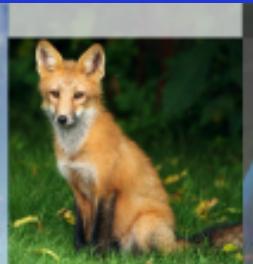




Connecticut Department of Energy and Environmental Protection



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**ENERGY &
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PROTECTION**

Town of Clinton, CT: Wastewater Management Issues, Challenges, and Alternatives – An Overview

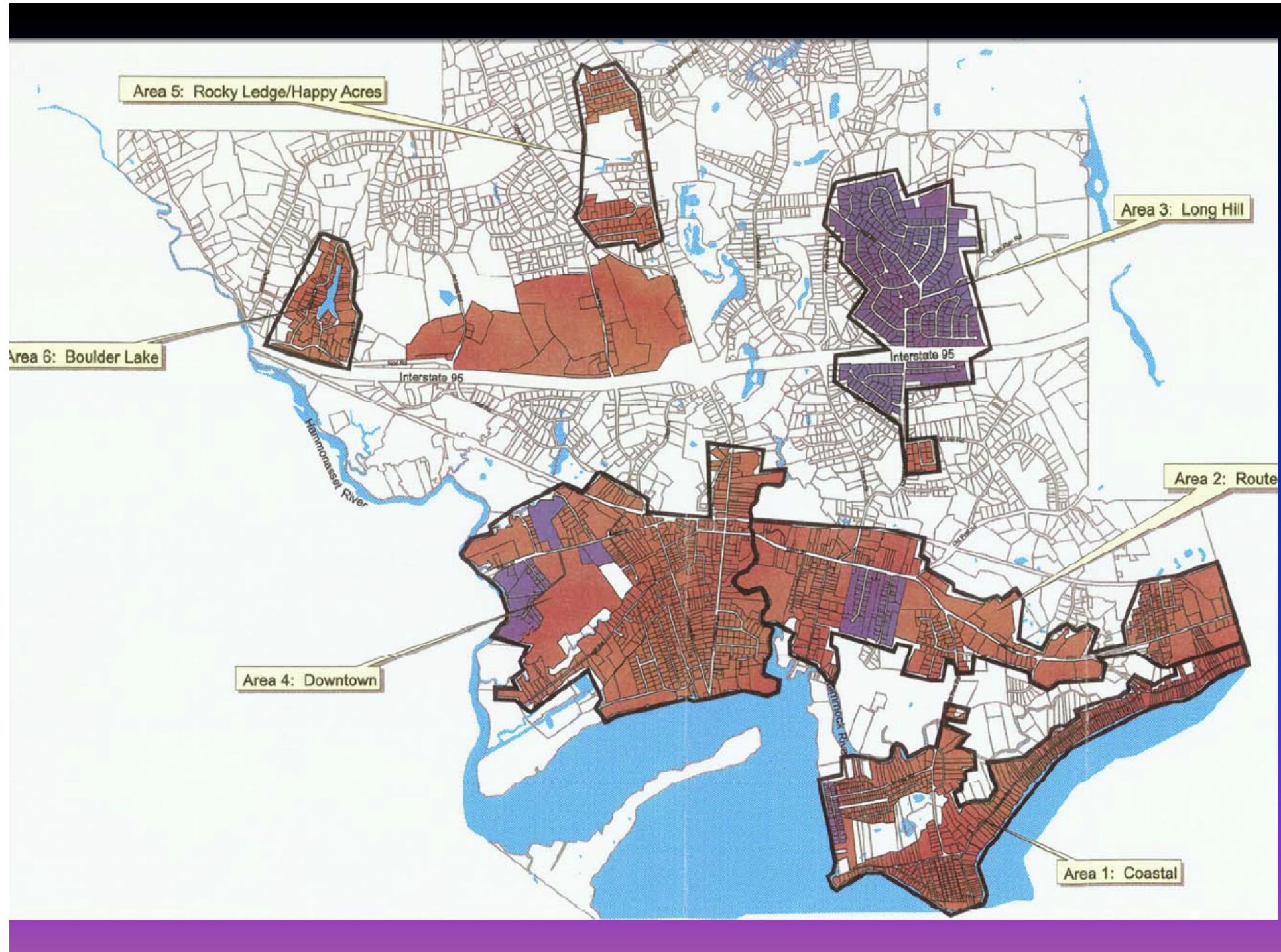
September 11, 2012
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Supervising Sanitary Engineer



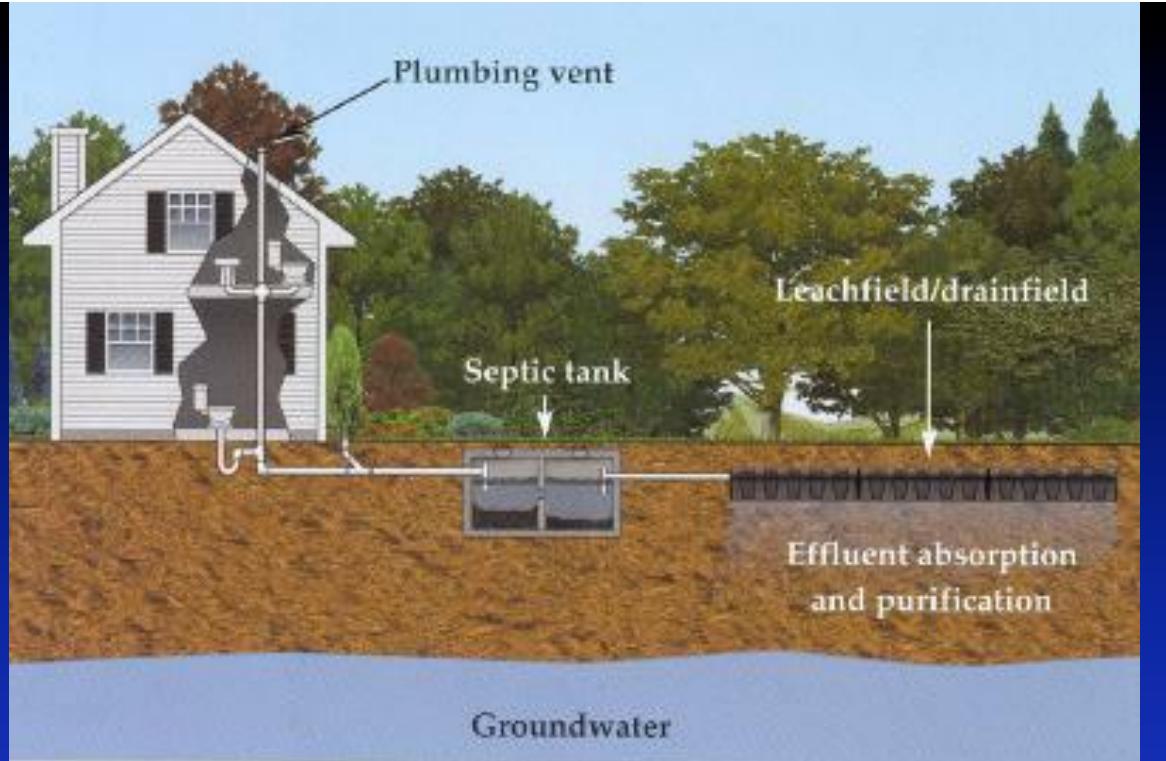
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Historically...

- Over the last 40 years, the town has hired a number of consultants to prepared engineering reports
- Each consultant recommended centralized sewers with a treatment plant and a discharge to surface waters.
- None of the recommendations have been implemented

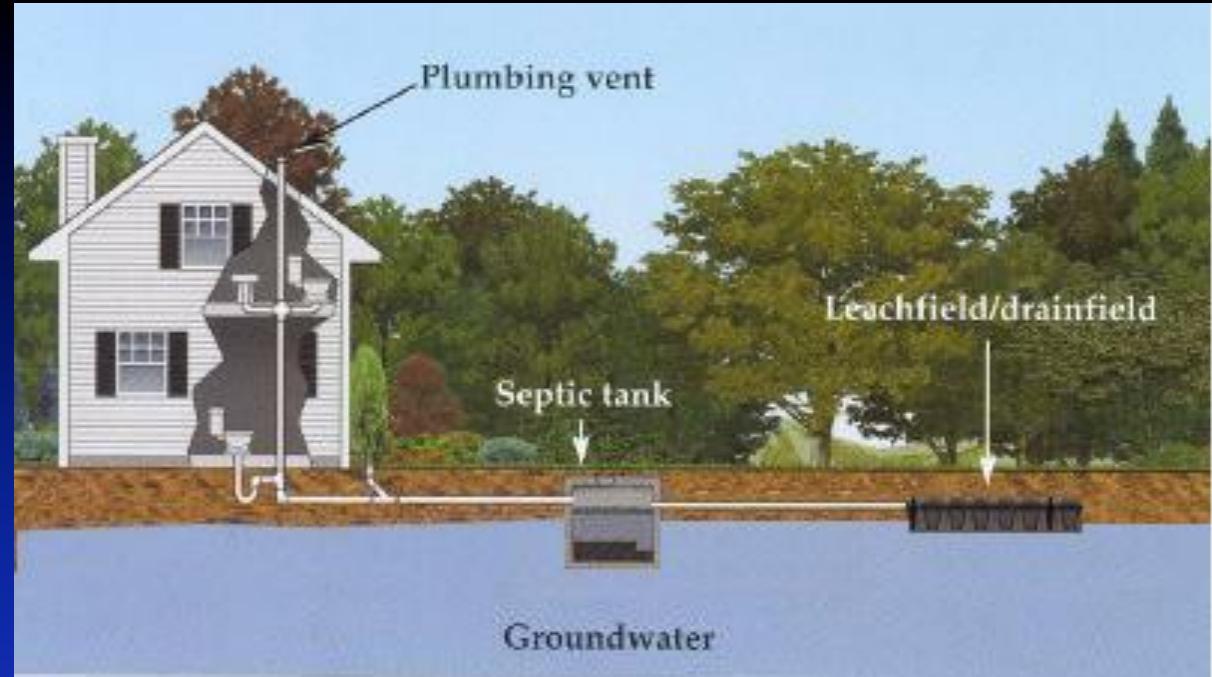


What does the health code require?



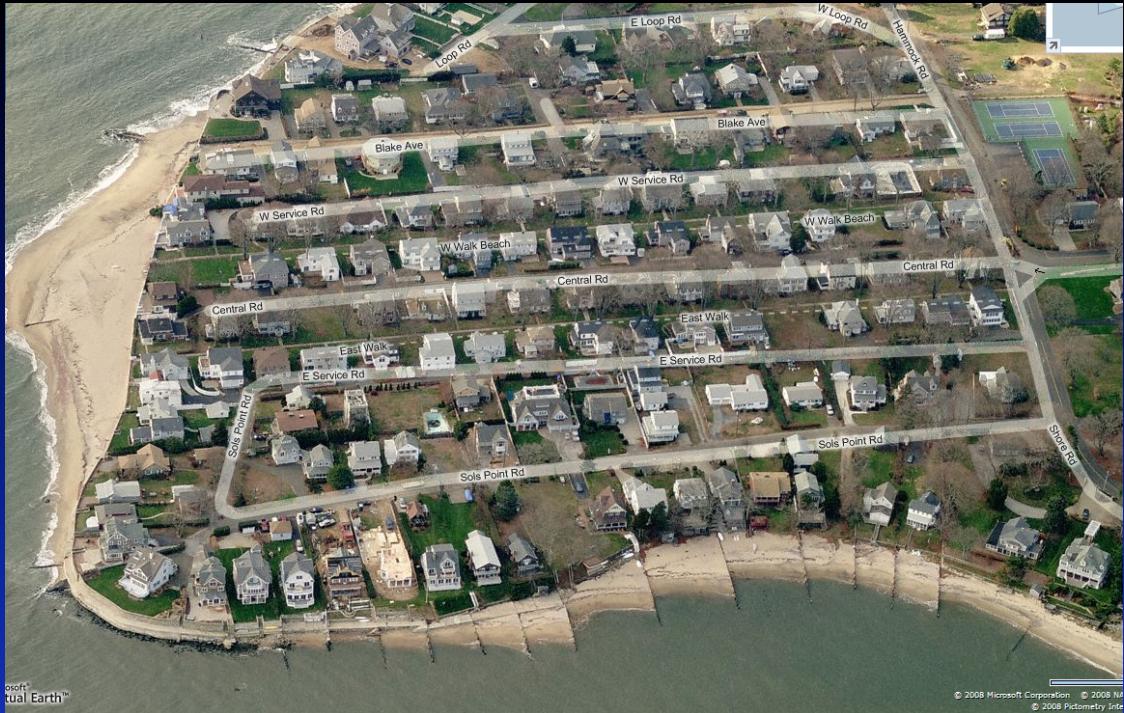
- A properly sized septic tank (minimum 1,000 gallons, larger for special criteria) with two compartments and proper baffling.
- Adequate leaching area to treat the wastewater, and return the treated effluent to the ground.
- Adequate depth from bottom of leaching system to groundwater or impermeable surface to allow for reduction of pathogens.
- Adequate separating distances from water supply wells, watercourses, structures, property lines, etc.

What is often encountered...



- Cesspools
- Septic tanks of varying sizes (as small as 250 gallons, often with a substantial percentage less than 1,000 gallons).
- Leaching systems that are too small.
- Leaching systems installed too close to the groundwater or other impermeable layer.
- Leaching systems with inadequate separating distances from sensitive resources

What's the problem?



- Small lots (less than $\frac{1}{4}$ acre) pose significant challenges for proper functioning of septic systems.
- When significant number of small lots are in a neighborhood, even the Public 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.

What do we need ??

- The goal is adequate treatment of wastewater
- 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 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.



Why is DEP Involved?

Statutory Responsibilities

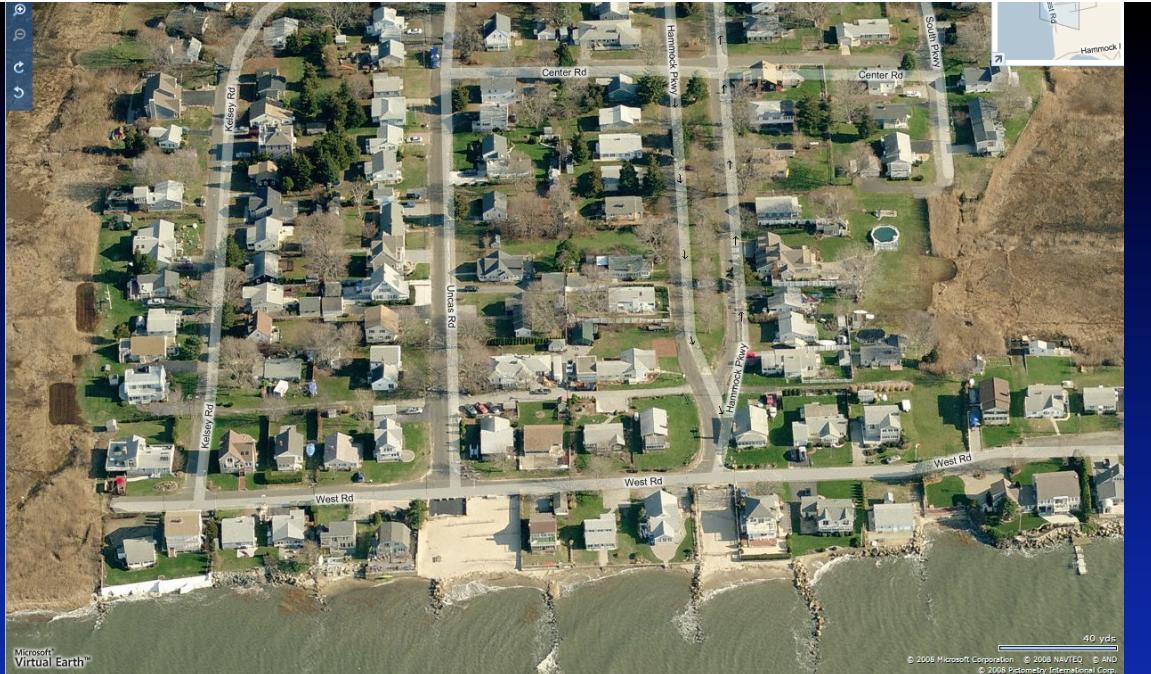
"If the commissioner finds that any municipality is causing pollution of the waters of the state, or that a community pollution problem exists, or that pollution by a municipality or a community pollution problem can reasonably be anticipated in the future, he may issue to the municipality an order to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

"community pollution problem" means the existence of pollution which, in the sole discretion of the commissioner, can best be abated by the action of a municipality (CGS 22a-423)

Is there scientific evidence to prove a problem exists?

- Not always. The science went into developing the Public Health Code, which tells us what the minimum system criteria need to be.
- Wastewater studies do a limited amount of groundwater and surface water sampling.
- The sampling data is not, by itself, used to validate or repudiate an evaluation of a study area. It is one of several components which, when taken as a whole, are used to reach conclusions about the status of an area

Why can't we just fix the problems?



- If the problem is with the installation (small septic tank, inadequate leaching area) then an onsite repair may be possible.
- If the problem is with the site (inadequate land, unsuitable soils, high groundwater) a different approach is necessary.
- Sometimes the best approach is to solve the problem with a community solution, not an individual onsite solution.

What is a “community solution”

- A community solution is one where the municipality takes responsibility for the implementation of the solution, either through contract or through management:
 - **Community sewerage system:** Conveying the wastewater from multiple lots to a common point for treatment and discharge
 - **Decentralized management district:** Requiring the upgrade of individual systems to a pre-determined standards, through a combination of conventional septic systems and alternative technology

Is this what Old Saybrook is looking at?



- Old Saybrook is evaluating a decentralized district, involving the upgrading of each property's own onsite system, to either a conventional system that meets PHC standards, or an Alternative Technology.
- The Town of Clinton is not required to pursue the same path. Individual repairs, clusters systems, and community systems (or combinations of all three) are all “on the table” at this point in time.

Will these systems be enough to address the problems and satisfy DEP?

- DEP will require that any cluster or community system be designed to provide a high level of treatment, with full disinfection, before discharge to the ground.
- Provided adequate effluent dispersal sites can be identified and acquired, DEP will consider the decentralized approach as an approvable long-term solution.

Questions?

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