

Innovative and Alternative Onsite Wastewater Treatment Systems

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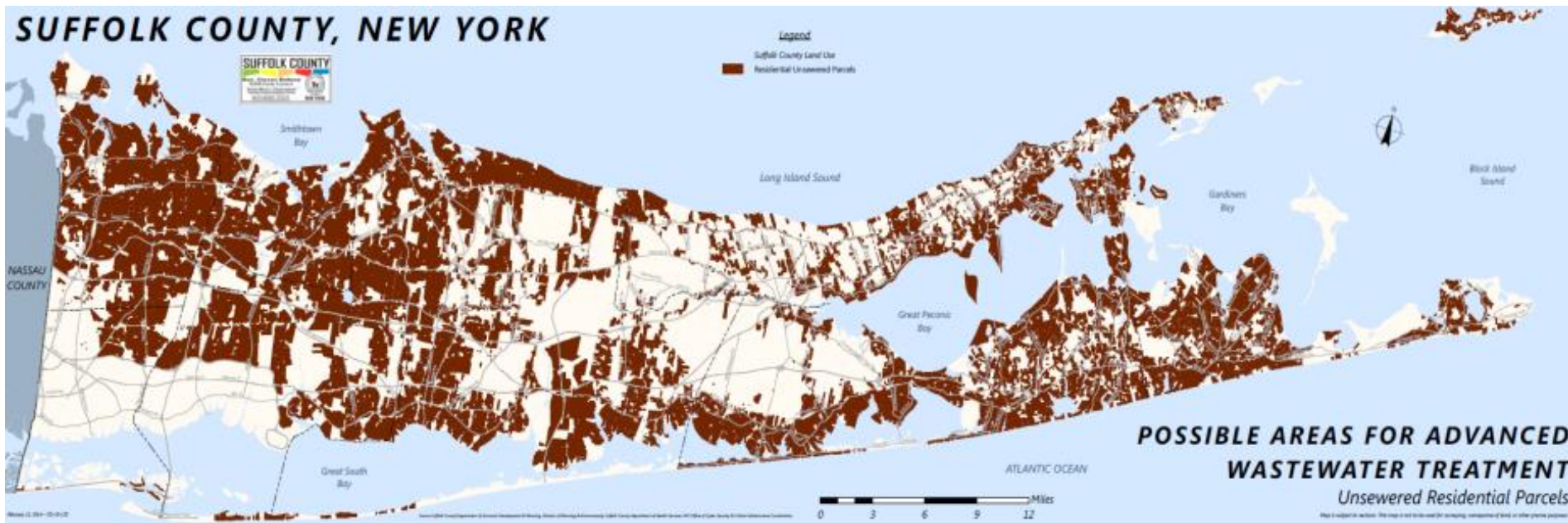
Suffolk County Department of Health Services

Division of Environmental Quality, Office of Ecology

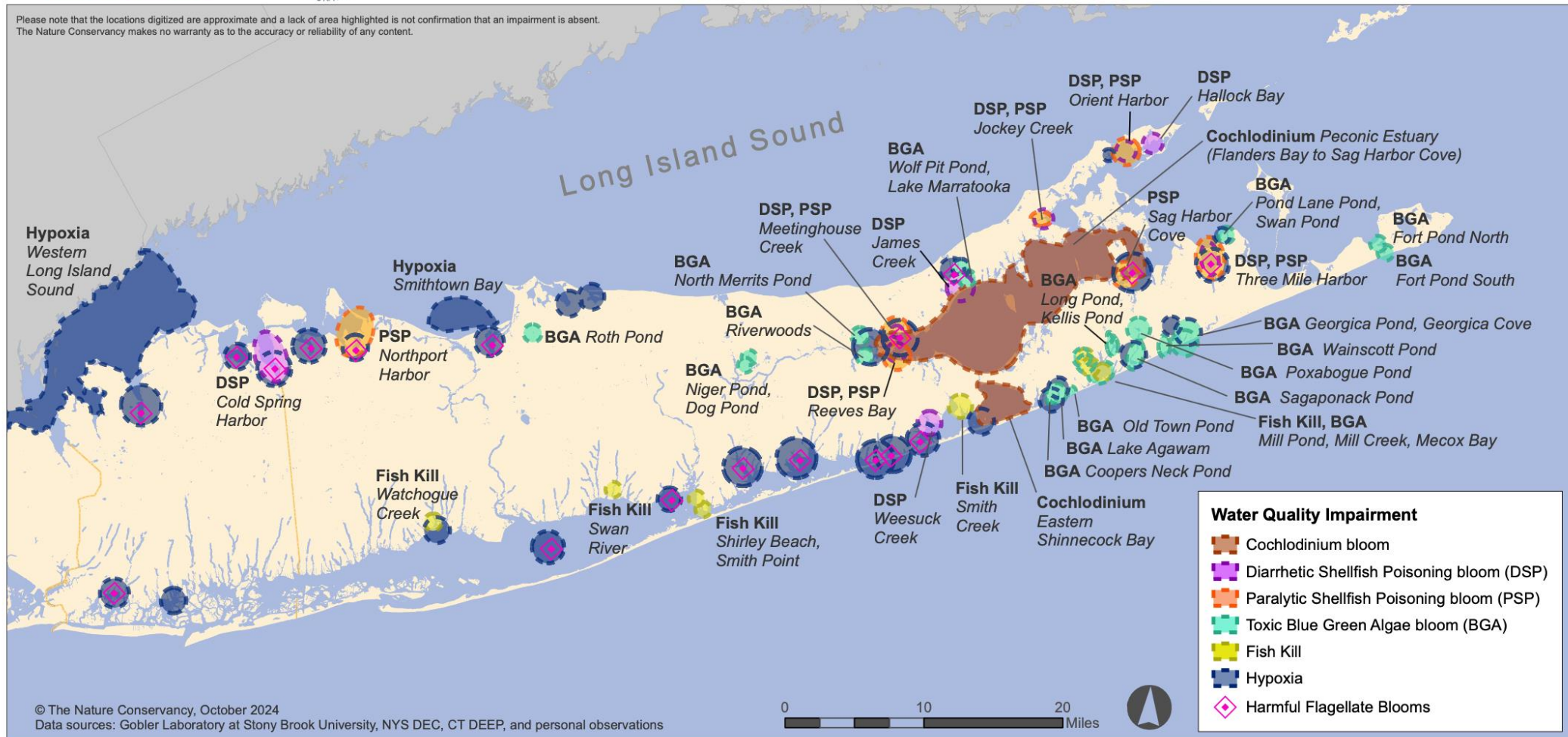


Suffolk County, NY

- Vulnerable Sole Source Aquifer – Public & Private Drinking Water Wells
- ~1.5 Million People – 74% of Parcels are Unsewered
- Approximately 380,000 Onsite Sewage Disposal Systems without Treatment
 - Approximately 250,000 pre-date 1973 Requirement for Septic Tank
- Surface Waters - Three Major Estuary Systems Deemed Impaired
 - HABs, Low DO, Shellfish Declines, Fish Kills, Beach Closures

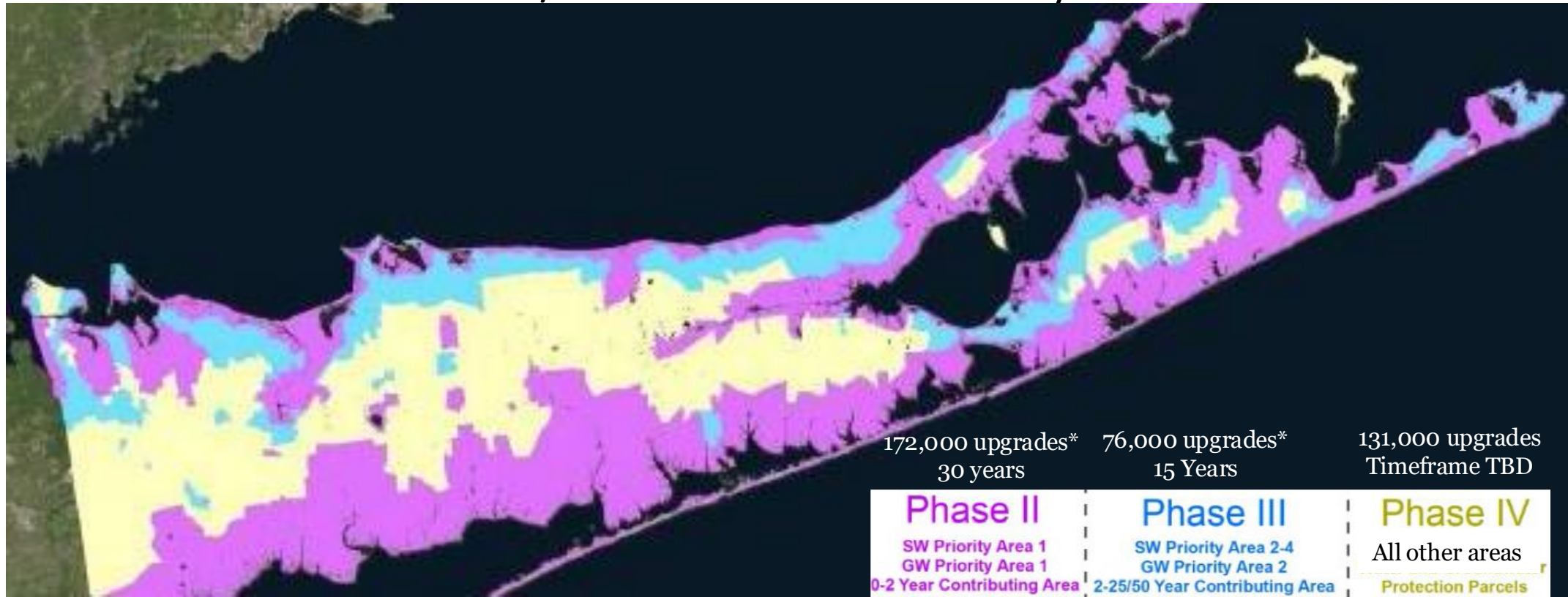


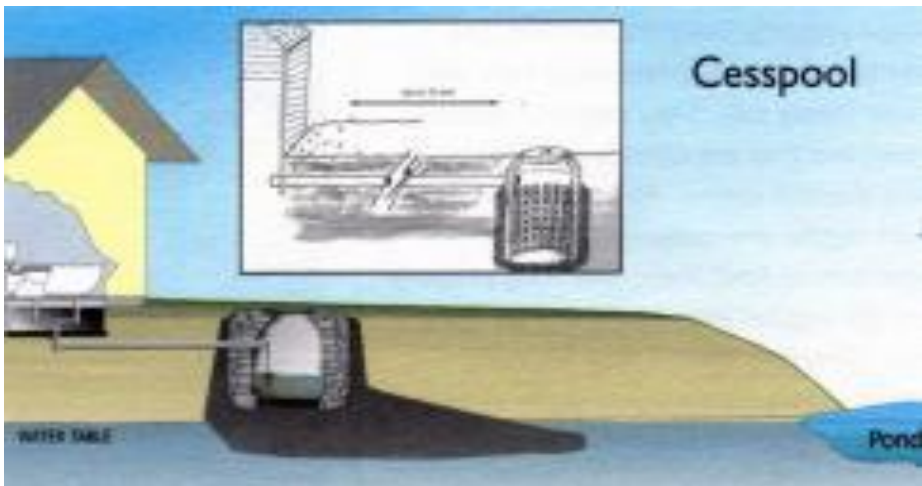
Surface Water Quality Impairments



What's Next for Suffolk County's Wastewater Management?

- On 11/5/2024, over 70% of Suffolk Voters Gave the Green Light to Modernize Suffolk's Wastewater Infrastructure
- A total of \$2.03 Billion expected to be available for onsite septic upgrades from the ¼% and the 1/8% sales tax fund over 30 years

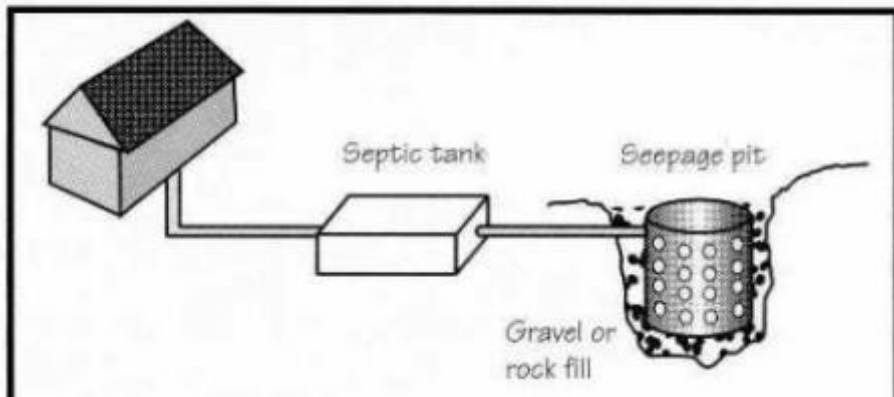




Cesspools

~ 250,000 in Suffolk County. Banned from new const. in 1973. Cesspools are little more than holes in the ground that discharge raw, untreated human waste and can contaminate surface and groundwater.

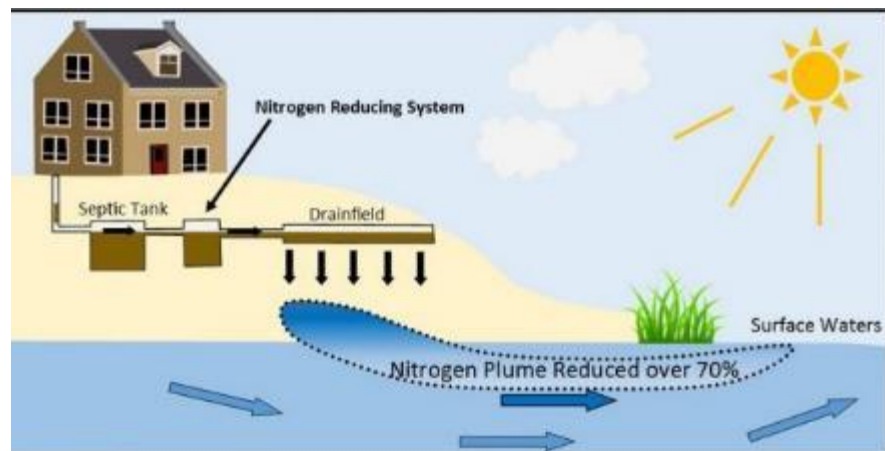
Since 7/1/2019 homeowners can no longer replace a cesspool with another cesspool, need a Conventional Septic at minimum.



Conventional Septic System

~ 110,000 in Suffolk County.

Consists of Septic Tank and Leaching Structure, required on new construction since 1973. This is the minimum code compliant system permitted to be installed for a replacement or retrofit beginning 7/1/19.



I/A OWTS Clean Water Septic

~ 6,500 + in Suffolk County.

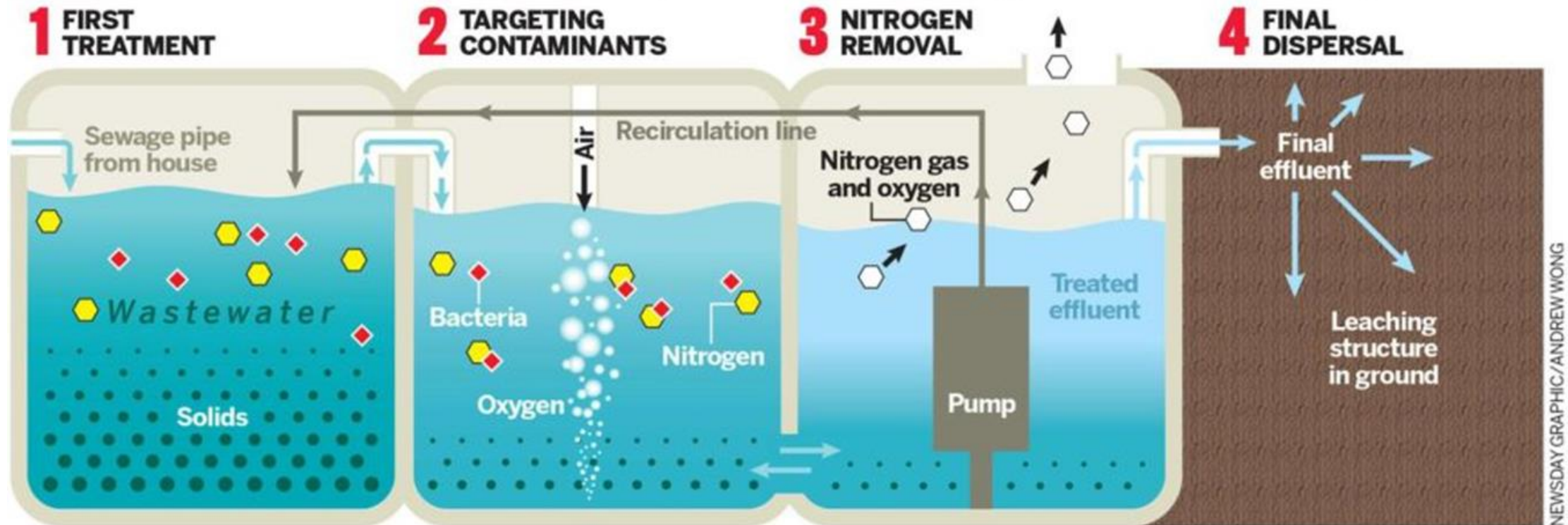
Advanced wastewater treatment systems that reduce BOD, TSS and remove up to 70% of Total Nitrogen prior to discharge.

Allowed on Voluntary basis in SC since 2016. Mandated for New Construction and Major Renovation as of 7/1/2021.

Sewering:
Large scale conveyance systems to a centralized wastewater treatment facility

Wastewater Treatment Technology

ADVANCED SEPTIC SYSTEM Many models exist. Here's how they generally work in reducing nitrogen in wastewater.



Wastewater enters the first chamber, where **solids** and sediment are allowed to settle. The water then moves on to the next stage.

Air is pumped in, feeding **oxygen** to "good" **bacteria** in the water so they can begin the process of converting **nitrogen** contaminants into nitrogen gas and oxygen.

A **pump** recirculates remaining solids and **treated effluent** to complete the process, resulting in **nitrogen gas** and **oxygen** being vented into the atmosphere.

The **final effluent**, which represents a 70% reduction in total nitrogen, is released into a **leaching structure** and dissipated into the ground.

NEWSDAY GRAPHIC / ANDREW WONG

I/A OWTS with General Use Approval and Provisional Approval



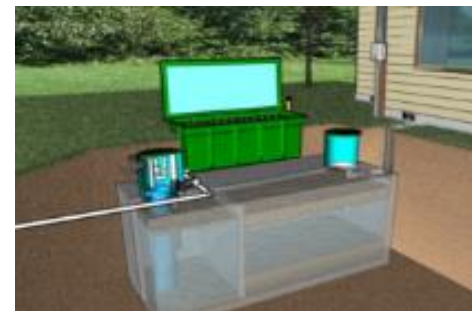
Hydro-Action



Fuji Clean



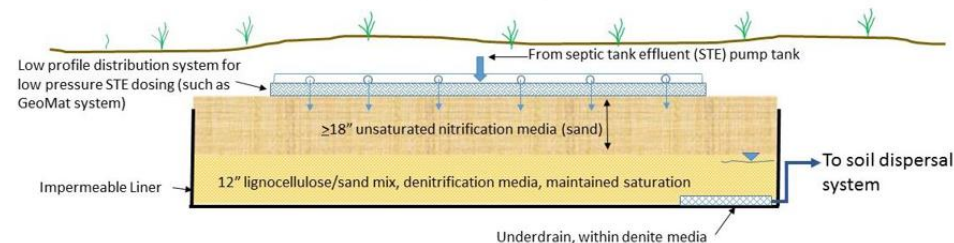
SeptiTech STAAR



Orengo Advantex AX-20



Norweco Hydro-Kinetic



**SBU Center for Clean Water Technology
Lined & Boxed
Nitrogen Reducing Biofilter (NRB)**

Other technologies approved for Pilot and Experimental Use in Suffolk County

What I/A OWTS Homeowners Should Know

- The **average** cost for installation of a nitrogen-removing I/A and leaching system and removal of existing system under the grant program is approximately
 - \$34,000 within the east end towns
 - \$28,500 within the west end towns
- The cost of engineering/design services and site restoration is separate. Costs will vary on a case-by-case basis based on site conditions (soil type, access, depth to groundwater, etc.)
- Yard Disturbance
- Covers to Grade
- Control Panels
- Annual Operation & Maintenance to inspect system components, replace filters, test alarms.
 - current average cost of an O&M contract renewal for 3 years is approximately \$1,500 (\$500/year)
- Electrical Costs
- Repair and Replacement Costs
- Pumping Costs



I/A OWTS Installation



Reclaim Our Water

I/A OWTS Installation



Reclaim Our Water

I/A OWTS Post-Installation



Reclaim Our Water

Control Panels & Air Vents



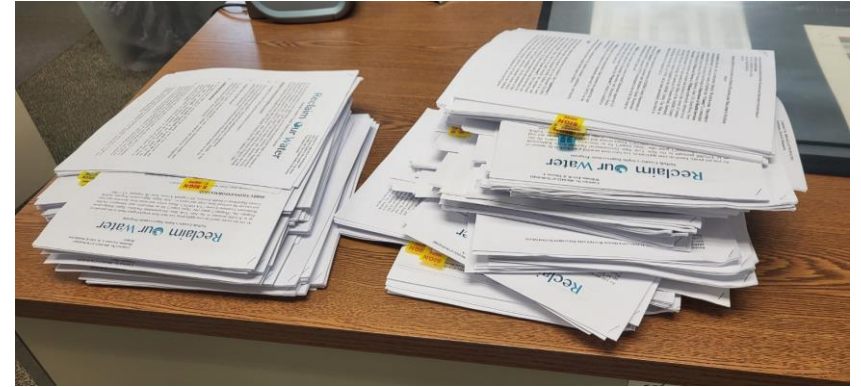
Grant Funding for Residential I/A OWTS

*\$25,000 - \$30,000 grant available to install an onsite
wastewater treatment system through grant application
to the Suffolk County Department of Health Services*

Suffolk County SIP & NY State Grants

- Suffolk County Septic Improvement Program (SIP)
 - **\$15,000** base grant
 - Additional \$5,000 for installation for LMI eligible applicants
- NY State Septic System Replacement Program (SSRP)
 - Up to **\$10,000** grant
- Town CPF Funds
 - Southampton, East Hampton & Shelter Island
- Low Interest Loan Program with CDCLI
 - Up to \$10,000 loan
- Grant Application Available Online: www.ReclaimOurWater.info

Grant Program Streamlining



- ✓ E-Sign Contracts are now in place
- ✓ Eliminated paper contracts & previous requirement for **66+** separate original signatures, initials and notarization
- ✓ Combined both County and State Grants into one contract
- ✓ Increased base grant amount to \$15,000
- ✓ Grant amendments available for pre-existing grant awardees increase grant amount by \$15,000
- ✓ Removed some documentation submission requirements
- ✓ Reducing waitlist for failure and non-failure applications
 - Still attempting to fill four open positions
 - Additional updates to online application to make applying easier for homeowners

Suffolk County SIP & NY State Grants

- Apply online at ReclaimOurWater.info
- Required documents include:
 - tax bill,
 - proof of system failure, if applicable, and
 - if applying for LMI, recent tax return
- If property is owned by Trust, LLC, or Corporation, additional documentation is required.
- Property cannot be in foreclosure or have tax liens.
- Grant Awardees must select a Vendor on the County's Approved List, established through a SOQ Process.
- Applicants assign their grant payment directly to the Vendor. Payments are then made by the County to the Vendor.
- County SIP is not designed as a reimbursement program. Applicants must apply for and receive a grant prior to installation of the I/A OWTS.
- Where an applicant is only applying for a NYS SSRP grant, State SSRP grants may be processed as a reimbursement to the homeowner.



SIP Grant Application Scoring

100 -	Catastrophic Failures, regardless of the property location
90 -	Non-Catastrophic Failures, regardless of the property location
80 -	Non-Failures, Priority Area 1
70 -	Non-Failures, Priority Area 2
60 -	Non-Failures, Non-Priority Area

- Non-Catastrophic Failure: An existing onsite sewage disposal system that has documented proof of:
 - having to be pumped two or more times a year,
 - wastewater backing up into the dwelling
 - wastewater rising to the surface of the ground over or near any part of the existing system, or
 - being a block cesspoolwithout evidence of an immediate public health threat, based on the information provided in the Grant Application.

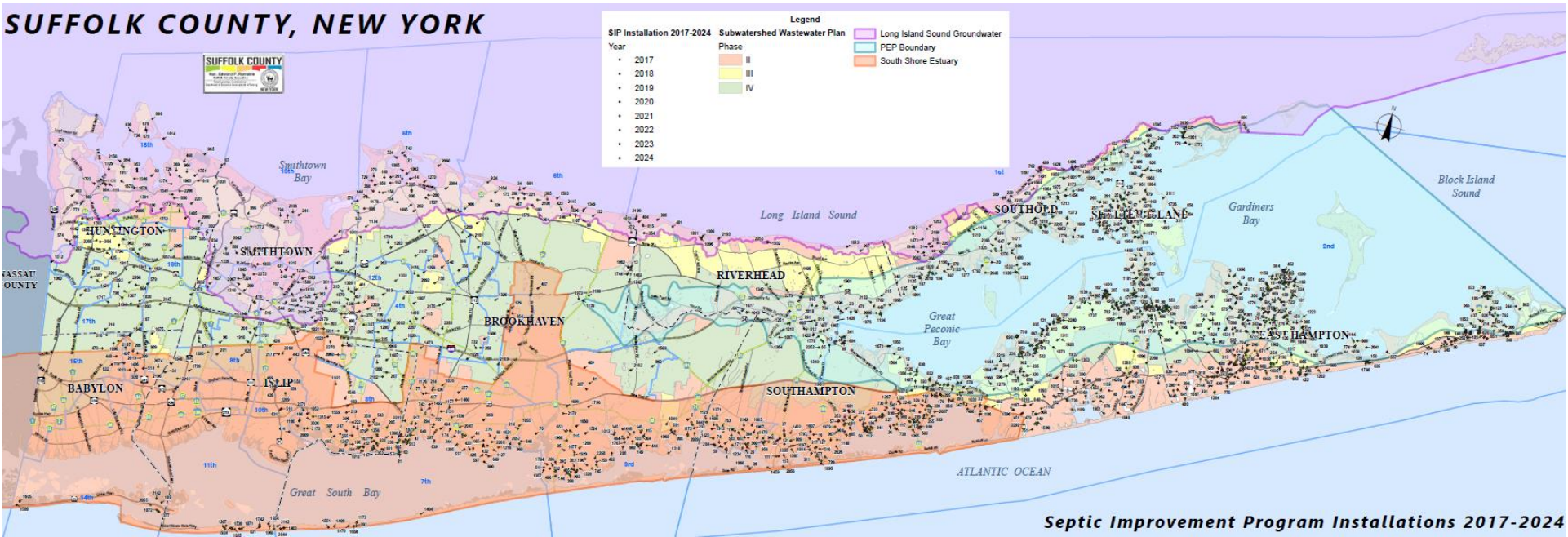
Grant Funded I/A OWTS Installations

Total of 2,575 + SIP & SSRP Grant Funded I/A OWTS Installations Completed & Paid Out

Year	Grant Funded I/A OWTS Installs Count
2017	8
2018	51
2019	257
2020	426
2021	294
2022	476
2023	460
2024	434
2025	169 +

Town	Grant Funded I/A OWTS Installs Count
Babylon	37
Brookhaven	370
East Hampton	683
Huntington	124
Islip	156
Riverhead	47
Shelter Island	131
Smithtown	61
Southampton	793
Southold	173

Reclaim Our Water





Questions?

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Suffolk County Department of Health Services
Office of Ecology

SepticDemo@SuffolkCountyNY.gov

631-852-5811

www.ReclaimOurWater.info

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