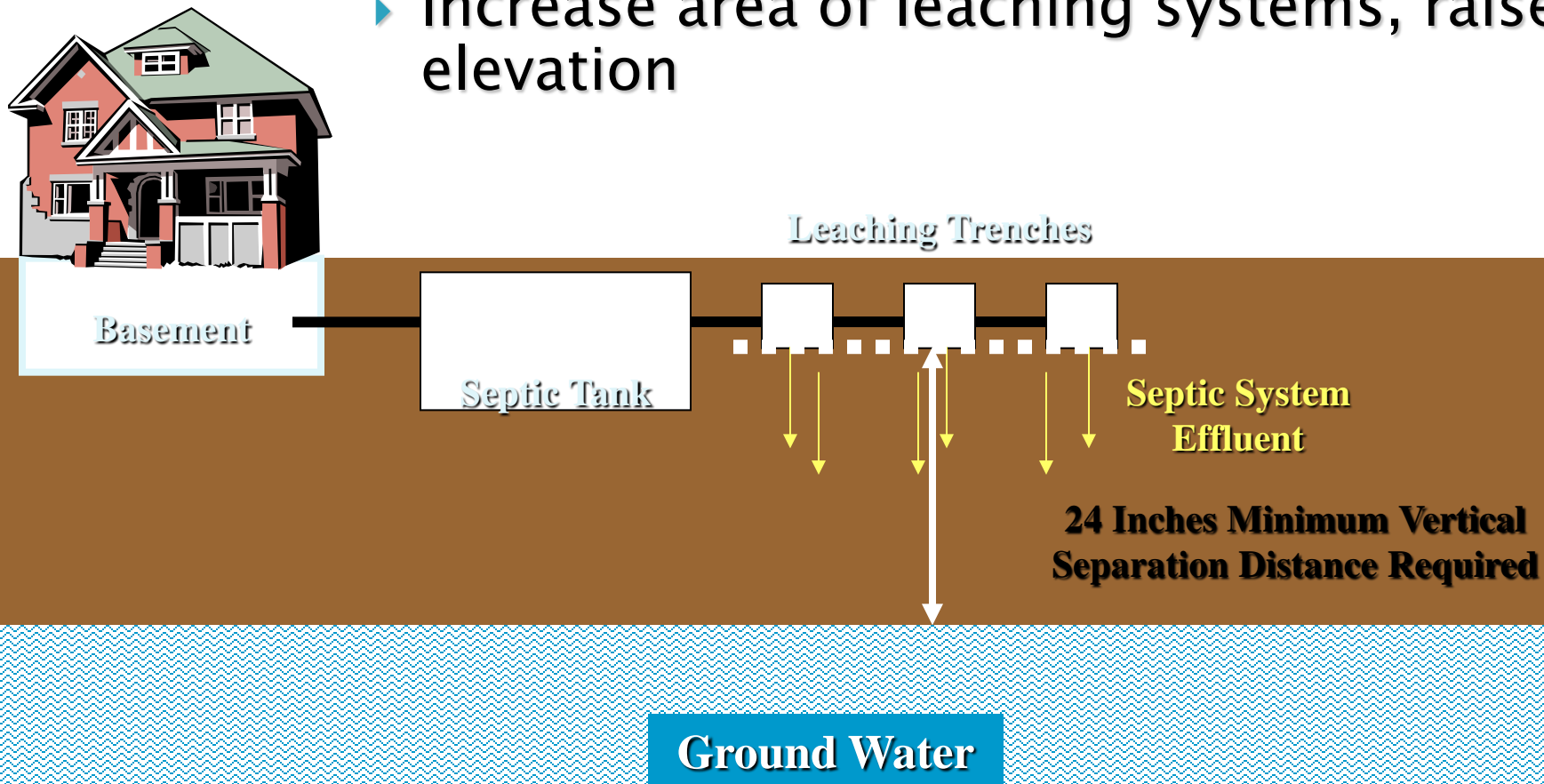
Upgrade Program Standards

- ▶ **Septic Tank**
 - 2-compartment tank with baffles & filter
 - Size must meet Public Health Code
- ▶ **Leaching System**
 - Vertical separation of at least 24 inches to groundwater
 - Effective area of leaching system must meet Public Health Code (may have to add to leaching system)
- ▶ **Advanced Treatment Systems required in some cases:**
 - Water Proximity Lots
 - If 2/3's of required leaching area can't be achieved
- ▶ **Copies of Upgrade Program Standards available**



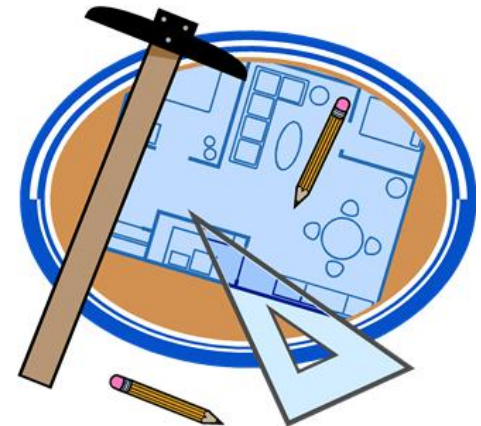
Conventional Upgrades

- ▶ Replace cesspools
- ▶ Install larger septic tanks, add effluent filters
- ▶ Increase area of leaching systems, raise elevation

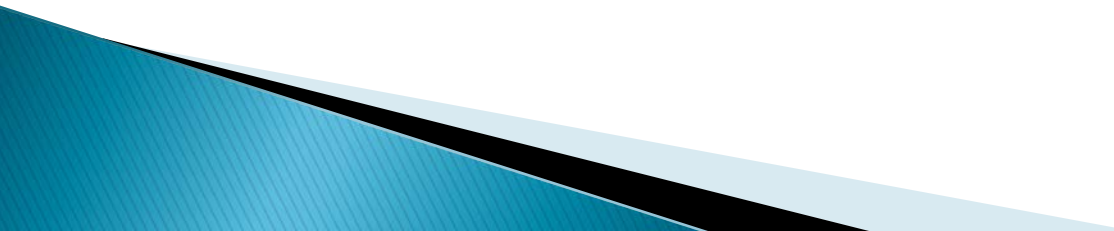


4. Design of Upgrades

- ▶ The WPCA's engineer will design required upgrades
 - Must meet Upgrade Program Standards
 - Advanced treatment (AT) systems will follow later
- ▶ Designs will be reviewed and approved
 - Conventional and engineered upgrades by CRAHD
 - AT Systems by WPCA



5. Bidding Process

- ▶ WPCA will assemble groups of upgrades (20–35 lots, or more)
 - ▶ WPCA's engineer prepares bid packages
 - Must meet Clean Water Fund procurement requirements
 - ▶ Contractors (including local installers and MBE/WBE) encouraged to submit bids
 - ▶ WPCA selects lowest responsive, responsible bidder
- 

6. Order to Upgrade

- ▶ CRAHD issues Order to Upgrade
 - Contractor pulls Permit to Construct
 - Timeline for Construction in the Order
 - Usually 120 days
 - Contract will maintain schedule to construct within Order timeframe



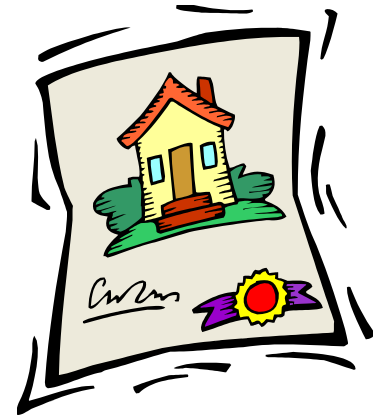


7. Construction

- ▶ Contractor installs upgrades (20–35 lots)
- ▶ Construction observation
 - WPCA's inspector observes for quality control
 - CRAHD must approve installation
- ▶ CRAHD issues Permit to Discharge
 - “As-built” drawings must be submitted first
- ▶ Contractor invoicing
 - Bills submitted to WPCA for processing and payment

8. Permit to Discharge

- ▶ Conventional systems – CRAHD issues WWMD Permit following:
 - Approval of installation
 - Filing of as-built drawing
- ▶ Advanced Treatment Systems – WPCA issues WWMD Permit following:
 - Approval of installation
 - Filing of as-built drawing
 - Service contract execution
- ▶ Permits good for 5 years
 - Then must be renewed



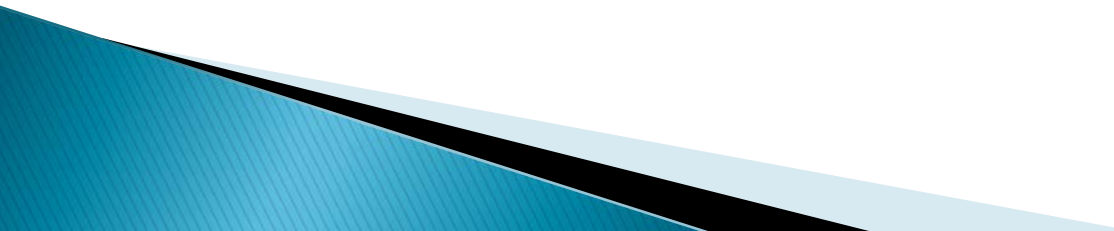
9. Operation

- ▶ Conventional systems
 - Pump septic tank every 5 years
 - Renew permit every 5 years
- ▶ Advanced treatment systems
 - Service contract required
 - Periodic inspections
 - Monitor effluent quality – quarterly
 - Pump septic tank every 5 years
 - Renew permit every 5 years

10. Benefit Assessments

- ▶ Project funding from DEP's Clean Water Fund
 - grants and loans
- ▶ Cost allocation:
 - DEP grant – 25%
 - Town contribution – 25%
 - Owner portion – 50%
- ▶ Owner costs levied as Benefit Assessments
 - Can pay off all at once
 - Can pay over 20 years at 2% interest rate
 - Town will lien property
 - There will be an Elderly/Disabled Relief component
 - Public Hearing process

Alternative Implementation Approach

- ▶ Owners have the option to waive the Clean Water Fund assistance
 - ▶ The same upgrades must be made as the CWF approach – *On same timeline*
 - ▶ Same schedule as CWF-funded process
 - ▶ Homeowner would be responsible for hiring designer and installer and filing forms
 - ▶ CRAHD and WPCA still involved with site testing and approval steps
 - ▶ Financing would be owner's responsibility
- 

OWNER UPGRADES

TOWN UPGRADES COST

Advantages: The property owner will pay 50% of the cost of the upgrade.

Town will make loan available so property owner can pay cost over 20 years at 2% interest.

Disadvantage: The property owner isn't involved with negotiating cost of the upgrade

Advantages: The contractor is not required to pay state prevailing wage rates, so construction may be less expensive.

Property owner may "shop around" for a contractor.

Disadvantages: The property owner has to arrange for their own financing.

Won't be eligible for the 25% CWF grant and 2% loan, or partial subsidy (25%) from the Town's funds.

OWNER UPGRADES

TOWN UPGRADES CONTROL

Advantage: The contractor is bound by a contract requiring specific performance standards, enforced by the Town and its consultants.

Disadvantage: The property owner has no say in the selection of the contractor, though Town will try to work with property owner.

Advantage: The property owner can negotiate the terms of the upgrade to meet their specific needs rather than relying on a general contract document covering dozens of properties.

Disadvantage: Managing on-site upgrades may be difficult and time-consuming if the property owner is not skilled in either contracting or septic system installation.

OWNER UPGRADES

TOWN UPGRADES CONVENIENCE

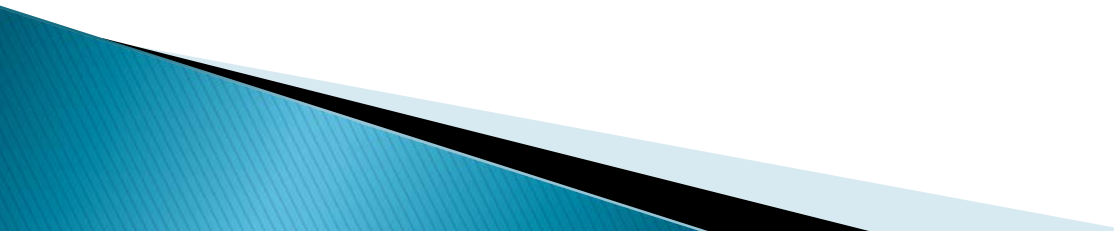
Advantage: The Town will handle the hiring and the scheduling of the contractor, and will have engineers and inspectors under contract to assure that the upgrade is properly done.

Disadvantage: The property owner has limited input on the timing of their upgrade.

Advantage: The property owner has some flexibility in the timing of the upgrade (subject to the time constraints in the CRAHD Order to Upgrade).

Disadvantage: The property owner has to hire their own contractor, and possibly an engineer, to design and install the upgrade and file forms. The responsibility for compliance with the Standards is on the property owner.

Enforcement and Appeals

- ▶ Failure to comply with the WWMD Ordinance is a violation and subject to fines of \$100 per day.
 - ▶ Legal action will be taken for non-compliance.
 - ▶ The WWMD Ordinance allows for the right to appeal the order issued by the Health District.
- 

**Old Saybrook WPCA
Oyster River East**

Based on Best Available Information

Locus map

Wetlands Boundary

Water

Septic Condition

- Needs Further Investigation
- Needs New Tank
- Needs New Tank and/or Leaching
- Vacant Land
- Investigate Upgrade Compliance
- Needs Alternative Treatment

0 100 200 300 Feet

Revised 26 October 2010

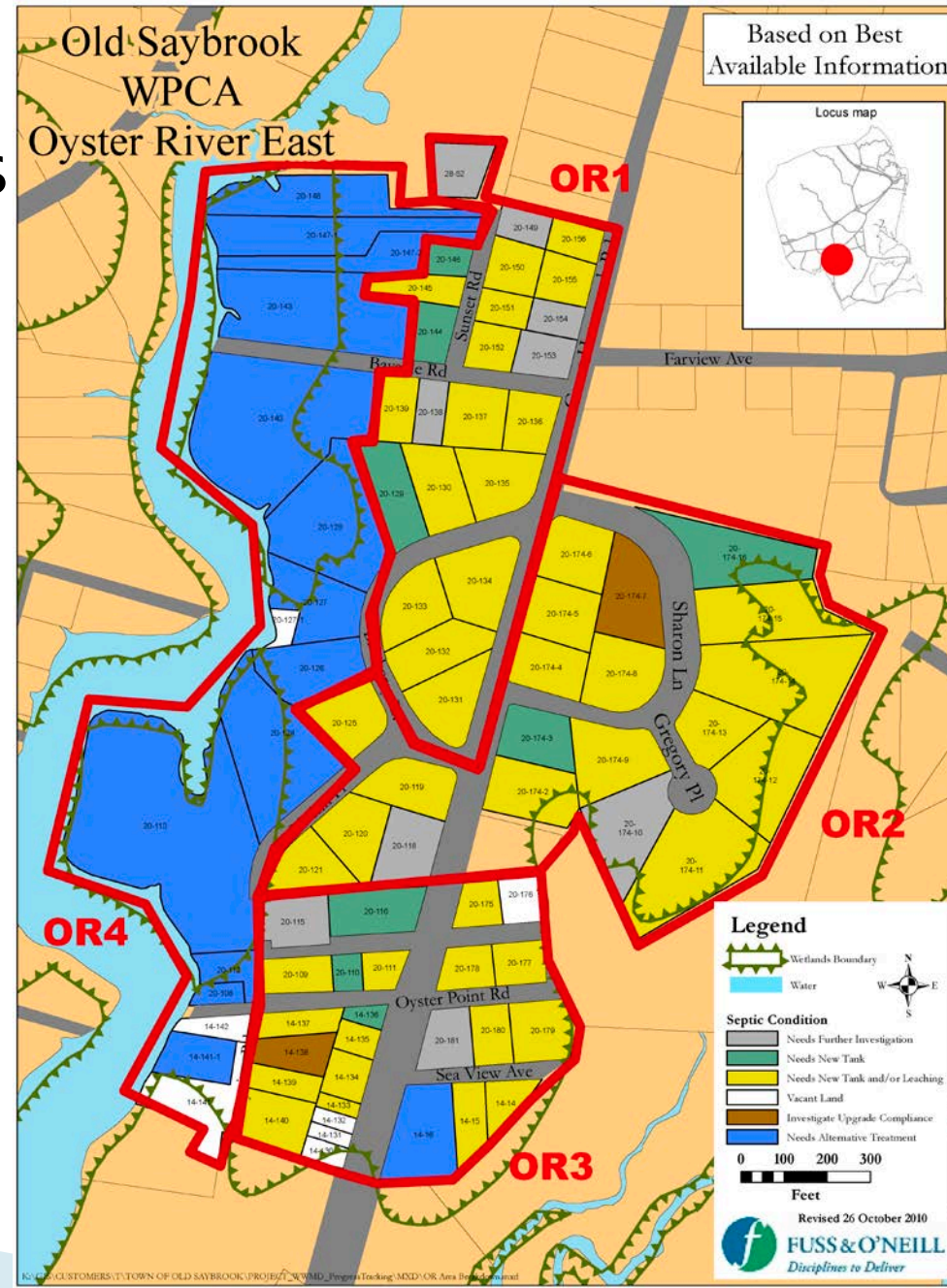
FUSS & O'NEILL
Disciplines to Deliver

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-
- Old Saybrook WPCA**
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- K:\GIS\CUSTOMERS\TOWNSHIP OF OLD SAYBROOK\PROJECTS\ROAD_Program\Tasking\MXD\StudyArea\Map\Oyster River East.mxd

Oyster River East Contract Boundaries

- 4 Construction Contracts
- Contract OR-1 (23 lots)
- Contract OR-2 (21 lots)
- Contract OR-3 (25 lots)
- Contract OR-4 (14 AT systems)



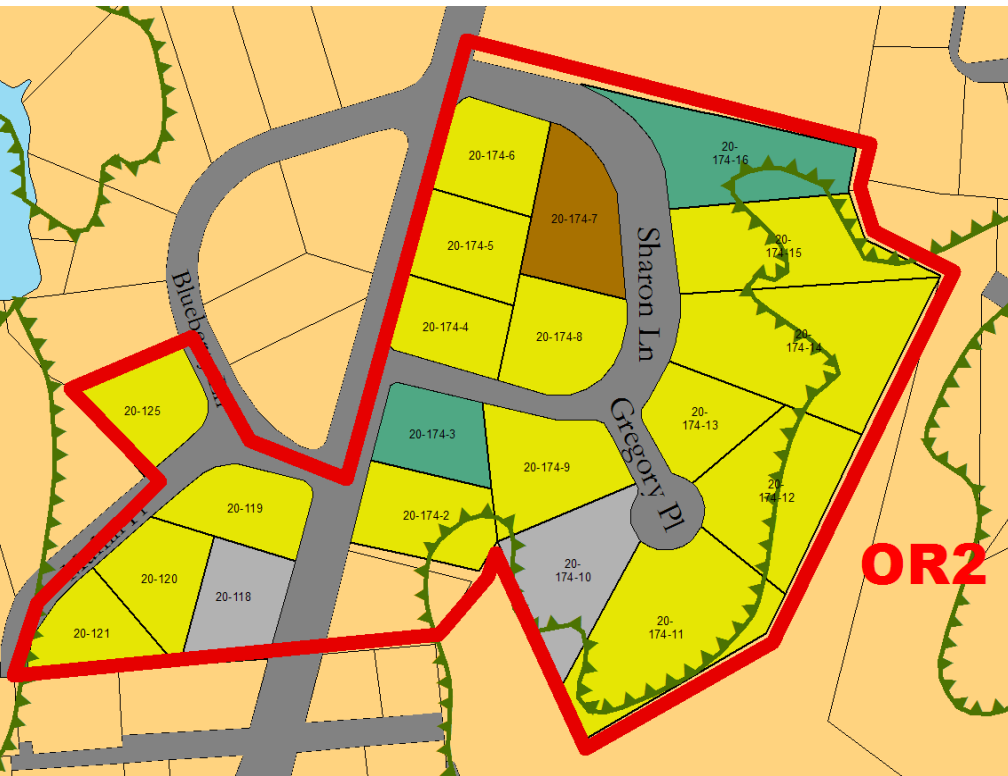
Oyster River East 1st Contract

- ▶ Contract OR-1 includes 23 lots off Great Hammock
- ▶ Systems that are already compliant with the Upgrade Standards will be issued a Permit to Discharge



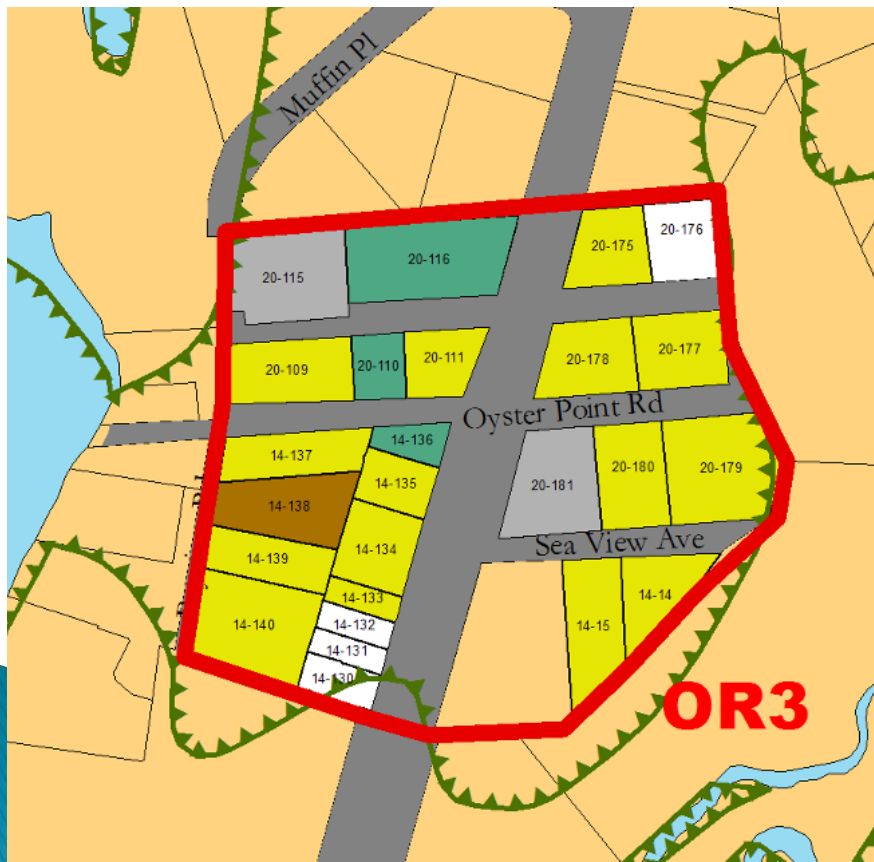
Oyster River East 2nd Contract

- ▶ Contract OR-2 includes 21 lots off Great Hammock
- ▶ Systems that are already compliant with the Upgrade Standards will be issued a Permit to Discharge



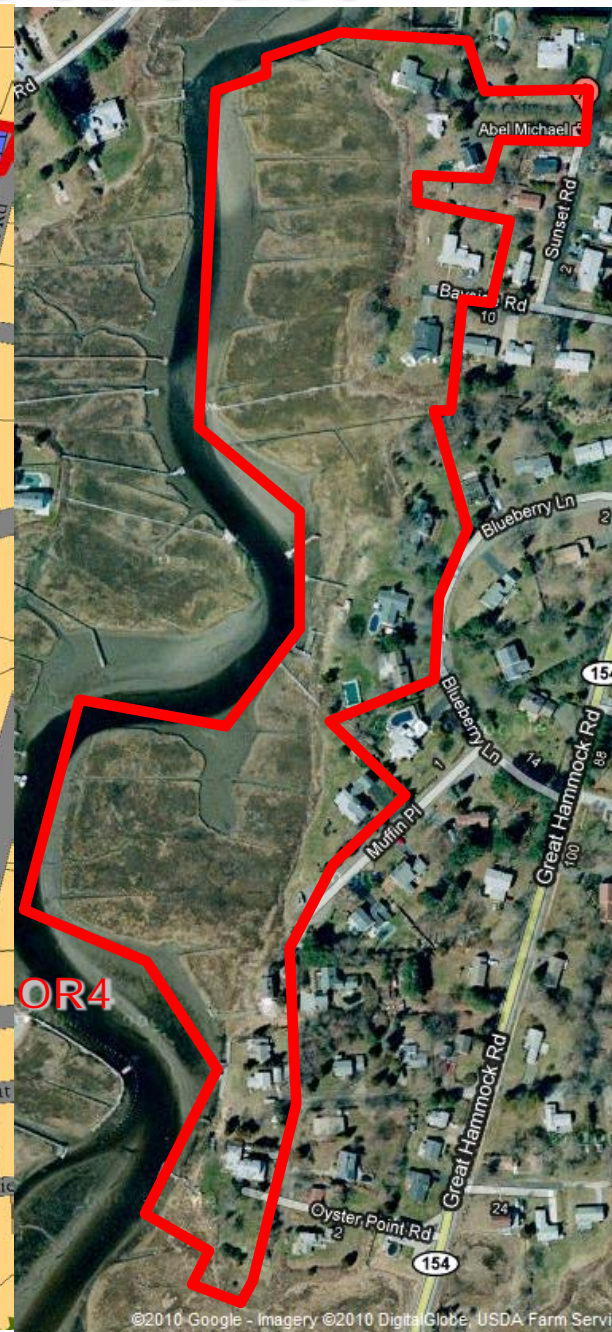
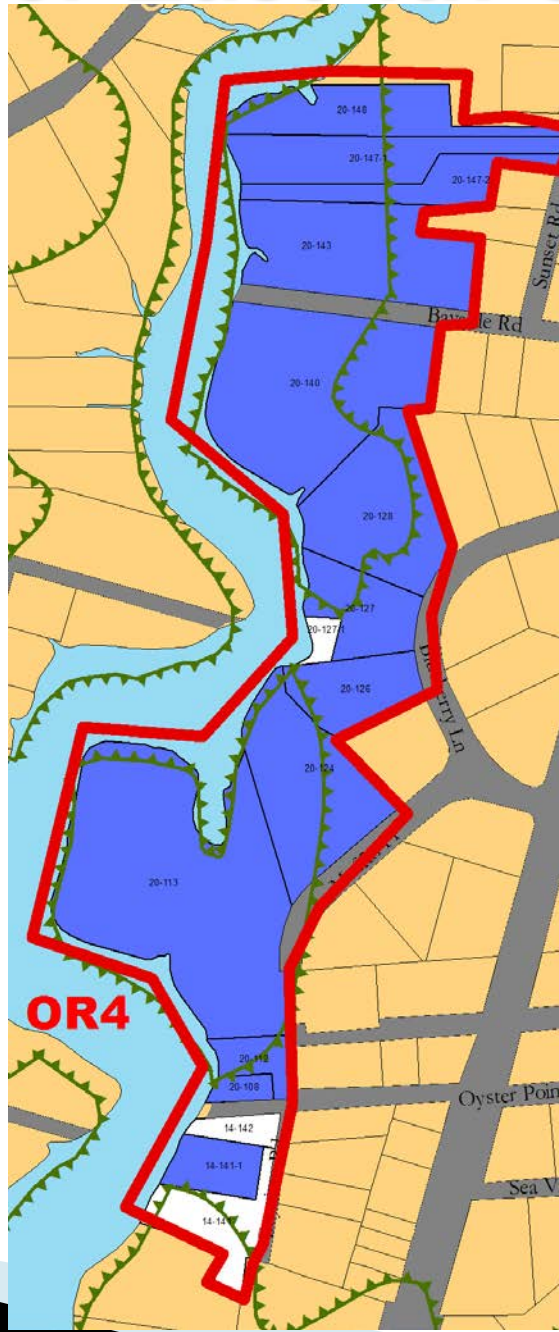
Oyster River East 3rd Contract

- ▶ Contract OR-3 includes 25 lots off Great Hammock
- ▶ Systems that are already compliant with the Upgrade Standards will be issued a Permit to Discharge



Oyster River East 4th Contract

- Contract OR-4 includes 14 water proximity lots that will required an advanced treatment system along with 2 AT lots from Saybrook Acres



Oyster River East – Tentative Schedule

- ▶ First 3 Contracts
 - Notice of Entry Letters: December 2010
 - Applications due: 30 days after receipt
 - Initial Investigations: Winter/Spring 2011
 - Design: Summer 2011
 - Bidding: Fall 2011
 - Construction: Winter 2011 – Summer 2012
- ▶ Advanced Treatment System Contracts
 - Similar steps
 - Complete by Winter 2012

Access Info at
www.oswpca.org

Town of Old Saybrook
WPCA Home Page
302 Main Street
OLD SAYBROOK, CT 06475-2369



OLD SAYBROOK

WATER POLLUTION
CONTROL AUTHORITY

CONTENTS

[Wastewater Mgt District: MAPS](#)

[Wastewater Management Program](#)

[Saybrook Acres](#)

[Septic Search:](#)

[Check my Pumpout Status](#)

[WPCA Policies and Procedures](#)

Contact Us

[Wastewater
Management District
Referendum Passed](#)

WPCA Members, Staff, and Consultants


Acting Chairman: George Gwizd
Vice Chairman: Dr. Robert W. Powitz
Secretary: George Gwizd
Member: Nelson Engborg
Member: Chuck Wehrly
Member: Doris Zumbroski
Member: Elsa Payne
Alternate: John F. Claffey, Jr.
Alternate: Ed Gyllenhammer
Coordinator/Webmaster: Robbie Marshall
Financial Manager: Gratia Lewis
WWMD Site Manager: Eugene M. Evangelisti
Clerk: Joanne Rynecki
Fuss & O'Neill Inc. : Peter Grose

Questions?

“My system is working – Why change?”

- ▶ Even if not breaking out or backing up, it may not be functioning properly; because:
 - Many systems in Saybrook Acres are over 40 years old
 - Many do not meet current Public Health Code:
 - Single compartment and undersized tanks; improperly sited/inadequate leaching components
 - Some are built too close to (or into) groundwater
 - Dense development results in high nitrogen loading
- ▶ The Town and State are providing opportunity to help homeowners replace their systems using services, grant and loan money.
- ▶ Upgrading the system will increase the value of property, and allow smoother turnover if sold.

Wastewater Management District Program

- ▶ Town ordered by DEP and court to improve on current septic systems
 - ▶ Developed on-site wastewater management program instead of installing sewers
 - ▶ Approved by voters in August 2009
 - ▶ Established a Decentralized Wastewater Management District (WWMD)
 - ▶ Authorized \$42 million in funding
 - ▶ First program of its kind in Connecticut
 - ▶ Now starting implementation
- 

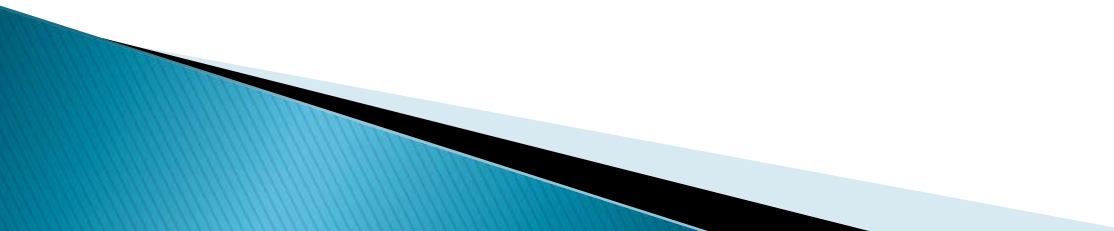
Community Pollution Problem

Connecticut General Statutes

Sec. 22a-427. No person or municipality shall cause pollution of any of the waters of the state.

Sec. 22a-428. If the commissioner finds a municipality is causing pollution of the waters of the state, or that a ***community pollution problem** exists, or that pollution by a municipality can reasonably be anticipated in the future, he may issue to the municipality an order to abate pollution.

***The existence of pollution which, in the sole discretion of the commissioner, can best be abated by the action of a municipality.**



According to the EPA:

- ▶ Onsite and clustered wastewater treatment systems serve approx. 25% of U.S. households (25 million.)
 - ▶ Approximately 33% of new development uses onsite treatment.
 - ▶ More than ½ the onsite systems are over 30 years old
 - ▶ Surveys indicate that at least 10% of systems back up onto the surface or into the home each year.
 - ▶ Data has shown that at least 20% of systems are malfunctioning to some degree.
 - ▶ The second most frequently cited contamination source of ground water is septic systems.
- 