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Getting to Scale

Adapting for Success in Long Island Sound

National Conference on Ecosystem Restoration

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Holly Drinkuth, Director Outreach and Watershed Projects Adapting the critical path for success in Long Island Sound requires paying attention to circumstances











20 years, \$800 million in Connecticut, point source nitrogen pollution reduced by 58.5%





Monitoring and modeling show investments at wastewater treatment plants are not sufficient to address eutrophication impacts in the Sound's coastal harbors, bays and rivers







EPA's Long Island Sound Nitrogen Reduction strategy proposes further reductions of point source nitrogen loads and focuses new attention on nonpoint sources







CRITICAL PATH TO ECOSYSTEM RECOVERY

1. Assess the nitrogen problem

- Calculate nitrogen loads & sources
- Map extent of ecosystem degradation
- Set ecosystem restoration endpoints

2. Build nitrogen reduction plan

- * Create stakeholder engagement plan
- Set nitrogen reduction targets
- Design technological & behavioral change alternatives
- Identify funding sources, policy gaps

5. Adjust actions to reduce nitrogen * Review progress against outcomes

 Revise plan, strategies, goals as necessary

Ecosystem Recovery

4. Track nitrogen reduction progress

- * Monitor ecosystem recovery
- Identify data gaps
- Communicate progress to date

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3. Take action to reduce nitrogen

- Finance solutions
- * Policy and code changes
- Create mandates
- Infrastructure upgrades
- * Behavioral changes
- * Fertilizer management



Approach

- Promote communications that market nitrogen reduction actions, policies and investments
- Demonstrate feasible solutions and catalyze watershed-based action
- Work at all levels of government to guide funding and remove policy barriers





Promote communications that market funding, policy and practice changes

• Example - test awareness of water quality problems and willingness to take actions







More Willing

- Reduce amount of Lawn requiring fertilizers (53%)
- Require best wastewater technology for new and redevelopment (63%)
- Restrict new development (69%)
- Reduce Fertilizer Use (77%)



Less Willing

- Inspect and Maintain septic system (45%)
- Replace septic systems near waterways w/ sewer systems (40%)
- Set and meet pollution reduction targets (37%)
- Upgrade septic system to best pollution reduction technology (18%)



The "Reveal"

- Monitoring shows nitrogen pollution from wastewater, fertilizers and the atmosphere threaten the Mystic and Pawcatuck Rivers.
- Scientists and engineers have proven solutions
- The Environmental Protection Agency recommends setting and meeting pollution targets to protect at-risk harbors and bays.





Opinions Changed Yes, 32%

Significantly Higher Among:

Those who swim or use personal watercraft (canoes, kayaks, row boats) (41%)

✓ Ages 18-44 (71%)

Promote behaviors and actions with high support and link values to increase awareness, support and demand for management actions and investments

Swimming & Birdwatching

Fishing

Great restaurant settings

Recreational Boating

Local fish and seafood 72%

61% 72%









Three Big Opportunities

- Capitalize on Willingness
 - Reduce lawn area that requires fertilizer
- Raise Awareness
 - Impact of septic systems and solutions
- Mobilize Support
 - Personal boaters; age 18-44 years

Demonstrate feasible solutions, catalyze watershed-based actions, build municipal and regulator capacity to implement new policies and practices







The Nature Conservancy Conservancy Explore Nitrogen Loading in the Saugatuck River Watershed

- 1. Eliminate 100% of residential lawn fertilizers
- 2. Reduce fertilizer by 50% on parks and golf courses
- 3. Upgrade septic systems to remove 90% of nitrogen Install permeable reactive barriers at residential
- 4. properties within 200 meters of the river

View map extent of all actions for this scenario combined





The critical path for clean coastal water in

