

An educational session on

THE DESIGN OF INNOVATIVE/ALTERNATIVE ONSITE WASTEWATER SYSTEMS

will be offered 10AM to 3 PM
on the follow dates and venues

June 8, 2017 The Nature Conservancy, 250 Lawrence Hill Road, Cold Spring Harbor, NY 11724

June 20, 2017 Cornell Cooperative Extension of Suffolk County, 423 Griffing Ave., Riverhead, NY 11901

June 28, 2017 Henrietta Acampora Cottage, 39 Montauk Highway, Blue Point, NY

5 CEU credits for engineers will be offered at all venues courtesy of NYWEA

5 CEU credits for architects will be offered for the June 20th session courtesy of A.I.A. Peconic

CEU credits for architects for the June 8 and 28 sessions are being sought.

To register: please fill in the following form:

<https://www.surveymonkey.com/r/OWTSregistration>

and either:

Mail a check made out to Peconic Green Growth, 651 West Main St., Riverhead, NY 11901 or

Pay through the Peconic Green Growth donation button with a note as to its application or

Pay with cash or check at check-in. Credit card information will be requested to reserve a seat.

Preregistration is strongly recommended as class sizes are limited.

Sponsored by

The Nature Conservancy, Suffolk County,

AIA PECONIC, NY Water Environment Association, Inc., LI Community Foundation

For questions and registration contact Glynis Berry, at info@peconicgreengrowth.org



Reclaim  our Water



THE DESIGN OF INNOVATIVE/ALTERNATIVE ONSITE WASTEWATER SYSTEMS

Sponsored by The Nature Conservancy, Suffolk County,
AIA PECONIC, NY Water Environment Association, Inc., LI Community Foundation

10AM to 3 PM

CEU: 5 CEU credits for engineers; CEU credits for architects requested

Cost: \$25 includes lunch

Session One: 3 hours

10:00 – 10:15 *Introduction* (TNC Chris Clapp)

This introduction discusses the impact of excess nitrogen and other pollutants from onsite wastewater and their impacts on the natural environment. Citing studies conducted by the Nature Conservancy, the degradation of waters, including the presence, variety and intensity of algal blooms occurring on Long Island, and the impact on aquatic life and habitat will be discussed.

10:15 – 11:00 *Suffolk County's Reclaim Our Water Initiative Overview* (John Sohngen or Justin Jobin)

A representative of Suffolk County's Department of Health Services will discuss the value of water to Suffolk County as well as the means to protect water quality from contaminants of major concern, including nitrogen, VOC's, and pharmaceuticals and personal care products. With Suffolk County's 360,000 onsite systems of which a high percentage are antiquated cesspools, the scale of the problem will be presented, along with the County's multipronged efforts to attack the issues. These include piloting and ultimately requiring enhanced, onsite systems, educating the industry, establishing new management and certification requirements, revamping standards of design, changing codes, and incentivizing early adopters with existing systems.

A description of the piloting process for new technologies will be described with systems in two pilots being named. Efforts to further treat by changing methods of discharge to ground will be discussed. The new permitting process and special requirements for new technologies, such as testing and maintenance contracts will be mentioned.

11:00 – 11:15 *Questions*

11:15 – 11:30 *Break*

11:30 – 12:15 *Suffolk County Residential Construction Standards* (John Sohngen or Justin Jobin)

This section will review in detail, changes to Residential Construction Standards. These include, updates to the design of septic tanks and the new section for Innovative/Advanced Onsite Wastewater Treatment Systems (I/A OWTS). Changed requirements and acceptable sizing guidance will be identified. Coordination with NYS regulations and the NYSDOH "Residential Onsite Wastewater Treatment System Design Handbook" and potential changes, such as shallow recharge systems and the elimination of grandfathering densities and cesspools will be discussed.

12:15 – 12:30 *Questions*

12:30 – 1:00 *Lunch + Discussion*

Session Two: 2 hours

1:00 – 2:45 *Technology Overview* (PGG – Glynis Berry)

This section will introduce new technologies for the enhanced treatment of onsite wastewater by both category and specific systems, including the range of I/A OWTS likely to be introduced in Suffolk County. The following general categories will be discussed, with the specific products identified in each section.

- Trickling Filter/Packed Bed technologies
- Extended aeration suspended growth/activated sludge
- Extended aeration submerged fixed film and anoxic fixed film
- Sequence batch reactor with submerged attached growth.
- Membrane Bioreactor
- Alternative systems i.e. soil-based, etc.

Each technology will be discussed, explaining the treatment train, unique factors and attributes of the system, and when which type of system will be appropriate for which conditions, such as site restrictions or part-time use. Resources will be provided.

2:45 – 2:00 *Questions & Break*

2:00 – 2:45 *Design Considerations* (all speakers)

Specific requirements for design submittals will be described, which include added details, electrical diagrams, and calculations for sizing and timing of pumps. Examples of drawings will illustrate the changes. Lessons learned from the installation of pilots will discuss situations likely to occur as the industry transitions to a new standard. Issues such as testing for water tightness, adapting existing infrastructure, abandoning existing infrastructure, design options to ensure resilience during power outages, the importance of avoiding subsidence, and aesthetics will be discussed.

2:45 – 3:00 *Summary* – (TNC Chris Clapp)



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The Presenters:

Glynis Berry, AIA, LEED AP is a partner in the firm *studio a/b architects* and is Executive Director of Peconic Green Growth. For Peconic Green Growth she wrote a Proposed Methodology for Establishing Need for Decentralized Wastewater Upgrades based on Environmental Conditions, which sparked discussion on the need for nitrogen mitigation in our region. Glynis supervised studies of the LI Sound watershed and the Peconic Estuary on the East End, which included hamlet maps of issues, a citizen survey, engineering reports, and suggestions for regulatory and operational changes. She has organized key symposia on Decentralized Wastewater, participated in the County's tour of other states' efforts, and designed several pilot installations of enhanced wastewater systems. She has also been advising local village planning commissions on zoning and code issues and will conduct a study with the Town of Southold on water conservation.

Christopher Clapp is a Marine Scientist with The Nature Conservancy, based in East Hampton. He joined the Conservancy in 2003 and worked on a multi-million-dollar shellfish restoration project in Great South Bay. He also helped lead a regional research project to understand the reasons for the decline of underwater seagrass meadows, vital habitats for shellfish and finfish. Both the shellfish and seagrass work revealed the debilitating role played by excess nitrogen. In pursuit of solutions, Chris has developed expertise concerning alternative septic systems that remove more nitrogen from wastewater than conventional systems. In addition to his work on Long Island, Chris serves on the following State and Regional Scale Teams; NY State Energy Team, NY State Inclusion and Diversity Team, Middle Atlantic and Northeast Atlantic Ocean Planning Teams, the Long Island Sound Planning Team, and the Middle Atlantic, Southern New England and Long Island Sound Water Quality Teams. Most recently he has been requested to advise The Nature Conservancy's Global Marine Team's efforts to reduce the impacts of wastewater on coral reefs. He holds undergraduate and master's degrees from Stony Brook University. Chris is a Long Island native.

Justin Jobin, Environmental Projects Coordinator with the Suffolk County Department of Health Services is a soil scientist and wastewater management expert. Working with a team of engineers, scientists and public health professionals to address the region's nitrogen pollution crisis, Justin is leading the pilot program evaluating onsite treatment systems for Suffolk County. He is also instrumental in the changes being made to Suffolk County's Sanitary Code. Justin previously served 13 years as the Wastewater Management District Coordinator for the Town of Jamestown, R.I., which is an island community and encompasses 1,835 homes with onsite wastewater systems. Nitrogen leaching from septic systems and cesspools has been directly linked with nutrient pollution in the Narragansett Bay, which surrounds Jamestown, similarly to how it has affected Suffolk County's ground and surface waters. Jobin has also authored several publications on wastewater management and developed curriculum for the New England Onsite Wastewater Training Program at the University of Rhode Island.

John Sohngen, P.E., is an Associate Public Health Engineer with the Suffolk County Department of Health Services ("SCDHS") Office of Wastewater Management and has over 13 years of experience in wastewater treatment. He currently serves as the supervisor of the Innovative and Alternative Onsite Wastewater Treatment System ("I/A OWTS") Program for the Suffolk County. Mr. Sohngen assisted in the preparation of the 2015 Suffolk County Comprehensive Water Resources Management Plan by preparing the Wastewater Management Chapter. In addition, Mr. Sohngen has supervised the installation and monitoring of various I/A OWTS in Suffolk County for demonstration purposes.