

Peconic Estuary Protection Committee
Meeting Summary – May 3, 2017

Suffolk County Department of Health Services
Public Health Board Room
360 Yaphank Avenue, Suite 2A
Yaphank, NY 11980

ATTENDEES

Committee Member Representatives

Town of Brookhaven | Veronica King (Committee Vice-Chair)
Town of East Hampton | Kim Shaw, Mark Abramson, Melissa Winslow
Town of Riverhead | Drew Dillingham (Committee Chair), Ernesto Rosini
Town of Shelter Island | Laury Dowd, Tim Purtell
Town of Southold | Michael Collins
Village of Sag Harbor | John Shaka (for Robert Stein), John Parker (by phone)

Additional Participants

Peconic Estuary Protection Committee Coordinator | Rachel Gruzen
Cornell Cooperative Extension Marine Program | Scott Curatolo-Wagemann
Peconic Estuary Program | Sarah Schaefer
Peconic Estuary Program/Department of Environmental Conservation | Elizabeth Hornstein

Committee Member Representatives Not Present

New York State Department of Transportation | Gregg Williams
Suffolk County | Frank Castelli, Jay Elyse, Alison Branco
Town of Southampton | Christine Fetten
Village of Greenport | George Hubbard, Paul Pallas
Village of North Haven | Dianne Skilbred

I. April 5th Meeting Summary Approved

The Peconic Estuary Protection Committee (Committee) members approved the April 5th Meeting Summary.

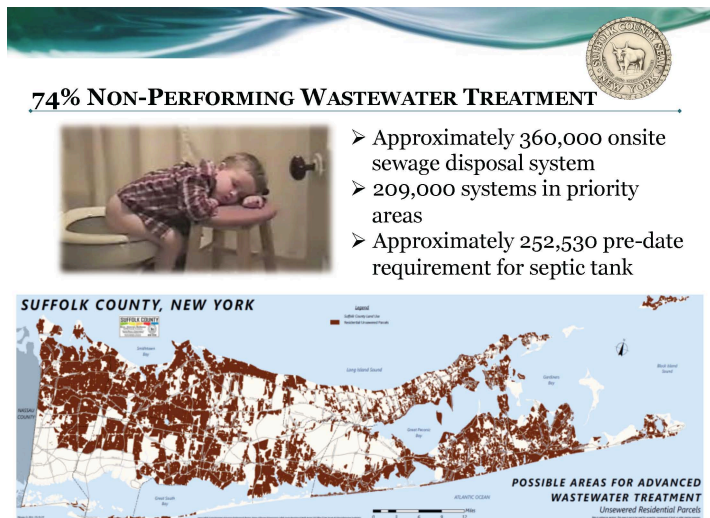
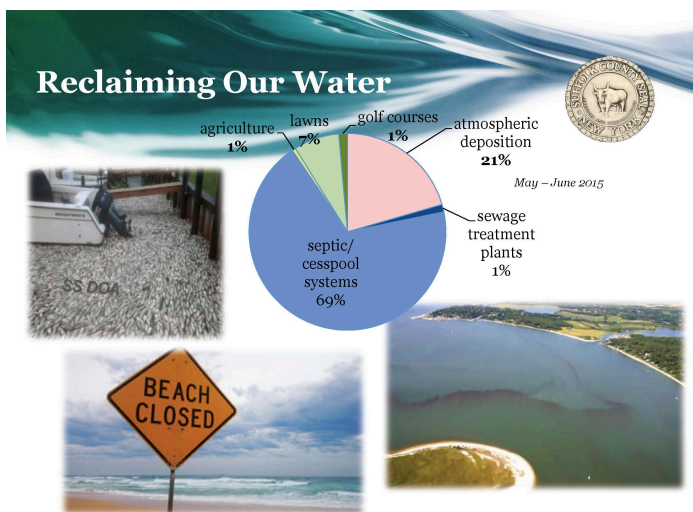
II. May 3rd Committee Meeting on I/A OWTS with Justin Jobin and Ken Zegel at the Suffolk County Department of Health Services in Yaphank

The May 3rd Committee meeting was held at the Suffolk County Department of Health Services (SCDHS) in Yaphank. The Peconic Estuary Program’s Sarah Schaefer helped organize a presentation and question and answer session by Suffolk County’s Justin Jobin, Environmental Projects Coordinator, SCDHS, and manager of the Innovative/Alternative Onsite Wastewater Treatment Systems Septic Demonstration Program; and Ken Zegel, Associate Public Health Engineer, Suffolk County Subwatersheds Wastewater Plan. Summaries of their presentations are provided below. The Powerpoints have been distributed to Committee members and will be attached to this summary. A selection of the slides is included below.

1. Justin Jobin, Environmental Projects Coordinator, Suffolk County Department of Health Services

Suffolk County produced its Comprehensive Water Resources Management Plan in 2015, a process that began in 2013. The Plan covers ways and means to protect water quality, wastewater treatment, coastal resiliency, nitrogen management, contaminants of concern, ecosystem health and more. The report documents scientific studies showing that nitrogen in Suffolk County surface waters is largely attributable to septic/cesspool systems. In Great South Bay, 69% of nitrogen is estimated to come out of septic/cesspool systems and these values are consistent across Suffolk County. The second largest contributor is atmospheric deposition estimated at 21%, while agriculture, lawns, golf courses and sewage treatment plants combined account for an estimated 10% of nitrogen.

Suffolk County has the highest density of septic systems across the United States. Of the approximate 360,000 onsite sewage disposal systems in the County, 209,000 are located in areas within a 0-25 year travel time for groundwater to reach water bodies. Areas within this 0-25 year travel time are considered by the County to be priority areas. Approximately 250,000 of the onsite systems pre-exist the County’s requirements for a septic tank. [The regulations were developed in 1972 and required a septic tank be placed in front of a leaching pool, according to a presentation by Walter Dawydiak at a later date.]



Source of All Images in the Document: Suffolk County Department of Health Services

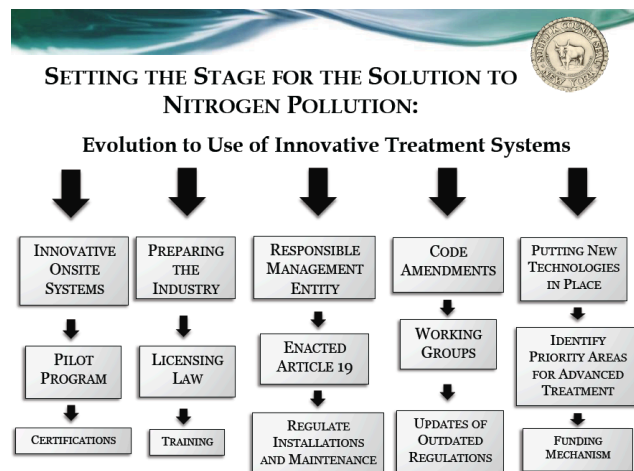
Suffolk County has taken a five-pronged approach in the “evolution to the use of innovative treatment systems”:

1. Innovative Onsite Systems -

- The County developed a pilot program to test the innovative technology in Suffolk County. Phase I is in progress and Phase II has recently commenced;

2. Preparing the Industry -

- A liquid waste licensing law was unanimously adopted and put into effect June 2016. The law defines training and continuing education requirements to prepare the industry for the installation and maintenance of nitrogen reducing technologies, called Innovative/Alternative Onsite Wastewater Treatment Systems (I/A OWTS or I/As). Currently there are over 100 trained contractors.



3. Responsible Management Entity -

- Article 19 of the Sanitary Code, which was passed by the County legislature in 2016, gives authority to Suffolk County to be the “Responsible Management Entity” (RME) for I/A systems. Given these systems are active and not passive, requiring routine maintenance and inspection, the County is required to manage them under the authority of the State Health Department. Article 19 establishes a framework for the SCDHS to act as RME with the responsibility to evaluate, approve, register, oversee and facilitate the use of I/As County-wide. In most other jurisdictions and states, denitrification systems are managed at the State level. For more information, see: <http://www.reclaimourwater.info/Portals/60/docs/SCSanCodeArt19.pdf> and http://reclaimourwater.info/Portals/60/docs/SepticImprovementProgramFAQs_final_5-8-17.pdf.

4. Code Amendments

- Sanitary Code Amendments are being drafted regarding cesspool phase-out, grandfathering, requirements on new construction or upgrades upon renovation, and more. The County is currently soliciting public feedback on these codes. Specifically:
 - Article 5 is on “General Sanitation, including requirements for disposing, storage, removal and transport of offensive material”;
 - Article 6 proposes additions/changes to address “replacements and retrofits of existing onsite sewage disposal systems, requirements for I/A OWTS for new construction, and a revised exemption section addressing “grandfathering” of pre-existing commercial structures.” Suffolk County is hosting on Friday, May 5th a Stakeholders Meeting to review the draft version of the Suffolk County Sanitary Code Article 6. John Sohngen is the contact person for further information.

5. Putting New Technologies in Place -

- The County is identifying priority areas for innovative/advanced onsite treatment, specifically with the development of the Subwatershed Wastewater Plan and other planning efforts;
- The County is creating the funding mechanisms to finance installations. The County is establishing a local law to authorize an incentive program with grants and low-interest loans to homeowners for installation.

I/As are active systems that mimic wastewater treatment processes to reduce nutrients in wastewater. Suffolk County streamlined the process to pilot and approve new I/A systems and developed a two-phase septic demonstration program to test technologies that have already passed through a demonstration program in comparable jurisdictions. Under Phase I, four of six system types have been approved for provisional use to date. The Busse system was not performing to standard; it was disconnected and the manufacturer has six months for a retrofit and retrial. Phase II began in March 2016 with a Request for Expressions of Interest and there are now an additional eight technologies participating in the second phase, with 23 homeowners receiving systems. Phase II systems utilize various alternate technologies such as polystyrene beads and membrane bioreactors (MBR). Some of these technologies are highly widespread in other countries. For example, manufacturer Fuji has over 2 million systems in the ground in Europe and Asia.

There are 42 demonstration systems made by 10 different manufacturers currently in the ground across Phases I and II. The most installs of any one system is five (HydroAction), and that particular system has already passed for provisional use. The SCDHS Approval List of I/A OWTS as of April 2017 can be found at the following link. The list includes a technical description of the function of each system and contact information for the manufacturers: <http://reclaimourwater.info/Portals/60/docs/Article19ApprovalList-4-17.pdf>. The SCDHS effluent standard for I/A OWTS is 19 mg/L. This is the NSF standard for nitrogen removal. Existing septic system effluent is 60-70 mg/L, therefore I/A systems are reducing nitrogen by over 70 percent.

SEPTIC DEMONSTRATION PROGRAM (I/A OWTS)

Phase 1 - Septic Demo Program

- o Manufacturer Selection
 - 4 manufacturers selected to install 6 types of systems for a total of 19 systems
- o Homeowner Selection
 - 19 homes selected throughout the County via lottery by Legislative District

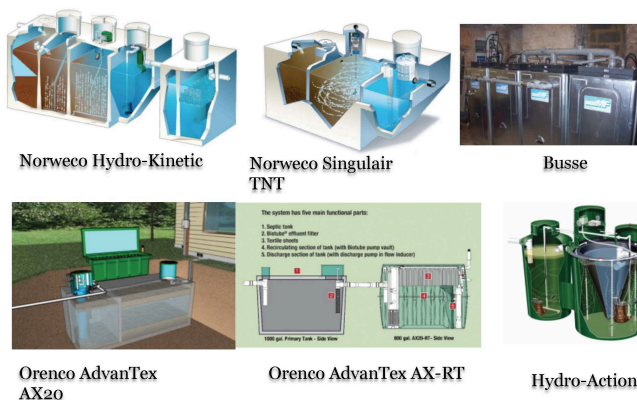


Phase 2 - Septic Demo Program

- 6 manufacturers applied to install 8 types of systems
- Homeowner Selection - over 207 Applicants
- 20 homeowners selected on July 26, 2016



SEPTIC DEMO PHASE 1 SYSTEMS

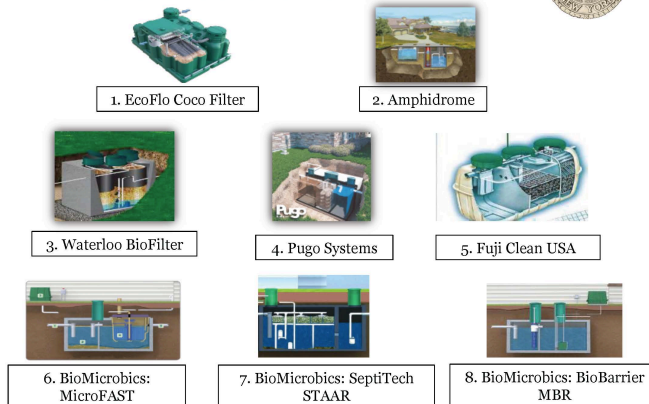


SUFFOLK COUNTY SEPTIC DEMO SYSTEM PERFORMANCE AS OF APRIL 2017

| Technology | AVG (Mg/L)* | Provisional Approval |
|-------------------------|-------------|--------------------------------------|
| Hydro-Action AN Series | 12 mg/L | Approved in September 2016 |
| Norweco – Singalair TNT | 18.8 mg/L | Approved in October 2016 |
| Orenco Advantex – RT | 18.8 mg/L | Approved in March 2017 |
| Norweco – Hydro-Kinetic | 18.9 mg/L | Approved in April 2017 |
| Advantex - AX20 | 37.6 mg/L | Cannot project approval at this time |
| BUSSE - MMF | 74.2 mg/L | Cannot project approval at this time |

*Standard is 19mg/L

SEPTIC DEMO PHASE 2 SYSTEMS

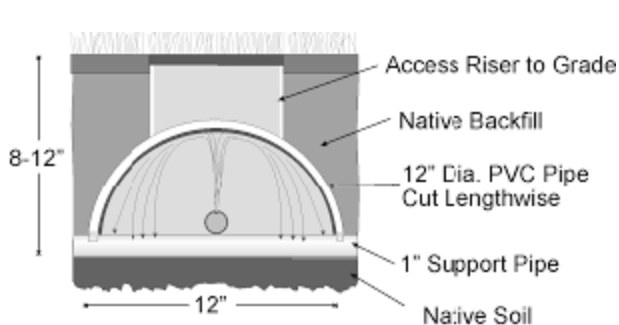


Each I/A technology can have a specific use that makes it more applicable to certain sites over others. For example some technologies have discharge pumps built in while others do not. Some systems may be better for high groundwater conditions and can save on expensive retaining walls and mounding up. Some technologies may be better suited for residences on barrier beaches where there is a highly limited leeching area available. Others, with multiple tanks, may be more appropriate for larger homes. The average footprint of is the size of an average septic tank. In some situations an I/A can replace the existing septic tank/ring/pool in location and dimension. SCDHS will issue in coming months a document on leeching rates to clarify some of the non-consistent sizing that currently exists in the regulations.

Historically septic waste management on Long Island involved vertical leaching pools in sand. The sand would remove bacteria, but no one thought in decades past about phosphorus, pharmaceutical levels, nitrogen or contaminants of emerging concern. Now the County is rethinking the vertical leaching and testing horizontal dispersal along trenches, or pressurized shallow drainfields. There are 10 pressurized drainage fields being tested under the pilot program. The I/A OWTS transforms the nitrogen into nitrate form, and a fabric material evenly wicks liquid and makes it available for uptake by bacteria, microbes, worms, etc. which can remove additional contaminants and nutrients.

THE PRESSURIZED SHALLOW DRAINFIELDS (PSDs)

- Pressurized drainfields that evenly and horizontally distribute treated effluent within 18 inches of the top soil horizon.
- Emphasis on increased microbial activity and nutrient absorption.
- Treated effluent reductions up to 50% TN



Excerpts from Suffolk County Septic Improvement Program informational materials: <http://reclaimourwater.info/>

“All of the provisionally approved technologies in Suffolk County rely on biological processes to treat wastewater and remove nitrogen. These systems use various methods to provide aerobic bacteria to convert nitrogen to nitrite and then apply an anaerobic (without oxygen) environment to denitrify by stripping the oxygen molecule off of the nitrate nitrogen, resulting in the release of gaseous nitrogen into the atmosphere. The nitrogen cycle is one of Earth’s most important biological processes, second only to photosynthesis.

“I/A OWTS are designed to reduce wastewater nitrogen, biochemical oxygen demand (BOD), and total suspended solids before being discharged below grade to leaching structures. Studies have shown that certain types of I/A OWTS treatment processes and leaching structures have the ability to reduce bacteria, viruses, and contaminants of emerging concern such as certain types of compounds/chemicals found in pharmaceuticals and personal care products that are present in wastewater. The Suffolk County Comprehensive Water Resources Management Plan Chapter 8 has a section dedicated to contaminants of emerging concern and wastewater treatment for further information.” For more information see the Suffolk County Septic Improvement Program FAQs: http://reclaimourwater.info/Portals/60/docs/SepticImprovementProgramFAQs_final_5-8-17.pdf

“How does an I/A OWTS benefit the homeowner? In addition to providing environmental benefits and reducing the nitrogen load to ground and surface waters, homeowners receive many other benefits from these state-of-the-art technologies. I/A OWTS can be more cost effective than conventional systems on lots with significant site constraints such as high groundwater, poor soils, small restrictive lot size, and coastal area. In addition, I/A OWTS consist of separate components, all of which are replaceable if something goes wrong. A homeowner may have to replace a pump or blower after 10 years, but they should not have to dig up and replace the system as is common with conventional systems. In some jurisdictions, I/A systems are said to increase property value.”

Source: http://reclaimourwater.info/Portals/60/docs/SepticImprovementProgramFAQs_final_5-8-17.pdf

“Pressurized Shallow Drainfields (PSDs) are used to distribute wastewater following pretreatment from an I/A OWTS. Pressurized Shallow Drainfields are placed in the upper soil layers (6 to 12 inches from the ground surface) for maximum wastewater treatment by natural soil processes. Shallow placement also maximizes vertical separation distance from the drainfield base to the groundwater. Design A shallow narrow drainfield works by pressure-dosing treated effluent into a small PVC drainfield lateral which is typically ¾ to 2 inches in diameter.”

<http://reclaimourwater.info/Portals/60/docs/PressurizedShallowDrainfields.pdf>

Half-Pipe Configuration: “The pressurized effluent squirts up against a cover made of a 12-inch PVC half pipe. This half-pipe protects the trench and helps distribute the effluent evenly over the trench bottom just below the ground surface where biological activity is greatest. Effluent infiltrates the native soil surface and percolates down through underlying soil where additional nutrient and pathogen removal occurs.”

HOW MUCH DO I/A OWTS COST?



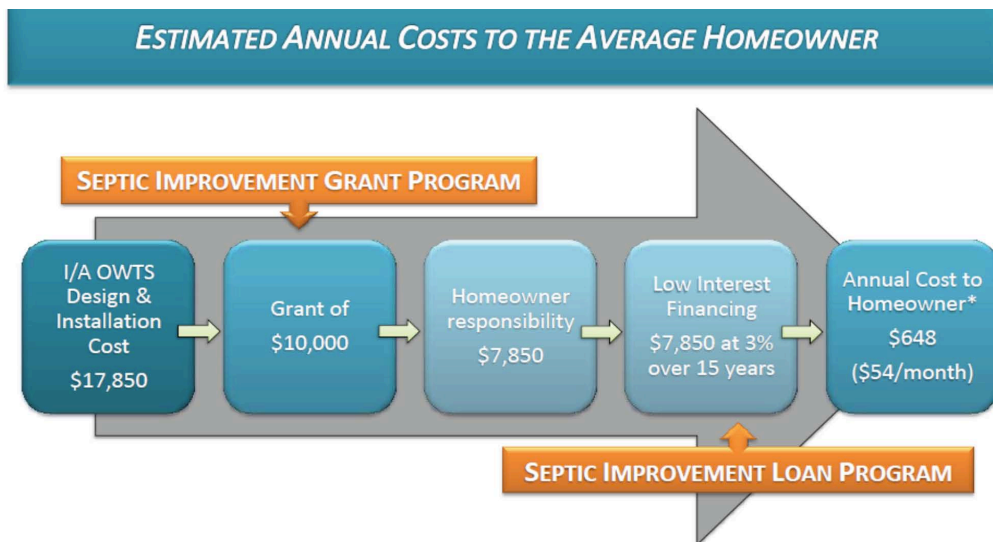
| Cesspool Replacement* | New Septic Tank & Leaching Pool System* | I/A OWTS** |
|-----------------------|---|------------|
| \$4,000 - \$6,000 | \$6,000 - \$8,000 | \$17,850 |

- * Assumes Typical Installation with no site constraints
- ** Includes Engineering and Installation Costs
- ** Provisionally Approved Material Cost Average \$7,800

Suffolk County is currently estimating the cost of an I/A OWTS at \$17,850, and has been developing a funding mechanism to finance installations. This estimated cost includes materials, permitting, engineering and installation costs. There are additional annual maintenance and electricity costs. With the grant and low finance loan, the new I/A would cost the homeowner \$54/month over 15 years. Under the new sanitary code regulations, design and permitting will be required for existing systems, as well. The proposed Article 6 stipulates that cesspools cannot be replaced without a permit and will need a system that conforms with Health Department regulations. Thus it will be cost competitive and comparable to install the new technology. The maintenance average cost is \$300/year. The first three years is covered by the manufacturer in the cost of system and after that is the responsibility of the homeowner. The I/A systems use electricity, which can range in cost from \$2-20 per month depending upon the technology.

The draft local law for grant and loan financing was proposed on March 28th and there was a public hearing on April 25th. The proposed program allocates \$2 million per year for an individual maximum grant amount of \$10,000 for the purchase and installation of an approved I/A OWTS and an additional \$1,000 for a Pressurized Shallow Drainfield. Suffolk County is also working with the CDC Long Island Funding Corporation with financial support from Bridgehampton National Bank to offer a 3% low interest loan up to \$10,000 for additional costs to the homeowner with a 15-year repayment term. The homeowner could receive a \$20,000 system with no out-of-pocket expense. Pre-registration is open now for the grant loan program. For more information write: septicdemo@suffolkcountyny.gov.

All other costs, including, but not limited to irrigation repairs, electrical improvements unrelated to system installation or other improvements necessary for the installation are to be paid by the property owner/applicant. Post-installation landscaping restoration is the responsibility of the property owner.

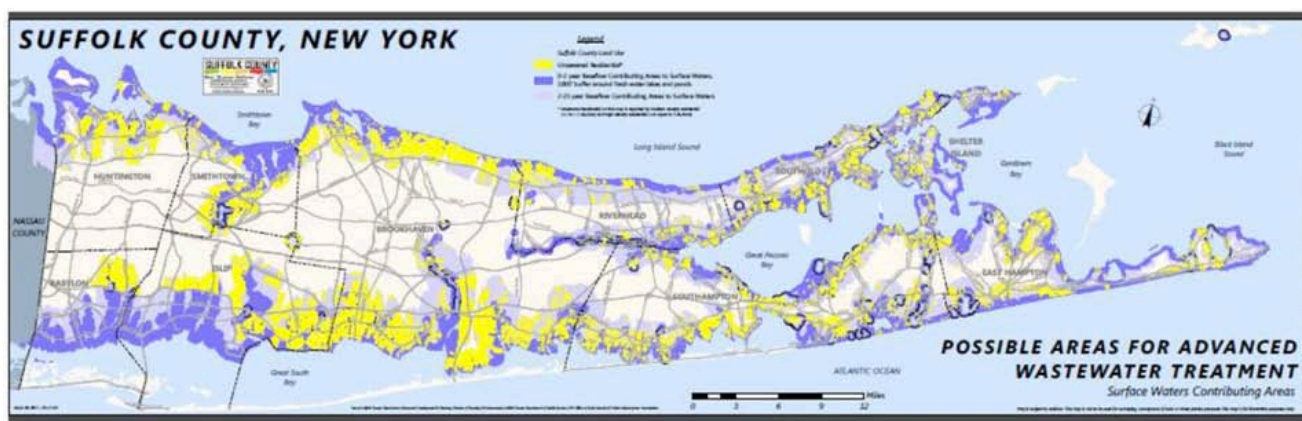


The Grant Eligibility Criteria for financing I/As mimics the STAR Program. Suffolk County homeowners must reside in targeted, high priority areas and satisfy the following:

- The residence must be single family, owner-occupied year-round and the owner's primary residence.
- The residence must be served by a septic system or cesspool, which is not connected to a public sewer or located, within any sewer district.
- Property is not a rental property.
- New construction is not eligible; however construction projects for existing residences may be eligible.
- No in-home business (other than a personal home office that does not require additional kitchen use or customer access).
- No resident is a current employee of Suffolk County, elected official or office holder of any political party (including official political party committee members).
- Availability of valid Certificates of Occupancy (CO) or Certificate of Zoning Compliance for the residence. Must be current of payment of property tax.
- Income verification (Provide a copy of owner(s) most recently filed federal income tax return). Grant assistance is based upon the following Income Criteria:
 - Adjusted Gross Income less than or equal to \$300,000/year 100% of grant;
 - Household income between \$300,000-\$500,000/year 50% of grant; and
 - Adjusted Gross Income of \$500,000 or more will not be eligible for a grant.

Suffolk County has identified three tiers of areas for prioritizing I/A installations. Each tier is based on the travel time for groundwater to reach surface waterbodies (more on this and the Subwatershed Wastewater Plan will be shared in Ken Zegel's presentation):

1. Priority Critical Areas (high or medium density parcels within the 0-2 year groundwater travel time or high or medium density residential parcels within 1,000 feet of enclosed water bodies in Suffolk County)
2. Parcels located within Critical Areas (high or medium density parcels within the 2-25 year groundwater travel time)
3. Parcels located outside Critical Areas



The near-term timetable and legislative process for the Suffolk County Septic Improvement Program is the following:

- March 28, 2017 Proposed program legislation introduced at general legislature meeting;
- April 25, 2017 Anticipated public hearing on the program
- May 16, 2017 Program is eligible for a vote at the general legislature meeting, if public hearing is closed on April 25
- July 1, 2017 Target operational date, if approved on May 16

Regarding I/A system performance under seasonal versus year-round use, Jobin stated that some systems perform better than others under seasonal use. An analysis on this topic demonstrated that seasonal use nitrogen output was averaging 22mg/L and year round performance was 17-18 mg/L. There are subsets within seasonal use in that load intensity can be one week intense or six months intense use.

Non-proprietary constructed wetlands are coming online as well. (In comparison, the I/A demonstration program is for systems that have NSF certification, which constructed wetlands do not.) The constructed wetlands can be well-suited for seasonal use. Two are under construction and testing at Sylvester Manor and on Fisher's Island. Constructed wetlands are a great option where site constraints do not exist. They can have a lot of plant uptake. There is a potential for lower costs, as well, though the pilots are still under demonstration and Suffolk County cannot yet report on the costs. Maintenance requirements are similar. Jobin noted that the County is also working with Stony Brook University testing biofilters. Scientists are installing field constructed systems similar to constructed wetlands to test biofilter performance.

Pilots are ongoing for commercial scale versions of the I/As. The County is aiming to issue commercial standards this summer. A few commercial I/A systems have been installed at County Parks. The Nature Conservancy is installing one. A feasibility study is underway for Young's Mobile Home Park in Riverhead. In the past the solution to increased volume of wastewater flow was to connect I/A systems in series. Now manufacturers are upscaling the systems from an original length of 8 feet to approximately 30 feet. Orenco, for example, has a 7000 gallon commercial version of its residential unit.

The County's new website on I/A OWTS is: <http://reclaimourwater.info/>

2. Ken Zegel, Associate Public Health Engineer, Suffolk County Subwatersheds Wastewater Plan

The purpose of the Suffolk County Subwatersheds Wastewater Plan is to establish priority areas for water quality protection and restoration in the 189 subwatersheds and 900 public water supply wells in the County. The Plan is under development with recognition that when funding sources become available for water quality protection actions, there will be a strategy and priority list in place to address target reduction levels, recommended upgrades and areas, cost analyses and implementation options to make investments that will have the greatest benefit to water quality.

The Subwatersheds Plan is an empirical approach to water protection under the Suffolk County Reclaim Our Water Initiative and the Long Island Nitrogen Action Plan (LINAP). LINAP is a project of the New York State Department of Environmental Conservation (NYSDEC) and the Long Island Regional Planning Council (LIRPC). LINAP looks at all sources of nitrogen while the Subwatersheds Wastewater Plan looks at wastewater only. Another purpose of the Plan is to identify data gaps and provide recommendations for further study.

The Subwatershed Plan is intended as an aggressive planning process with a short timeline that uses sound science. It is not a long-term analysis such as the process for developing Total Maximum Daily Loads (TMDLs) for waterbodies. The Subwatershed Plan steps are:

1. Establish a uniform and consistent set of subwatershed boundaries for all priority areas (surface water, drinking water, groundwater)
2. Develop nitrogen load rates
3. Develop receiving water residence times ("flushing times") (surface water sensitivity)
4. Establish baseline water quality
5. Establish tiered priority areas
6. Define endpoints (e.g., water clarity, dissolved oxygen, HABs, SAV, etc.)
7. Establish first order nitrogen load reduction goals for all of the County's surface water, drinking water, and groundwater resources
8. Produce recommendations for *wastewater upgrades* for each priority tier
9. Evaluate annual costs for various implementation options to support funding recommendations.

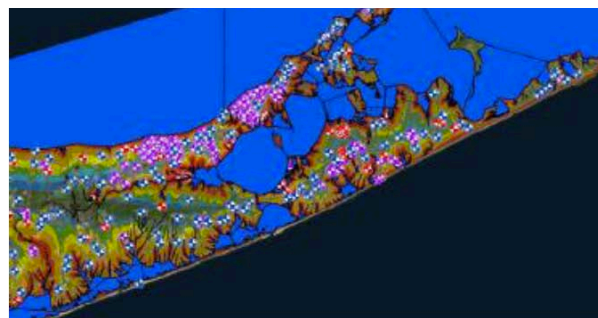
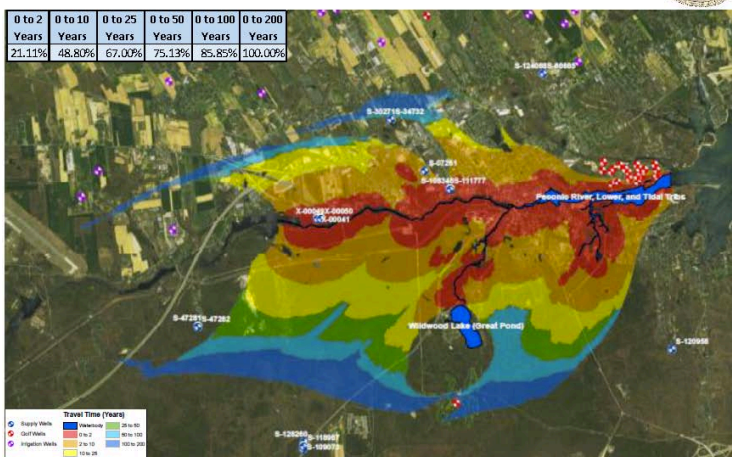
The Subwatershed Plan uses a Suffolk County Groundwater Model produced by consultants CDM Smith. The groundwater model recreates how groundwater travels in the subsurface zone. The model creates a model environment with information on geology, soils, hydrologic parameters, recharge rates, pumping rates (public supply wells, farm irrigation, etc.) and other critical parameters. The model then predicts where the groundwater will go and what quantity will flow to the different embayments. The model has upwards of one million nodes which generate much data, and uses 2012-13 precipitation data, a data set considered to be representative of regional averages.

The County has delineated subwatershed boundaries up to the 200-year contributing area and estimated the groundwater baseflow and travel time. This information helps the County to assess legacy nitrogen and how much impact it has on water quality in certain areas. Legacy nitrogen, or that which has been discharged in past 50-75 years from previous land use, is particularly an issue with agricultural land use on Long Island. There is also consideration of nitrogen concentrations, called hotspots, that might affect the model.

Delineation of the subwatershed boundaries uses as a base the NYSDEC's Priority Water Body List, which is a readily available list, acknowledged and used by regulators, policymakers and other stakeholders. There are 189 subwatersheds on the List, 76 located in the Peconic Estuary watershed, most saltwater but for 4 or 5 freshwater ponds. [Some of the member municipalities noted that they have found inaccuracies in the NYSDEC Priority Water Body List. The County stated it has established new boundaries for some of the surface waters.] The draft subwatershed delineations were released at the end of April and are under review.

The watershed area is gradated, or contoured, by subsurface water travel time to surface waters, called baseflow: 0-2 years, 2-10, 10-25, 25-50, 50-100 and 100-200. The majority of the groundwater, 84 percent, had a 0-25 year transport time. Some water in Suffolk County is 1000 years old, but the methodology stopped delineating at 200 years because transport rates of a greater timeline had very low contribution to surface waters. Preliminary observations are that the age of the water increases to the west given the water movement rate is slower "up", or inland, in the watershed.

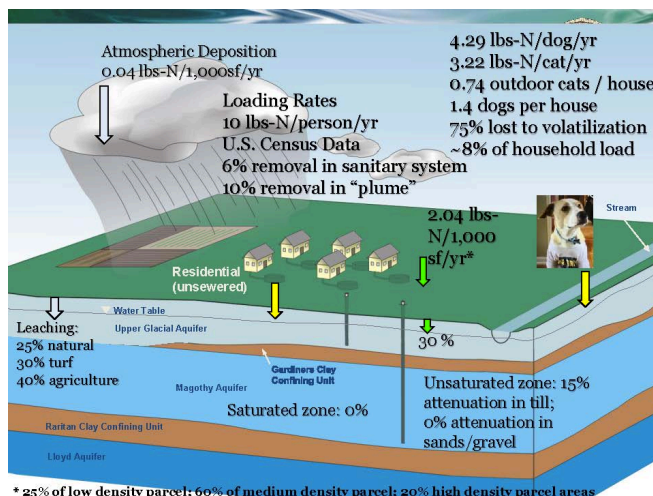
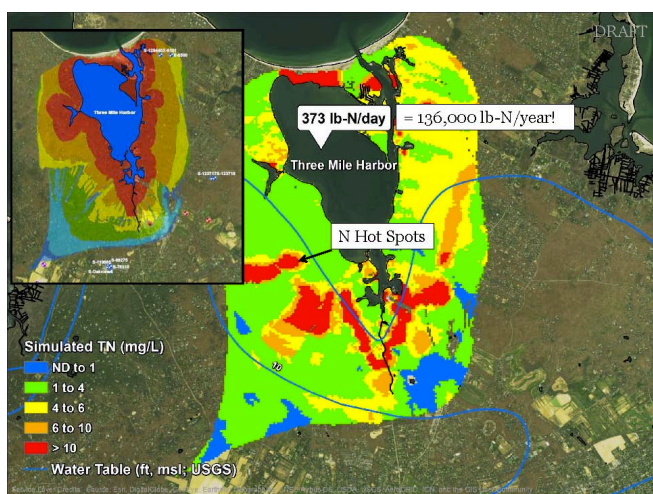
SUBWATERSHEDS DELINEATION EXAMPLES



PECONIC ESTUARY
BASEFLOW
SUMMARY

| | |
|----------------|------|
| 0 to 2 Years | 44% |
| 0 to 10 Years | 72% |
| 0 to 25 Years | 84% |
| 0 to 50 Years | 92% |
| 0 to 100 Years | 97% |
| 0 to 200 Years | 100% |

DRAFT – SUBJECT TO REVISION



The County convened task forces and working groups to vet assumptions and methodologies and get agreement from the experts that the County is using the best data and assumptions. The nitrogen load is based on land use [land use data collated and provided to the County by the Committee’s GIS Working Group in 2016.] Once nitrogen enters into the subsurface zone there are certain attenuation rates as it travels through the zones to the waterbody. The County started with this concept and used the modeling tool to incorporate the assumptions in the model. Various land uses were assigned nitrogen use rates. The model assigns each residence as a point source to simulate predicted concentrations. For example, residences of a certain zone were assigned 10 pounds nitrogen per person per year. The model assumes a small nitrogen removal rate by sanitary systems; 0-15% is cited in the literature and the County settled on 6%. Pet waste was 8% of the household load. [Southold’s Michael Collins commented that the model does not account for nutrient uptake in agricultural crops.] The model produces concentration contours of the nitrogen loads and helps the County to focus on contributing areas of concern. Nitrogen concentration must also be divided by the size of the waterbody, volume, benthic conditions and water flush rates. The County is in preliminary discussions on installing monitoring wells to check and calibrate the models. This would be the natural next step to LINAP.

The consultant firm HDR, formally HydroQual, is producing the Surface Water Model using Environmental Flow Dynamic Code (EFDC). This model predicts how nitrogen would be removed from a waterbody by flushing and not biological processes. The flushing time (Tf) is the time it would take for nitrogen to be removed from the system near to 100%.

The findings of the Groundwater and the Surface Water Models along with other weighted criteria (such as measured Dissolved Oxygen (DO), acres of Submerged Aquatic Vegetation (SAV), Pathogens and Depth to Groundwater) are used to establish tiered priority subwatersheds. [Collins commented that the pathogen loads should not be taken from NYSDEC, given many waterbodies are closed for administrative closures and not pathogens. Brookhaven’s Veronica King stated that pathogen criteria should use volumetric data and not be a “yea/nea” input. The County commented that the purpose of this model is to have a platform from which data gaps can be identified, to then garner support and funding for additional studies and data collection such as new pathogen data.]

Each water body in Suffolk County will have a complete set of data on water quality parameters. Zegel noted that there are still about 60 waterbodies for which data is not available. Zegel will forward the list to the Committee members via the Committee Coordinator for input if municipal data sets are available, or to work the data gaps into the sampling program in the future. Data to supplement the Plan must be collected under the County’s existing Quality Assurance Program Plan (QAPP). Any additional water quality monitoring data to be supplied by the municipalities would have to follow the County QAPP. Zegel will also distribute the list of all receiving water bodies for the Plan.

EXAMPLE MATRIX

Per unit volume of water body

| Subwatershed | N Load | Residence Time | Total Nitrogen | Dissolved Oxygen | SAV | HAB | Fish Kill | Clarity | Pathogens | Depth to GW | SLOSH |
|------------------|--------|----------------|----------------|------------------|-----------------|--------|-----------|---------|-----------|-------------|--------------------|
| | (#/yr) | (days) | (mg/L) | (mg/L) | Acres or Y or N | Y or N | Y or N | | Y or N | % < 10 feet | % 0 to 2 Year Area |
| <i>Weight</i> | -N | -N | -N | +N | Q | Q | Q | +N | Q | -N | -N |
| | 20 | 10 | 10 | 10 | 10 | 5 | 5 | 5 | 5 | 10 | 10 |
| Coeclles Harbor | 16,827 | 5 | 0.34 | 11.4 | Y | Y | N | 6 | N | 7% | 61% |
| Dering Harbor | 11,571 | 4 | 0.06 | 6.5 | Y | N | N | 7 | N | 3% | 53% |
| West Neck Bay | 11,936 | 10 | 0.41 | 11.5 | Y | Y | N | 5 | N | 5% | 66% |
| West Neck Harbor | 12,666 | 2 | 0.31 | 11.7 | Y | N | N | 7 | N | 3% | 61% |

The nitrogen load reduction goals under the Plan are the following:

- Develop Total Nitrogen to Endpoint relationships using statistical evaluation of local data supplemented with regional data. This will group areas with similar characteristics like residence time, salinity, etc., and using those findings to extrapolation on subwatersheds without water quality data.
- Estimate required load reduction using as reference similar watersheds with “good” water quality.
- Use existing guidance values to achieve Endpoints for other conditions like DO, SAV, etc.

The objective is to have a specific wastewater approach for each parcel in Suffolk County using I/A OWTS and targeted areas for sewerage. Nitrogen mitigation will include the use of I/A OWTS, targeting areas for sewerage, installation of permeable reactive barriers (PRBs), and more. The County will be reaching out to towns and villages for information on known and foreseen sewer areas. The County is also establishing criteria for recommending clustered areas, where commercial scale I/A systems are installed for a cluster of residences. The County is looking at 8-10 pilot areas with unique characteristics where assumptions and characteristics can be extrapolated County-wide, including Young’s Mobile Home Park in Riverhead, and sites in North Sea Harbor, Reeves Bay and James Creek or Deep Hole Creek.

The next steps for the Wastewater Plan include:

- Draft Priority Area Map in late May/June 2017
- Quarterly WPAC Meeting May/June 2017
- Draft Subwatersheds Wastewater Plan July/August 2017
- 2nd Stakeholders Meeting August/September 2017
- Final Subwatersheds Wastewater Plan Fall 2017
- Generic Environmental Impact Statement Winter 2017

The speakers welcomed continued communication. They can be reached at:

Justin Jobin
 Environmental Projects Coordinator
 Suffolk County Department of Health Services (SCDHS) - Office of Ecology
 360 Yaphank Avenue, Suite 2B
 Yaphank, NY 11980
 Phone: [631-852-5808](tel:631-852-5808)
justin.jobin@suffolkcountyny.gov

Kenneth Zegel, PE
 Associate Public Health Engineer
 SCDHS - Office of Ecology
 Phone: [631-852-5809](tel:631-852-5809)
ken.zegel@suffolkcountyny.gov

ACTION ITEMS:

- **Check out the website <http://reclaimourwater.info/> with materials to learn more.**
- **Encourage homeowners to pre-apply for the grant program.**
- **Committee members to review the County’s table of water quality data per water body (to be provided by Zegel via the Coordinator) and provide any available additional water quality monitoring data and consider working these data gaps into a future sampling program using the County QAPP for water quality monitoring.**

III. Grant Opportunities

The Coordinator reported that the New York State Regional Economic Development Councils (REDC) announced on May 1st a call for applications for 2017 grant funding. The Consolidated Funding Application (CFA) is due at the end of July. Elizabeth Hornstein of the Peconic Estuary Program (PEP) and New York State Department of Environmental Conservation (NYSDEC) shared with the Committee information on two opportunities within the CFA: the NYSDEC Round 14 Water Quality Improvement Program (WQIP) and the Climate Smart Communities Grant Program. Hornstein encouraged municipalities to apply to these programs which fund coastal projects and planning to protect water quality.

The Coordinator reported that she investigated all grant opportunities with the CFA including the NYSDEC Water Quality Improvement Program (WQIP) and the Local Government Efficiency Grant. None of the grants would fund educational outreach or coordinator activities unless associated with a specific project. The Coordinator agreed to distribute a summary of all grant opportunities as well as an overview of the requirements of the CFA for further discussion individually by phone or as a group at the June 9th meeting.

The Suffolk County CFA information session is on June 9th 10:00am at Stony Brook University in Stony Brook. This is the same time as the June Committee meeting. The LI REDC has also issued a 2017 Call for Priority Projects, a non-required, pre-application phase due Friday, May 26th. For more information go to: <https://regionalcouncils.ny.gov/content/long-island> or <https://regionalcouncils.ny.gov/content/long-island-priority-project-request-form-2017>.

ACTION ITEMS:

- **For those interested in applying for NYS funding under the Consolidating Funding Application, consider sending a representative to the information session on June 9th at 10am at Stony Brook University (the same time as the June Committee meeting.) More information can be found at: <https://regionalcouncils.ny.gov/content/long-island> or <https://regionalcouncils.ny.gov/content/long-island-priority-project-request-form-2017>.**

IV. Peconic Estuary Program Subwatershed Management Plans

PEP's Hornstein thanked the Committee members for their feedback on the PEP Subwatershed Plans produced by Horsley-Whitten. For those municipalities that have yet to review them, she asked the towns provide feedback on which projects are completed and which are priorities. Documents found here: <http://www.peconicestuary.org/projectdetails.php?pid=407>. Hornstein encouraged municipalities to consider them for funding allocations under the CFA grant and the Community Preservation Fund.

ACTION ITEMS:

- **Members to revisit the Horsley Whitten subwatershed management plans from 2013 and provide feedback to PEP on which projects are completed and which are priorities. Documents found here: <http://www.peconicestuary.org/projectdetails.php?pid=407>. Municipalities to consider the stormwater projects for funding allocations under the CFA grant and the Community Preservation Fund.**

Kindly note your calendars with the upcoming 2017 meeting dates. We meet the first Wednesday of each month at Cornell Cooperative Extension in Riverhead, unless otherwise noted:

Friday June 9th, July 12th, August 2nd, September 6th, October 4th, November 1st, December 6th