Protecting the Long-Term Viability of Connecticut's Recreational Shellfish Areas



Kristin DeRosia-Banick Environmental Analyst 3 Connecticut Department of Agriculture Bureau of Aquaculture **11th ANNUAL GATHERING OF SHELLFISH COMMISSIONS** Saturday, January 31, 2015



CT Shellfish Initiative: Recreational Areas

Summary of Concerns Raised

- Improve Communications
 - Identify contact to assist towns with decision-making process for water quality issues related to shellfishing
- Identify and remedy pollution sources that affect shellfish beds
 - Address decaying infrastructure; storm drains carrying sewage
 - Impact of climate change on local shellfish resources
- Provide Education and Training Opportunities for Shellfish Commission Members

CT Shellfish Initiative: Recreational Areas

DA/BA response to issues raised at scoping sessions that relate to protecting the long-term viability of recreational areas

- How can DABA and shellfish commissions collaborate to address water quality issues impacting recreational areas?
- What are resources for towns to be aware of in terms of water quality?
- Are there opportunities for outreach to connect shellfish commissions with water quality monitoring groups working in their watersheds?
- Are commissions interested in becoming more actively involved in identifying pollution sources impacting their areas?



DA/BA POC for Recreational Programs

- Identify a single point of contact (POC) at DA/BA
- POC will communicate with analysts in charge of the region
- Opportunity to strengthen relationships with shellfish commissions
- Translate statewide program management into local impacts
- Collaborate to identify solutions to unique issues impacting individual programs
- DA/BA holds the Statewide perspective, but we also need the local knowledge held by the commission members: EXAMPLES
- Water quality issues are the biggest challenge to protecting public health; we need your help to keep an eye on your areas to prevent illness
- Strong partnerships will improve outcomes and opportunities for recreational programs



SSDS Impacts to Recreational Areas

- Approximately 40% of the coastline in CT is served by SSDS
- SSDS on the coastline may not be effectively treating sewage due to site limitations (sand, high water table, small parcels, ledge rock)
- Many SSDS are 50+ years old and installed prior to current Public Health Code
- Coastal SSDS are increasingly vulnerable to storm surges and rising water levels
- Options are limited in many of these areas:
 - On-site retrofits
 - Community systems
 - Extend sewers
 - Vacate properties
- According to current code, SSDS would not be allowed on many of these lots!



SSDS Impacts to Recreational Areas

- What is the risk?
 - WA State Norovirus Outbreak
 November/December 2014
 - At least 11 people became ill after consuming oysters harvested from WA growing area
 - Sanitary survey conducted identified a failing septic system in the growing area
 - The risk to public health is serious and cannot be taken lightly
 - In coastal areas, septic systems that are ineffective at removing pathogens may be impossible to identify via sanitary survey or more invasive techniques like dye studies
 - Failures may only occur under specific conditions such as storm surge, astronomical high tides



Guilford Coastal SSDS Long Term Planning

Categories of Options	Possible Options
Management of coastal real estate	Building codes (freeboard, V zone standards in A zones)
and structures	Acquisition of damaged properties
	Zoning overlays
	Zoning amendments
	Coastal realignments through any of the above
Shoreline protection and	Hard shoreline protection
management of coastal and near-	Living shorelines
shore lands	Buffers for flood protection
	Land acquisition for tidal marsh migration
	Land conservation for tidal marsh migration
Roadway alterations	Elevation of roadways
	Abandonment of roads
	Re-evaluation of emergency routes
	Alternate egress
Protection or replacement of water	On-site retrofits of septic systems
supply wells and septic systems	Community wastewater systems
	Extension of sewer system
	Individual water treatment systems
	Community water systems
	Extension of water mains
	Vacate properties

The options listed in Table 1 were presented to the public. A number of comments were received during the public participation component of the meeting. In general, these comments were grouped into the following four themes:

Guilford Coastal Resilience Plan

http://www.ci.guilford.ct.us/pdf/Coastal%20Resilience%20Plan,%20Report%20&%20Options.pdf

Old Saybrook Decentralized Wastewater Management Program

- High density development
 - 4 to 8 homes per acre
- Older systems (50+ years old) built prior to current Public Health Code
- Marginal land developed because of proximity to shore
- Shallow groundwater
 - Permeable soils, but unsuitable for septic systems
- Nitrogen loading to Long Island Sound



Decentralized Wastewater Management for an Established Coastal Community http://www.oswpca.org/files/CAWPCA_OS_DWMP_113010.pdf

Old Saybrook Decentralized Wastewater Management Program

- 15 Neighborhoods
- Approximately 1900 Properties
- Voted in by Referendum August 2009
- Two questions on ballot
 - Adopt WWMD Ordinance
 - Authorize funding \$41.7 million
- Passed by a 3 to 1 margin
- Project is eligible for DEEP's Clean Water Fund
 - 25% grant
 - Loan to Town for balance of costs
- Town to subsidize 25% through:
 - In-kind services
 - General taxation
- Property owners to be assessed for remaining 50%

Decentralized Wastewater Management for an Established Coastal Community http://www.oswpca.org/files/CAWPCA_OS_DWMP_113010.pdf



Old Saybrook Decentralized Wastewater Management Program

- Site investigation process is conducted by WPCA Inspectors (licensed installers, Phase I and Phase II Subsurface Wastewater certified), RS, and soil scientists and surveyors
- Inspectors walk the property to locate and identify utilities, unexpected objects, and septic system components
- Soil test team to establish the depth to groundwater and other "restrictive layers" which determine the placement and type of leaching products chosen
- A percolation (perc) test using a post hole digger is also done for the sanitarian's leaching system formulas.
- All this information will go into the plans and criteria to enable the installer or engineer to draw the septic system design
- When the plan is complete it is placed in each resident's "Upgrade Package" for them to meet and review it with the Site Manager
- The WPCA is flexible in working with the homeowner in what will be done and when and where on their property

Site Investigation Process: http://www.oswpca.org/files/Site_Investigation_Process.pdf

Pollution Source Tracking in Watersheds

- DA/BA has collaborated with Harbor Watch/River Watch program to investigate pollution impacts to shellfish growing areas
- Success stories
 - Calf Pasture Beach: direct discharge identified by DA/BA staff during sanitary survey in stormwater outfall to beach/shellfish growing area
 - Cross-connection to grease trap subsequently identified and corrected redirecting to sewer line
 - Able to reopen impacted shellfish beds after correction and confirmation by improved sample results
 - Requires communication and coordination among all agencies to identify, investigate and correct sources



Pollution Source Tracking in Watersheds

More Success Stories:

- Downgrade of Betts Bay during 2012 to Conditionally Approved Seasonal area due to elevated bacteria levels in water and shellfish samples
- As of January 2015, samples have shown improvement and Betts Bay has been returned to year-round Conditional Area
- Collaboration between DA/BA, Harbor Watch, DPW, DPH to identify, investigate and correct sources



Pollution Source Tracking in Watersheds

- Also referred to as "illicit discharge detection and elimination" or IDDE
- EPA's Storm Water Phase II Final Rule states that this storm water management program must include IDDE
- DA/BA can identify direct discharges during sanitary survey or if bacteriological testing indicates a problem requiring investigation
- Many times these discharges are located up within the watershed in areas not surveyed by DA/BA for shellfish program
- Once identified, it is up to the municipality to investigate and correct
- Requires partnership and commitment: \$\$\$ and time-consuming

http://water.epa.gov/polwaste/npdes/stormwater/upload/iddmanual.pdf



Next Steps: Where do we go from here?

- Request DA/BA attendance at shellfish commission meetings...POC
 - We can't know what is going on in your areas unless you tell us
 - If you are interested in upgrades in specific areas, let us know so we can analyze the data and come up with a plan
 - Some areas will require further investigation and some areas may not be appropriate for a shellfish area
 - Commission should appoint a single POC for DA/BA
- Work with DA/BA, Harbor Watch, DEEP, EPA, and other groups to conduct training for municipalities on pollution source tracking
 - Please let me know if there is interest in pursuing this
 - Tool-box approach for commissions so they know what resources are out there
- Get involved and educate yourself about Coastal Resiliency and Wastewater Management in your communities
 - Recreational areas are near-shore and increasingly vulnerable in terms of water quality
 - Find out what is being done in your community and get involved in the process