

Technology, Policies and Funding to Achieve Clean Water on Long Island



Chris Clapp

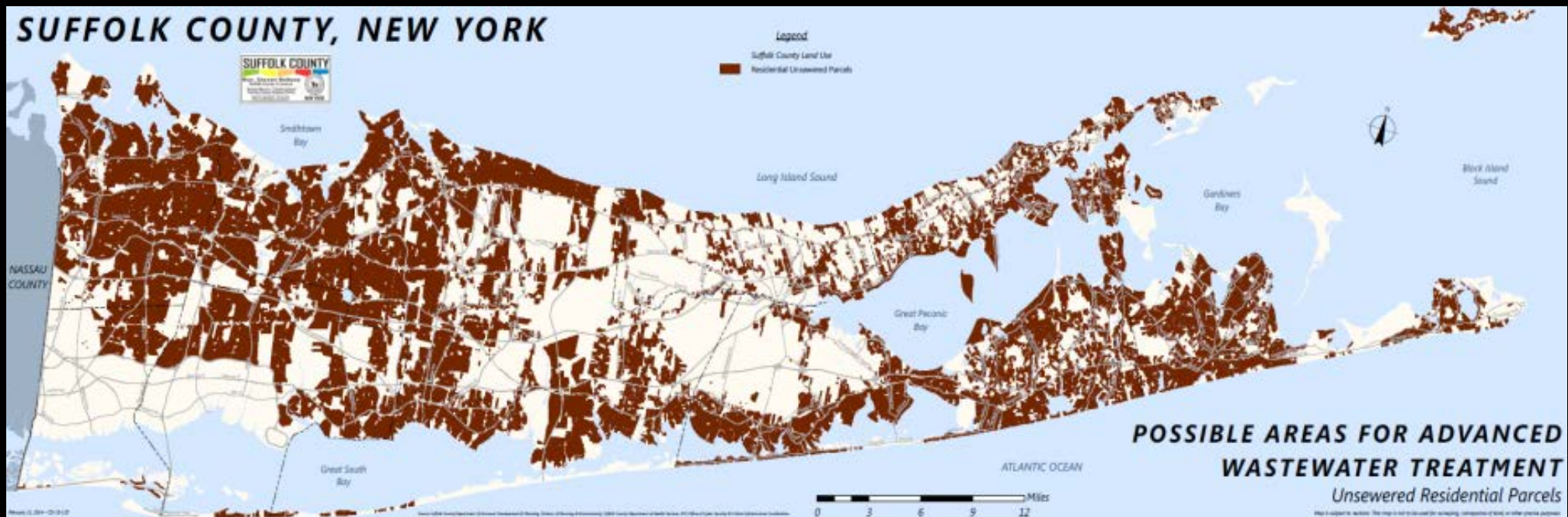
Marine Scientist

The Nature Conservancy on Long Island

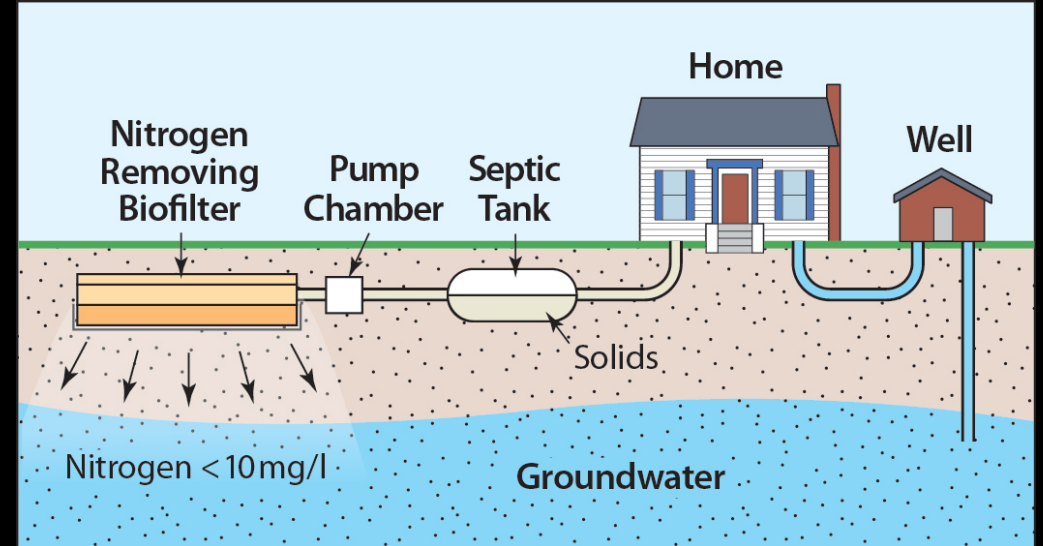
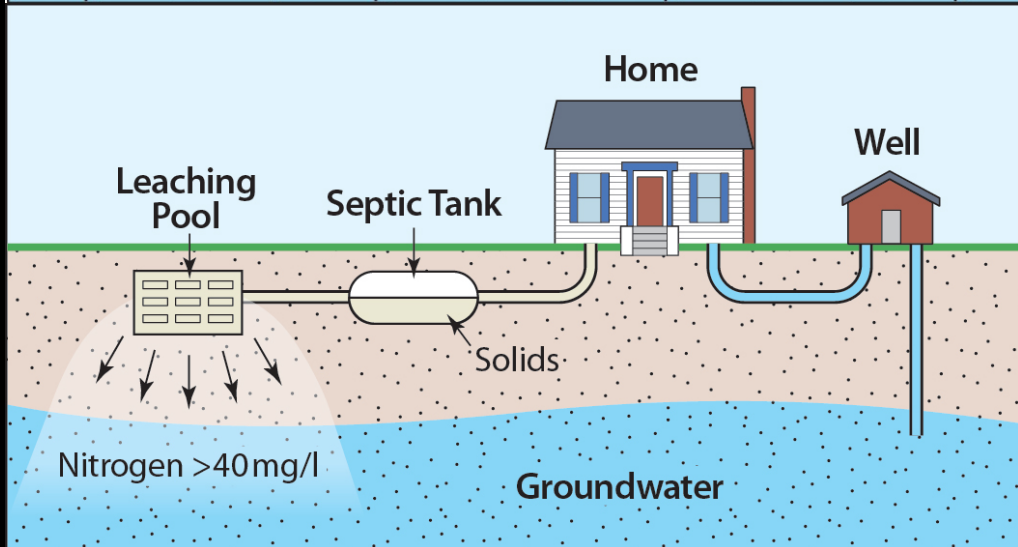
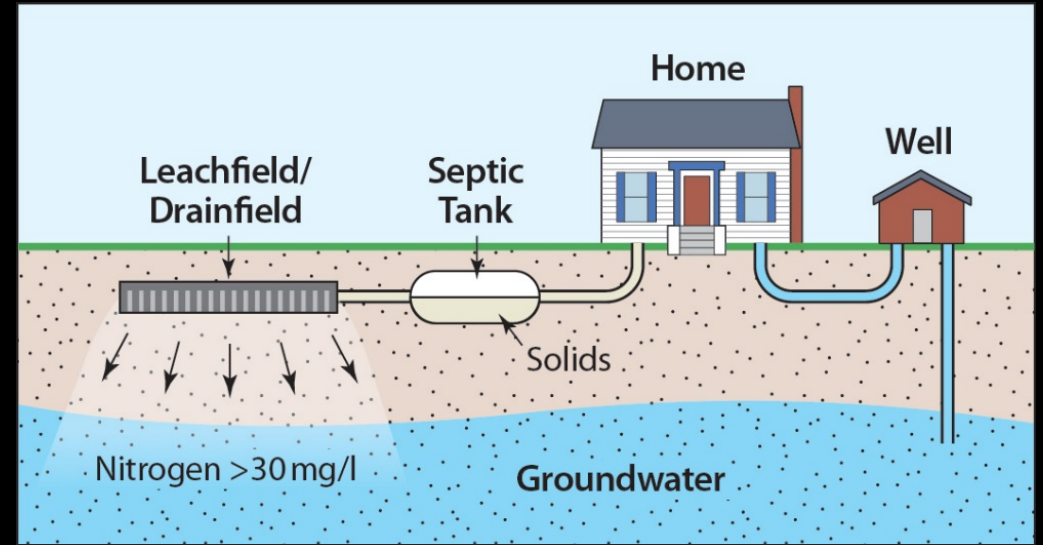
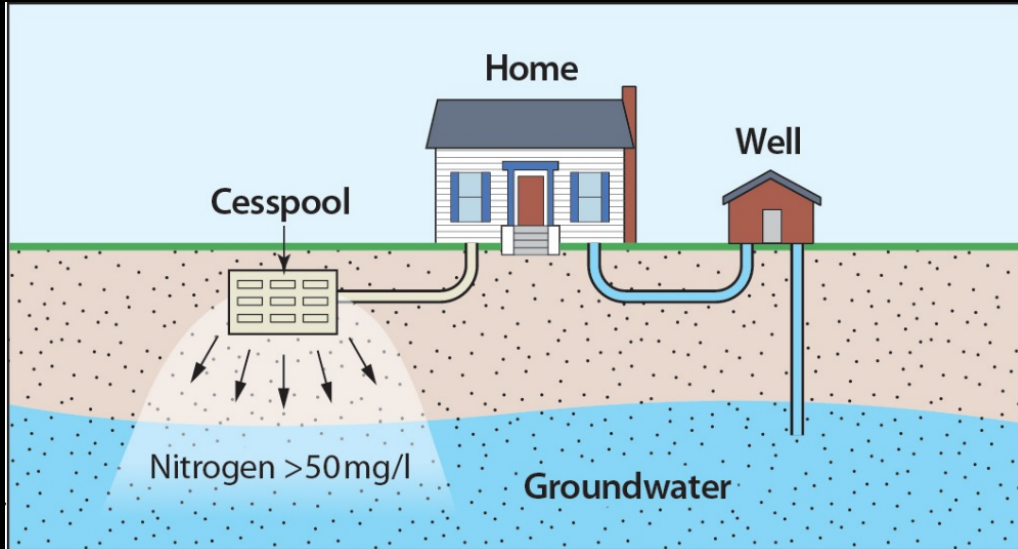
74% Non-Performing Wastewater Treatment



- Approximately 360,000 onsite sewage disposal system
- 209,000 systems in priority areas
- Approximately 252,530 pre-date requirement for septic tank



“Conventional” On site Septic Systems



Advanced Septic Systems and Reduced Nitrogen Loads

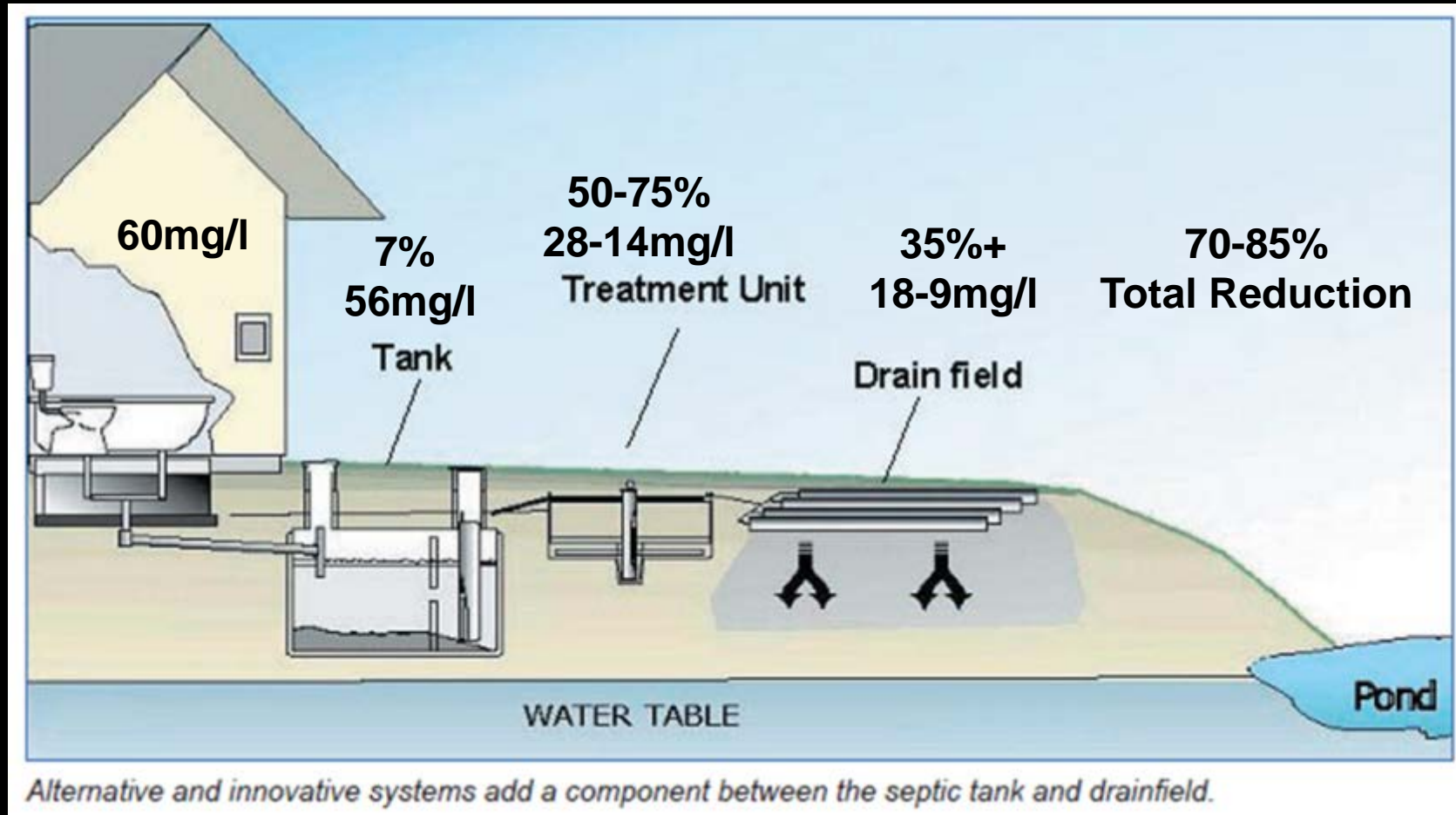


Image Credit URI

“Created Wetlands”



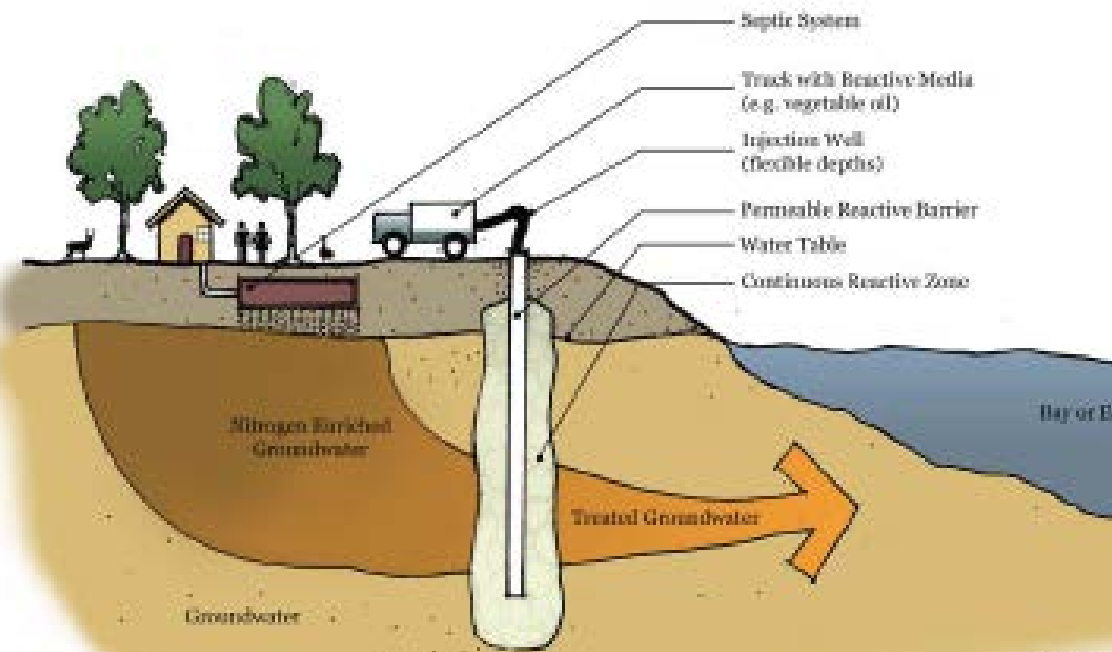
Urine Diversion



Rain Gardens and Bioswales



Permeable Reactive Barriers

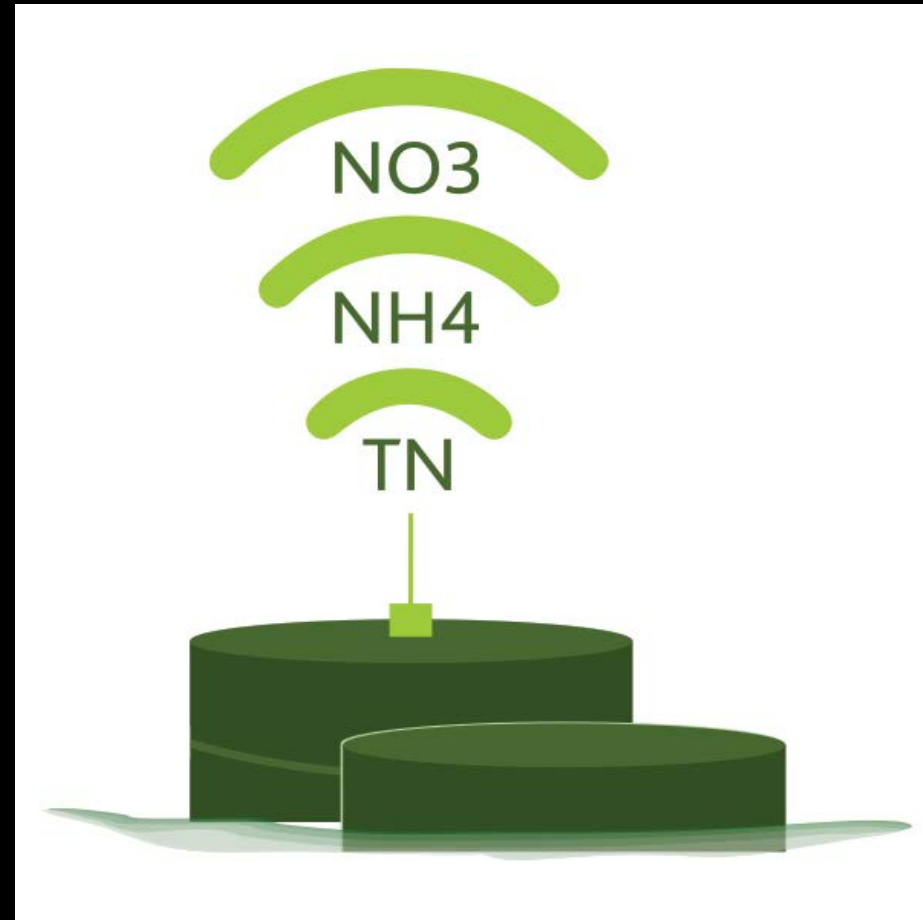


FIGURE

Embayment Circulation

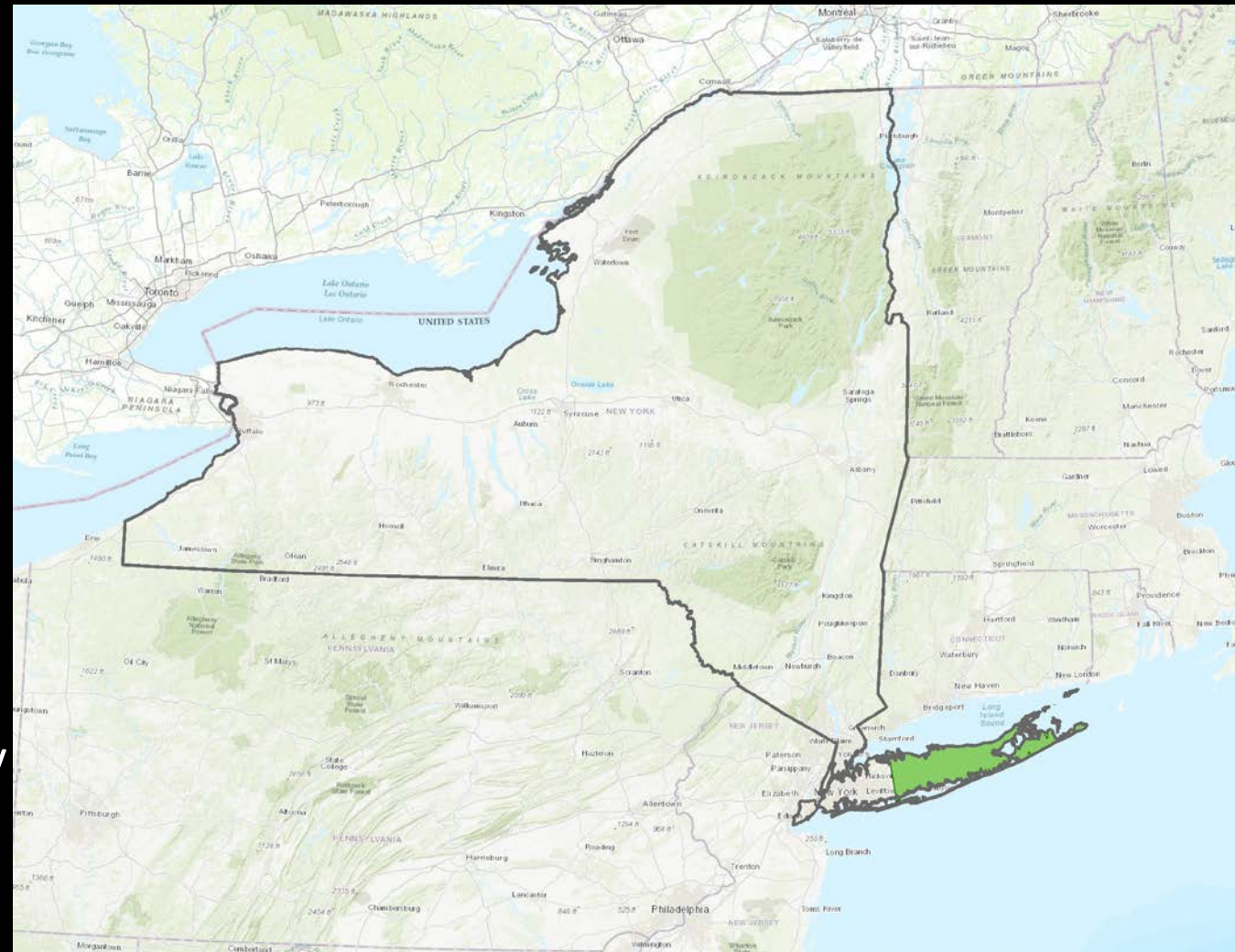


Nitrogen Sensor



Water Management in New York

- NY State Department of Environmental Conservation Responsible for Surface Waters
- Some Health codes dictated by State DOH
- County Health Dept oversees sanitary systems
- Water Authority and water districts oversee drinking water supply
- Building Codes Administered at the Town and Village level
- Nobody is truly responsible for the totality of the water cycle



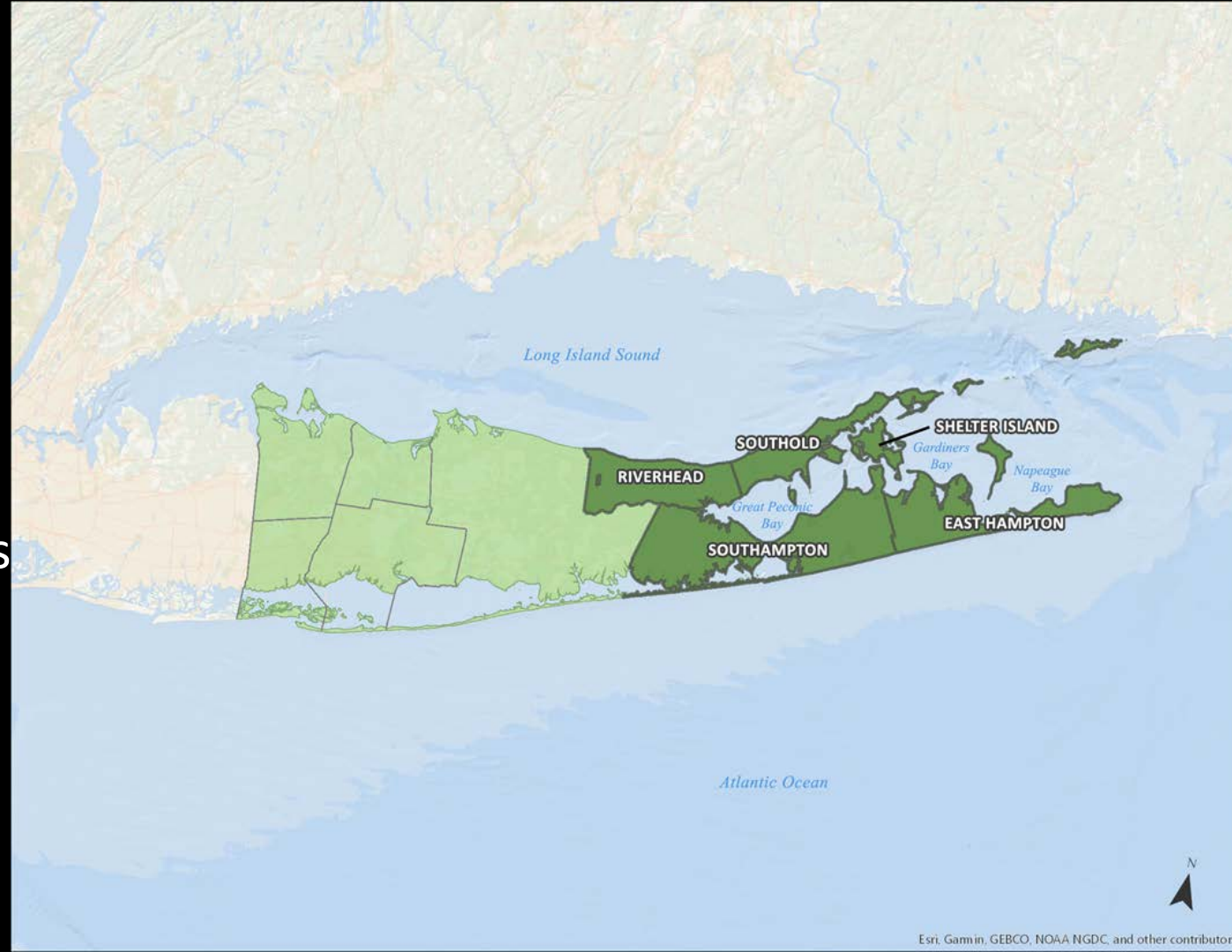
County Level Codes and Funding

- Suffolk Article 19 Creation and Adoption
- Article 6 Updates
- County Grant/Loan program
- Setting load targets and creating plans at the Sub-Watershed level



Local Government Level Work

- Creation and Adoption 1998 2% real estate transfer tax
- Recently Reauthorized To extended funds use to “Water Quality Improvement Projects”
- Overwhelming response 80% yes
- Greater than \$15mil. in annual revenue
- Can be used to incentivize septic systems
- Some Towns and Villages now requiring upgraded systems



Where do we go from here



- Continue to Keep drum beat up for public support
- Push the boundary of technology and innovation
- Continue to produce sound science to back up policies
- Continue to promote a larger long term funding stream
- Broader Policies will follow funding and public support