



# Mitigation of Nitrogen Pollution in Southold

July 28, 2022

Southold-Peconic Civic Association Meeting  
Peconic Community Center



## Agenda

### Introductions

**Nitrogen Pollution and Mitigation Projects,**  
*Valerie Virgona, PEP Outreach Coordinator*

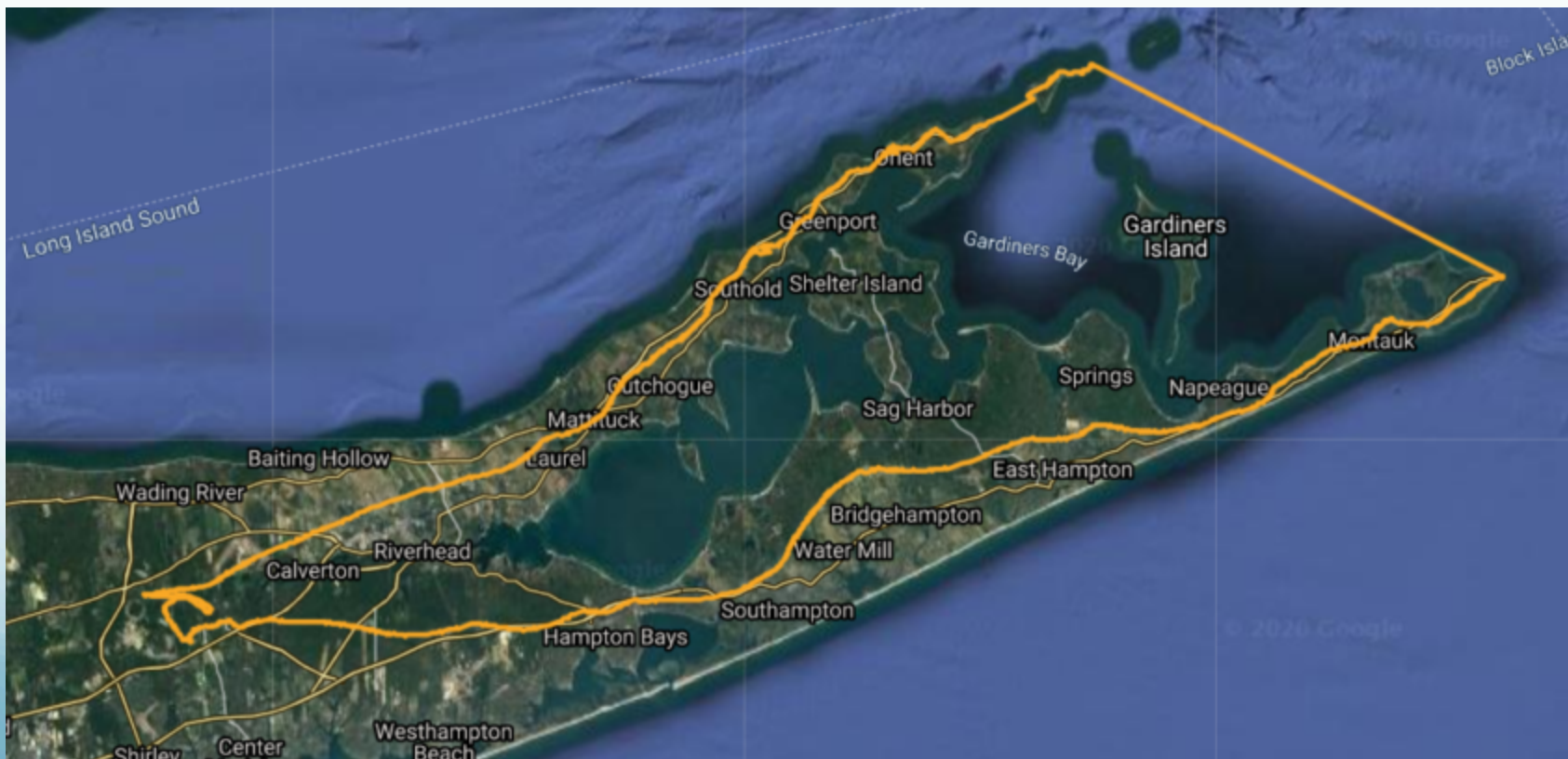
**I/A Septic Systems and Financial Incentives**  
*Julia Priolo, Principal Environmental Analyst*

### Questions and Discussion



# Peconic Estuary Partnership

- EPA designated National Estuary Program
- PEP works to restore clean water, protect and enhance vibrant ecosystems, and communicate sound science for nature-based coastal planning in the Peconic Estuary and its watershed.







# Water Quality Monitoring & Research

- **Nutrients, Pathogens, Toxics, Algal Blooms**
- **Atmospheric Deposition: Nitrogen and Mercury**
- **Eelgrass, River Herring, Wetlands**







# Sources of Excessive Nutrients and Pathogens



Agriculture



Cesspools



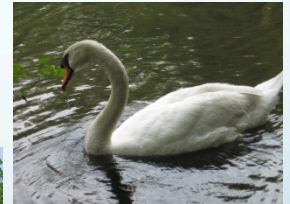
Septic Systems



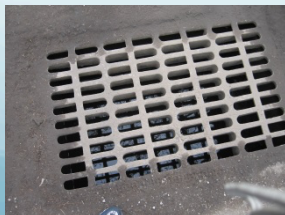
Residential Fertilizer



Animal Waste



Sewage Treatment Plants



Stormwater



# Impact: Loss of Critical Habitat



Source: Gobler, 2016

- Salt Marsh is critical for a wide variety of marine and avian life
- Salt marsh filters terrestrial pollutants
- Increased Nitrogen suppresses roots and accelerates salt marsh disappearance on Long Island

- Eel grass is critical for marine life
- Nitrogen accelerates the loss of eel grass habitat on Long Island







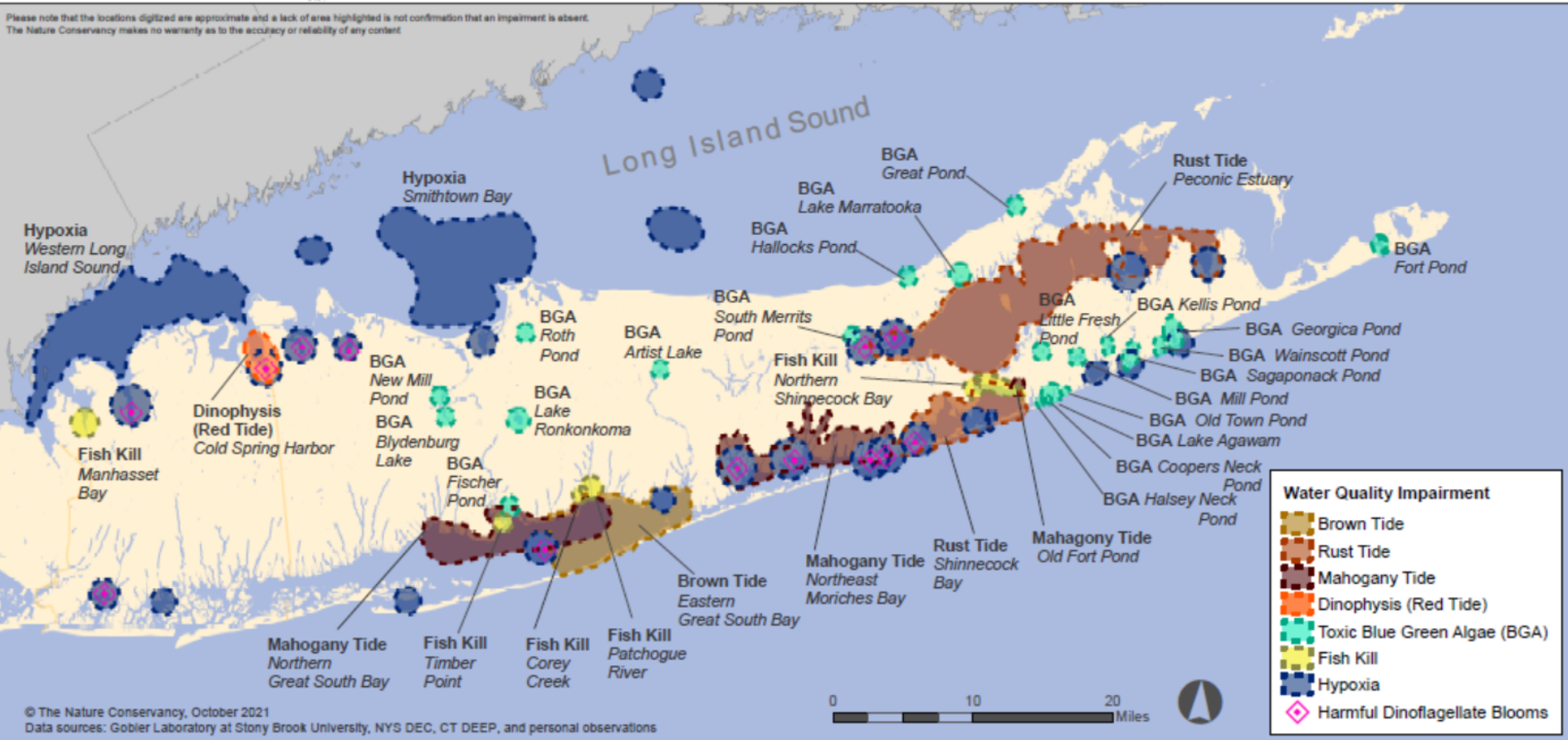
# Impact: Harmful Algal Blooms



## Long Island Water Quality Impairments Summer 2021



Please note that the locations digitized are approximate and a lack of area highlighted is not confirmation that an impairment is absent. The Nature Conservancy makes no warranty as to the accuracy or reliability of any content.

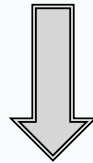
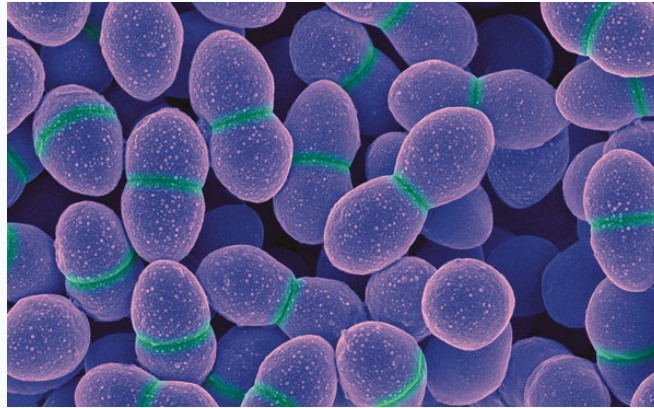


© The Nature Conservancy, October 2021  
Data sources: Gobler Laboratory at Stony Brook University, NYS DEC, CT DEEP, and personal observations





# Impact: Health Hazard



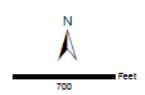


# Goose Creek Subwatershed



Source: Esri, DigitalGlobe, GeoEye, IGN, GeoEye, USDA, USGS, AeroGRID, IGN, Esri, Swisstopo, and the GIS User Community

- Legend**
- Goose Creek Subwatershed
  - Parcels
  - Retrofit Sites
  - Retrofit Footprint
  - Retrofit Drainage Area
  - Retrofit Impervious
  - Hot Spots
  - Neighborhoods
  - Hydrography
  - Southold 10ft. Contours
  - Southold 5ft. Contours



**Horsley Witten Group**  
Sustainable Environmental Solutions  
400 West 10th Street  
New York, NY 10011-3208

**Restoration Opportunities  
Goose Creek  
Subwatershed  
Southold, NY**

Date: 7/1/2013 Figure 4.1



# Goose Creek Watershed

## NYSDEC Priority Waterbodies List

**New York State**

**Final 2018 Section 303(d) List**

**June 2020**

Water Index Number	Waterbody Name (WI/PWL ID)	County	Type	Class	Cause/Pollutant	Suspected Source	Year
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**Part 2c - Multiple Segment/Categorical Waterbody Segments Impaired due to Shellfishing Restrictions**

Might be addressed by a waterbody specific TMDL or a pollutant/source specific TMDL or other strategy to attain water quality standards.

(MW6.1b) GB-SIS- 84-P423	Goose Creek (1701-0236) <sup>7</sup>	Suffolk	Estuary	SA	Fecal Coliform	Unknown	2018
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# Goose Creek Subwatershed Stormwater and Direct Discharge



## Pollution in Stormwater

- Nutrients
- Bacteria from animal wastes and illicit connections to sewerage systems
- Oil and grease from automobiles
- Sediment from construction activities
- Careless application of pesticides, herbicides and fertilizers
- Litter



# Goose Creek Stormwater Management Project





# Goose Creek Stormwater Management Project

- Collaboration between the Town of Southold and the Peconic Estuary Partnership
- 60% of cost funded by Town of Southold
- 40% of cost funded by PEP EPA BIL Funds
- Town of Southold will be constructing this project
- 7 total outfalls will be eliminated





# Homeowner Rewards Program

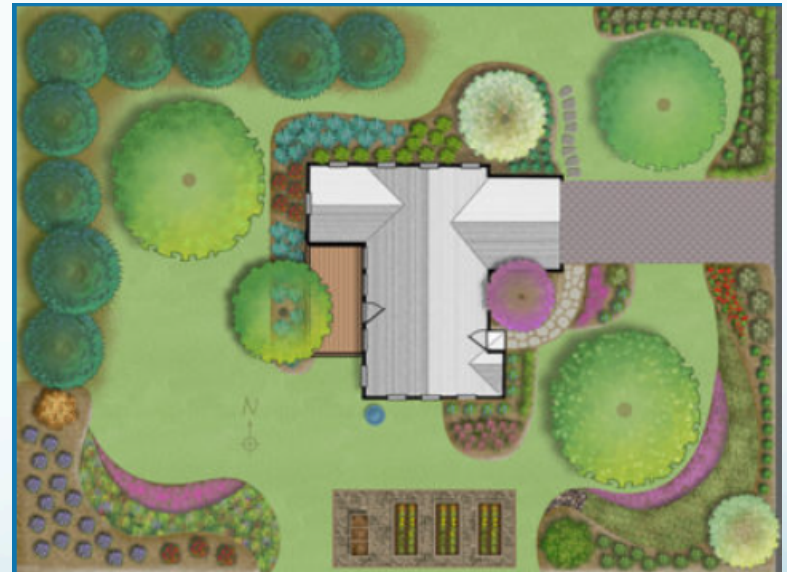
- Incentivizes Homeowners to incorporate Rain Gardens, Rain Barrels, and Native Plants on their property.
- Homeowners can earn up to \$500 to offset the expense of installing green infrastructure on their properties.





# Homeowner Rewards Program

- For more information, visit our website:  
<https://www.peconicestuary.org/what-you-can-do/homeowner-rewards-program/>
- PEP Interactive Yard Tool
- Native Plant Species Database
- Native Plant Garden, Rain Garden, and Rain Barrel Installation Instructions
- Fertilizer Recommendations
- Homeowner Rewards Program Application!



# **SUFFOLK COUNTY RECLAIM OUR WATER INITIATIVE**



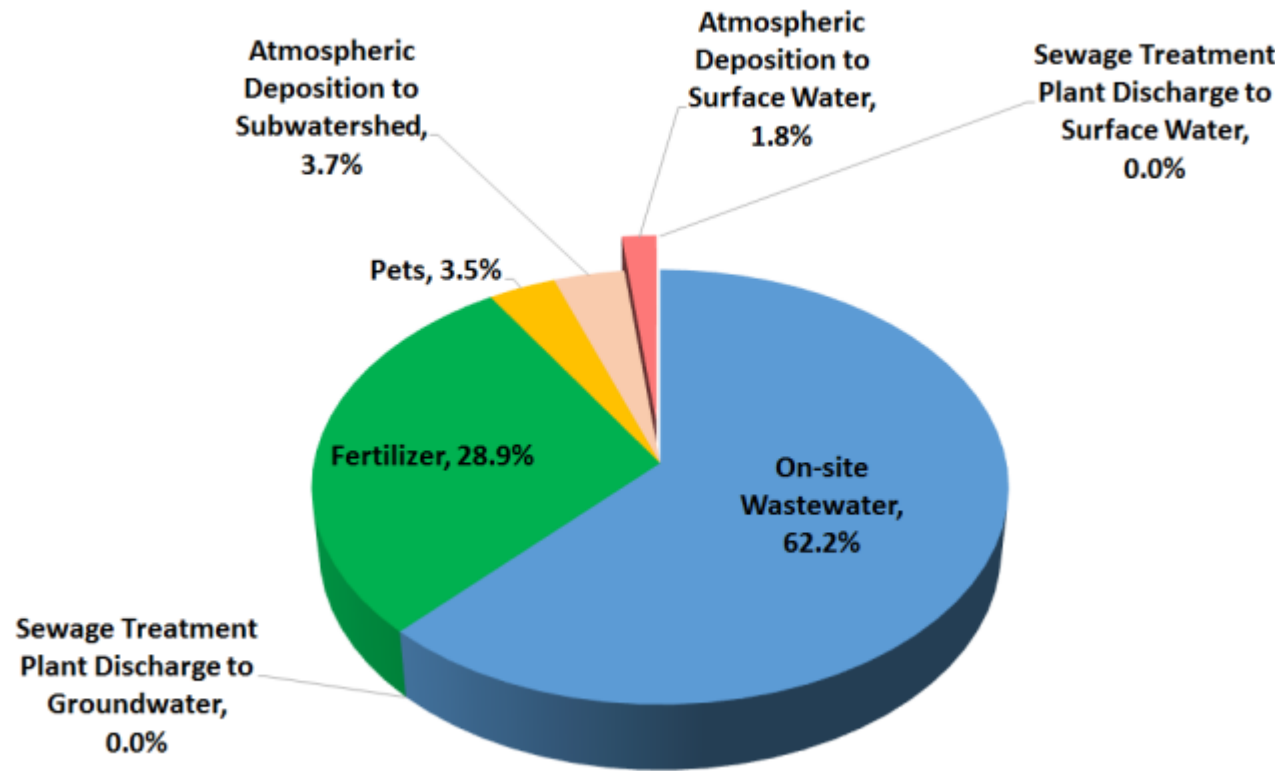
**JULY 28, 2022**

**JULIA PRIOLO, PRINCIPAL ENVIRONMENTAL ANALYST  
SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES**

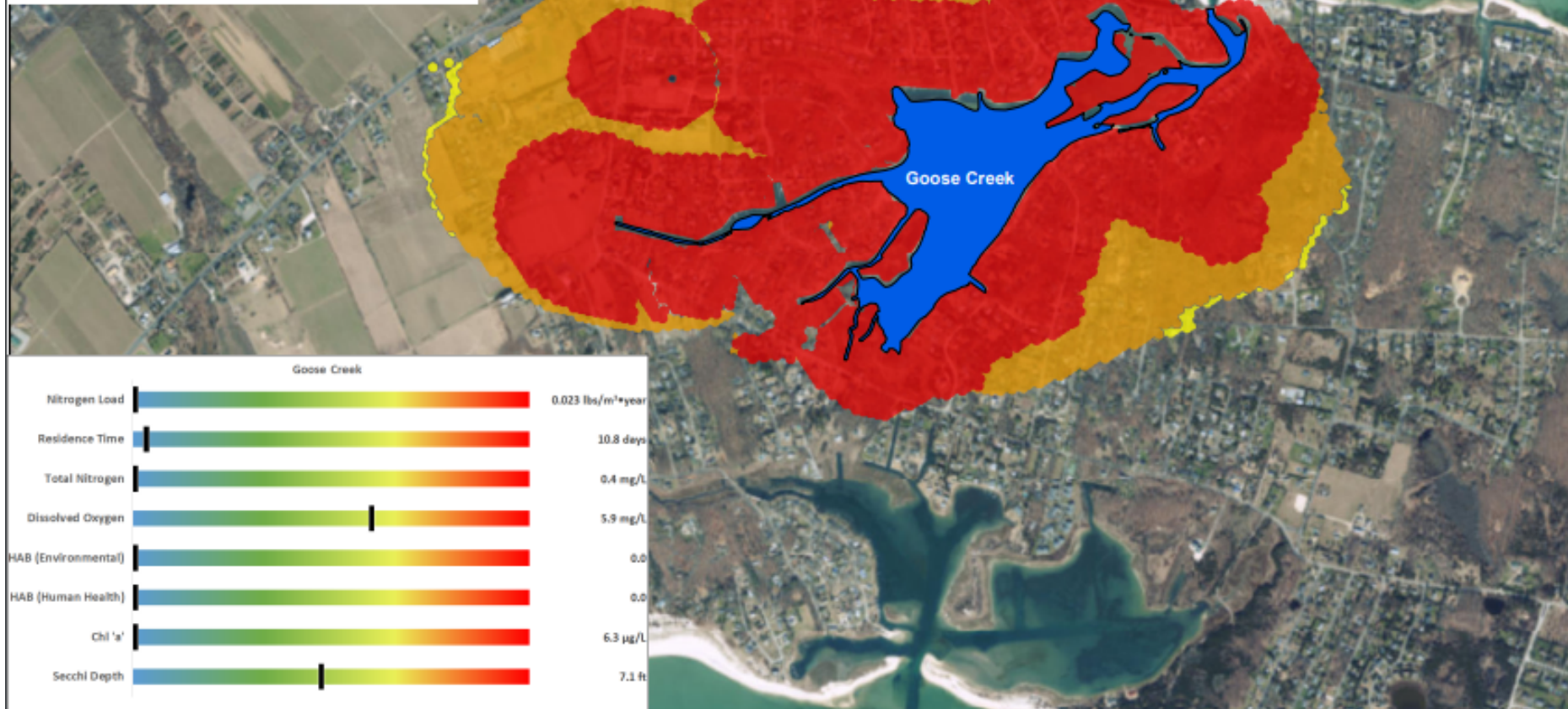
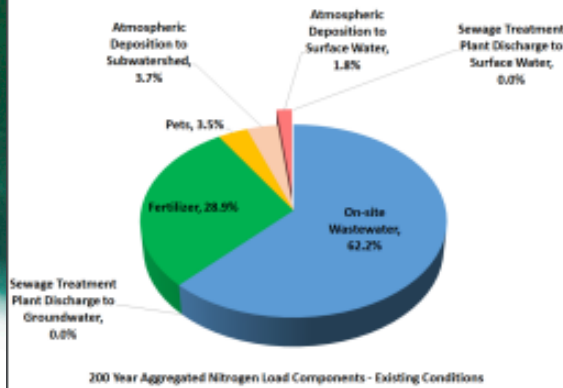
**[JULIA.PRIOLO@SUFFOLKCOUNTYNY.GOV](mailto:JULIA.PRIOLO@SUFFOLKCOUNTYNY.GOV)**



# Goose Creek



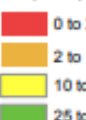
200 Year Aggregated Nitrogen Load Components - Existing Conditions



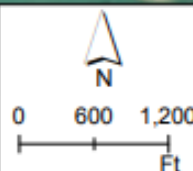
**Management Area/Nitrogen Reduction Goal**

9 33%

**Travel Time (Years)**



**Subwatershed is Well Characterized**

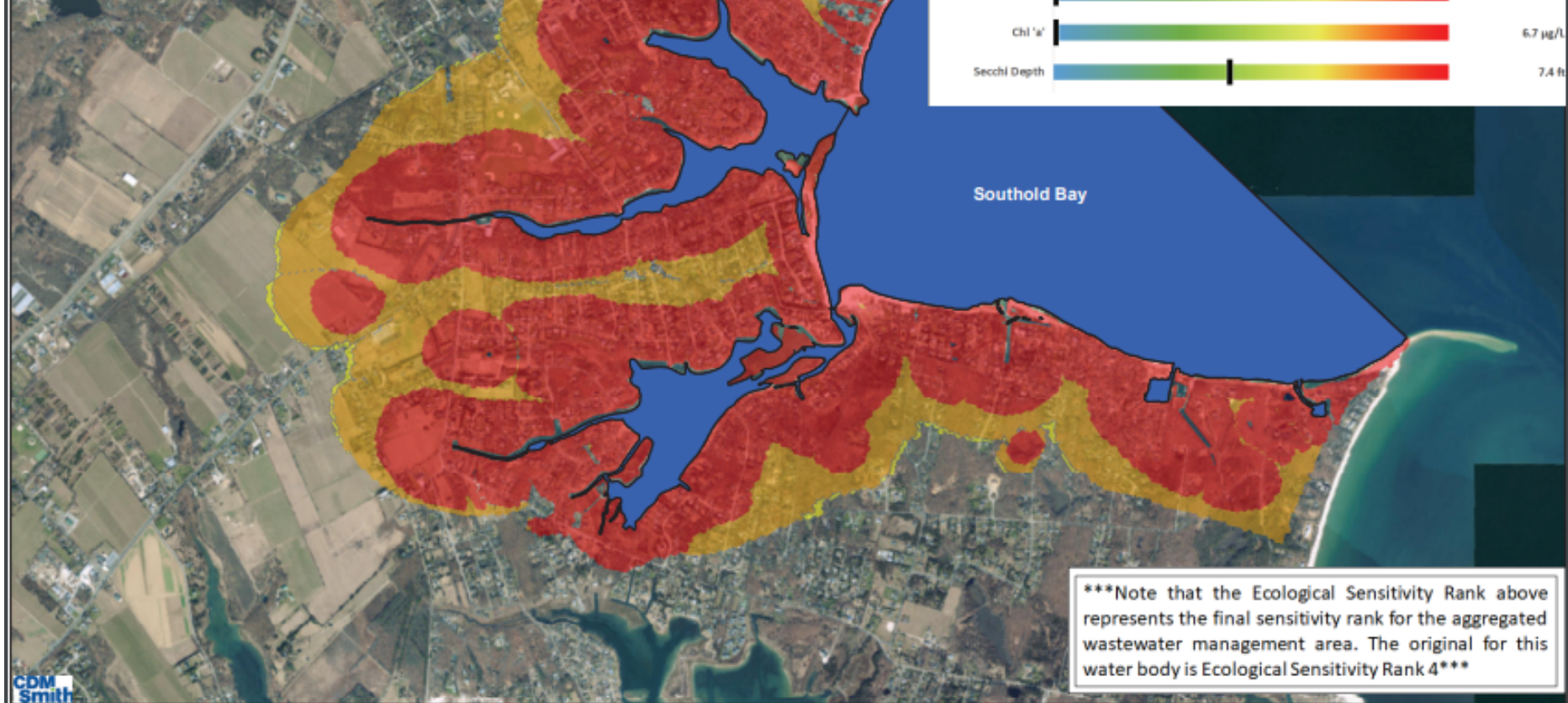
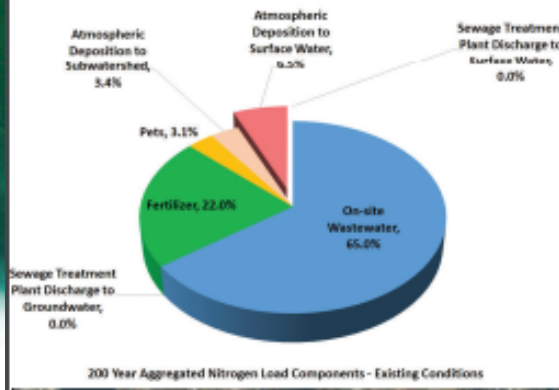


**Wastewater Management and Water Quality Characterization 25 Year Contributing Area**  
1701-0236  
**Goose Creek**



# Ecological Sensitivity Rank

3



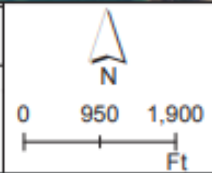
\*\*\*Note that the Ecological Sensitivity Rank above represents the final sensitivity rank for the aggregated wastewater management area. The original for this water body is Ecological Sensitivity Rank 4\*\*\*



**Management Area/Nitrogen Reduction Goal**  
9 33%

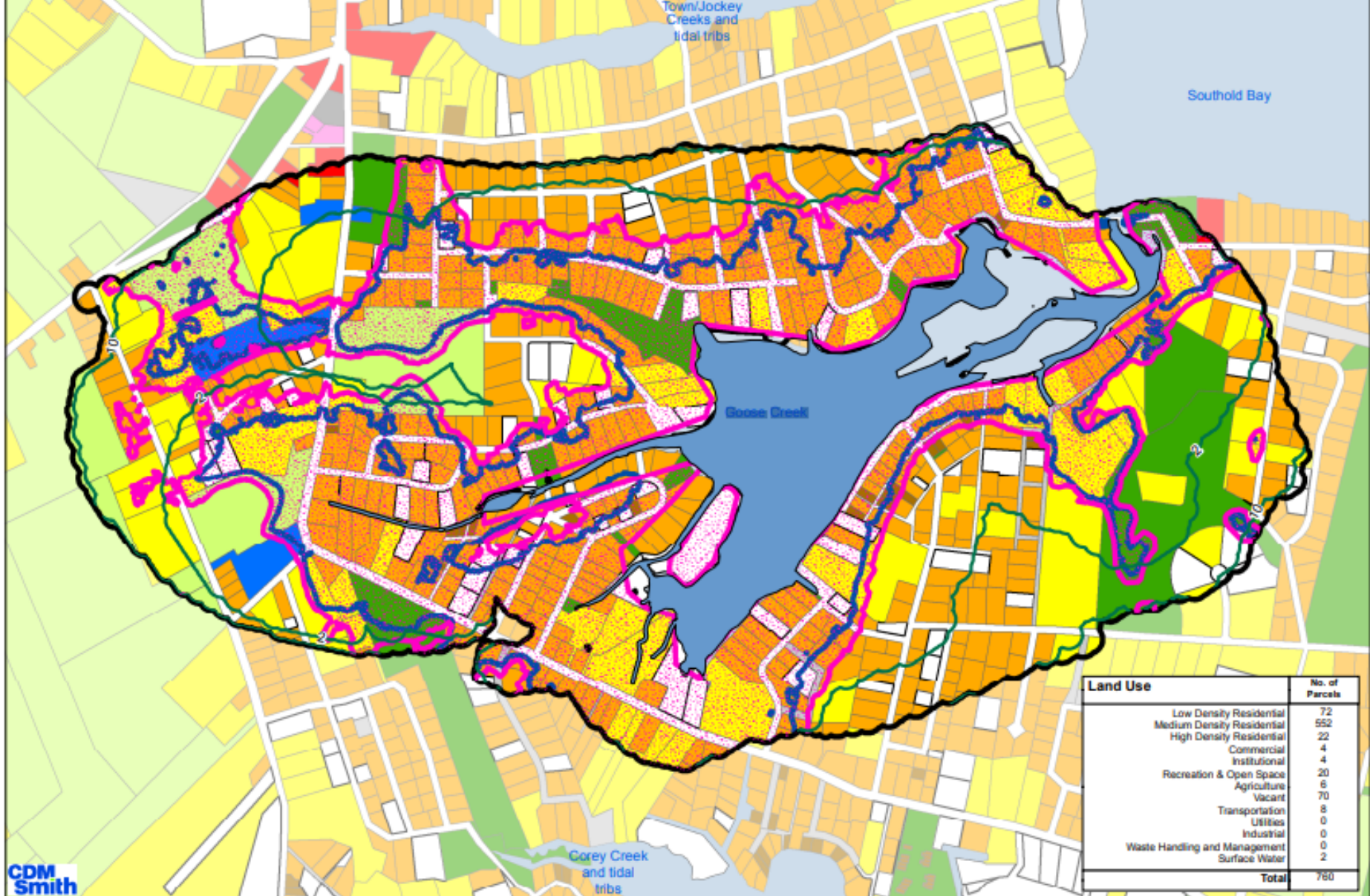
**Travel Time (Years)**  
 0 to 2 (Red)  
 2 to 10 (Orange)  
 10 to 25 (Yellow)  
 25 to 50 (Green)

**Subwatershed is Well Characterized**  
 Waterbody (Blue)  
 Sewered Area (White)  
 Well Contributing Area (Blue with diagonal lines)



**Wastewater Management and Water Quality Characterization**  
 25 Year Contributing Area  
 1701-0044  
 Southold Bay



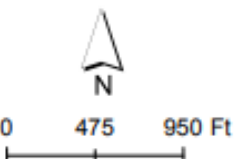


Land Use	No. of Parcels
Low Density Residential	72
Medium Density Residential	552
High Density Residential	22
Commercial	4
Institutional	4
Recreation & Open Space	20
Agriculture	6
Vacant	70
Transportation	8
Utilities	0
Industrial	0
Waste Handling and Management	0
Surface Water	2
<b>Total</b>	<b>760</b>



- Land Use (Suffolk County Department of Planning and Economic Development Land Use, 2016)**
- Low Density Residential
  - Medium Density Residential
  - High Density Residential
  - Commercial
  - Industrial
  - Institutional
  - Recreation and Open Space
  - Agricultural
  - Vacant
  - Transportation
  - Utilities
  - Waste Handling and Management

- 25 year Groundwater Contributing Area
  - 2/10 year Groundwater Contributing Area
- Depth to Water (ft)**
- Less than or Equal to 10 feet
  - SLOSH Zones



**Subwatershed Planning Criteria**  
**1701-0236**  
**Goose Creek**

# I/A OWTS IN SUFFOLK COUNTY INNOVATION & ALTERNATIVE ONSITE WASTEWATER TREATMENT SYSTEMS





# I/A OWTS WITH GENERAL USE APPROVAL



## Hydro-Action

Date: December, 2021  
Provisional Average:  
11.1 mg/l TN



## Fuji Clean System

Date: February, 2022  
Provisional Average:  
10.2 mg/l TN





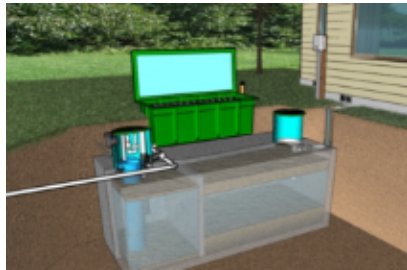
# I/A OWTS with Provisional Use Approval



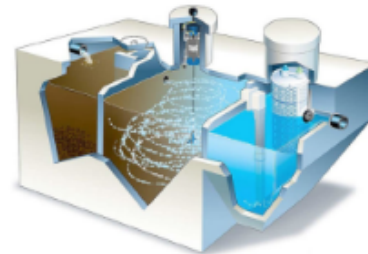
SeptiTech STAAR



Norweco HydroKinetic



Orengo Advantex AX-20



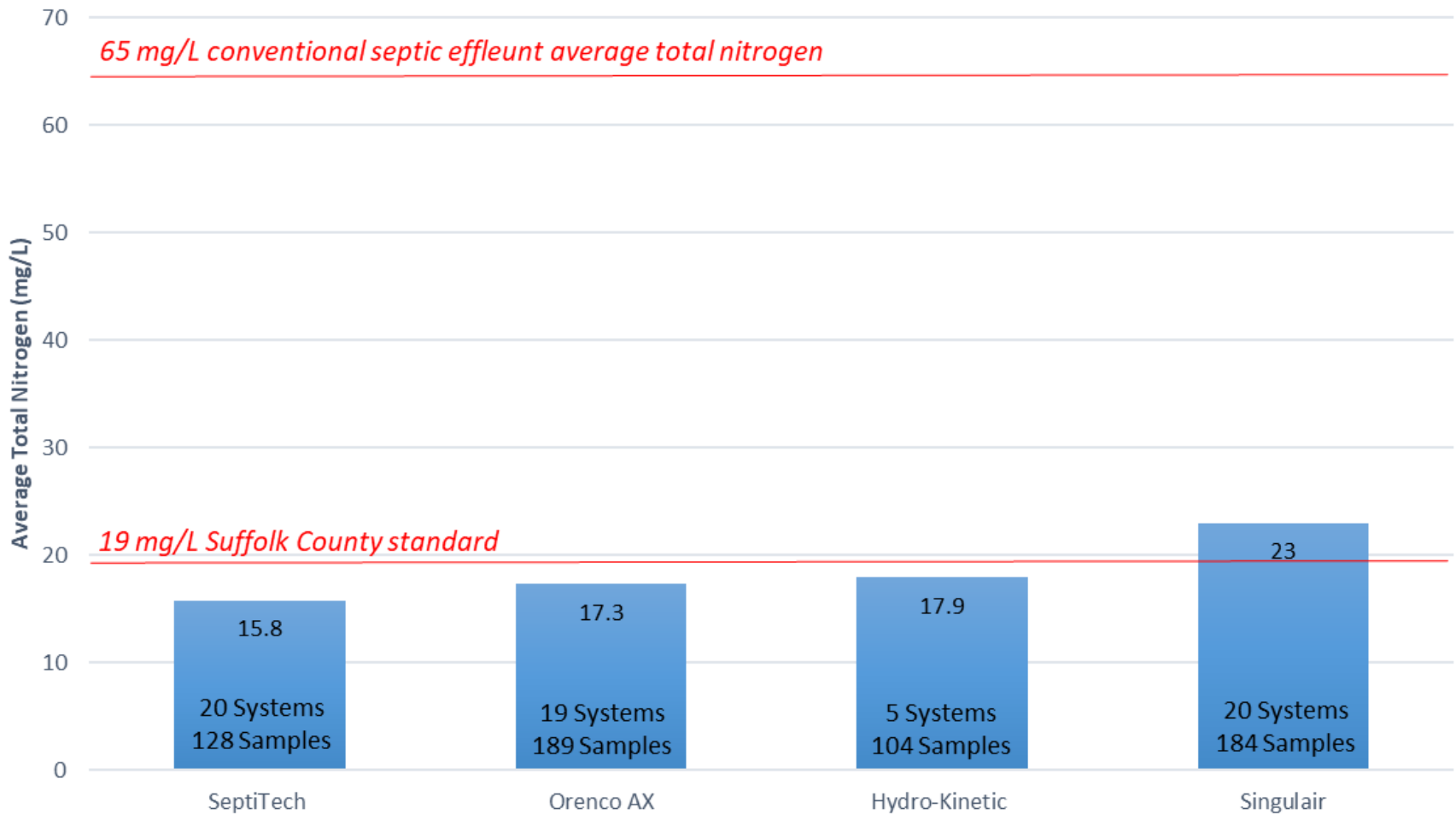
Norweco Singlair TNT

Additional I/A OWTS technologies permitted for use in Suffolk County under Experimental and Pilot Approval

<https://www.reclaimourwater.info/Regulatory.aspx>



## Cumulative Bi-Monthly Sampling Results For Provisionally Approved I/A OWTS Technologies







# I/A OWTS INSTALLATION







# I/A OWTS INSTALLATION











# HYDRO-ACTION







# HYDRO-ACTION







# FUJICLEAN





FUJICLEAN







# CONTROL PANELS & AIR VENTS



# SUFFOLK COUNTY SIP & NY STATE GRANTS



- Suffolk County Septic Improvement Program (SIP)
  - \$10,000 base grant
  - Add'l \$5,000 for pressurized shallow drainfield leaching system
  - Add'l \$5,000 for installation for LMI eligible applicants
  - Potential add'l \$5,000 for design services for LMI eligible applicants
- NY State Septic System Replacement Program (SSRP)
  - Up to \$10,000 grant
- Low Interest Loan Program with CDCLI
  - Up to \$10,000 loan
- Town CPF Funds
  - Southampton, East Hampton & Shelter Island
- Grant funding enables Suffolk County to implement upgrades in accordance with the timeline in the Subwatersheds Wastewater Plan.



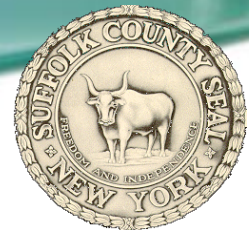


# SUFFOLK COUNTY SEPTIC IMPROVEMENT PROGRAM (SIP) IMPORTANT PROGRAM DETAILS


- County SIP is not designed as a reimbursement program. Applicants must apply for a grant prior to installation of the I/A OWTS.
- Applicants must select a Vendor on the County's Approved List, established through a SOQ Process.
- Applicants assign their grant payment directly to the Vendor for County. Payments are then made by the County to the Vendor.
- State SSRP grants may be processed as a reimbursement. Where an applicant is only applying for a State SSRP grant, Vendor is not required to be on County List. For most applications, we couple County and State grants so applications utilizing both funding sources would need to use a contractor on our SOQ List.
- Grants and Reimbursements may be subject to federal and/or state taxes. Applicants should consult their own tax, legal and accounting advisor(s) regarding tax implications.
- Audit and Control will not process payments unless there is a W-9 from the applicant on file.
- If property is owned by Trust, LLC, or Corporation, additional documentation is required.
- Taxability of Grants







# Approved I/A OWTS Installer List for SIP

		<b>Suffolk County NY - Septic Improvement Program - 4 Bedroom Quote List</b> <b>I/A OWTS Vendor List Contact Information</b>	
Vendor	Contact Information		
A&A Sewer and Drain Maintenance Inc.	<a href="mailto:aasewerdrain@gmail.com">aasewerdrain@gmail.com</a>	631-849-1599	
Beltran Cesspools	<a href="mailto:beltrancespools@gmail.com">beltrancespools@gmail.com</a>	631-582-0222	
Brian V. Klug, Landscaper, Inc.	<a href="mailto:brianvan@kluglandscaper.com">brianvan@kluglandscaper.com</a>	631-325-1208	
Cardo Site Development, Inc.	<a href="mailto:cardosite@yahoo.com">cardosite@yahoo.com</a>	631-653-4377	
Clear River Environmental	<a href="mailto:Dwarren@clearriver.us">Dwarren@clearriver.us</a>	Eastern Suffolk: 631-298-7749 Western Suffolk: 631-467-5447	
CMM Sitework, Inc.	<a href="mailto:info@cmmsitework.com">info@cmmsitework.com</a>	631-286-3650	
Direct Drainage	<a href="mailto:DirectDrainage@aol.com">DirectDrainage@aol.com</a>	631-472-0677	
Diversified Services of Water Mill, Inc.	<a href="mailto:office@diversifiedli.com">office@diversifiedli.com</a>	631-324-6933	
East End Excavating Corp.	<a href="mailto:eastendexcavating@gmail.com">eastendexcavating@gmail.com</a>	631-324-1718	
Eastern Site Development	<a href="mailto:info@easternsitedevelopment.com">info@easternsitedevelopment.com</a>	631-209-4240	
Excav Services, Inc.	<a href="mailto:brandon@excavservices.com">brandon@excavservices.com</a>	631-687-9507	
Guillo Contracting Corp.	<a href="mailto:nicole@guillocontracting.com">nicole@guillocontracting.com</a>	631-727-5702	
J&C Contracting of East Hampton Inc.	<a href="mailto:carlopez@optonline.net">carlopez@optonline.net</a>	516-885-0400	
John Willis Co., Inc.	<a href="mailto:johnwilliscesspool@gmail.com">johnwilliscesspool@gmail.com</a>	631-758-6338	
Ken Rousell, Inc.	<a href="mailto:kristin@kenrousellinc.com">kristin@kenrousellinc.com</a>	631-288-2545	
Micro Earth Moving Inc.	<a href="mailto:microearthmoving@yahoo.com">microearthmoving@yahoo.com</a>	631-725-1236	
Noyack Trucking & Excavation LLC	<a href="mailto:heather@noyackte.com">heather@noyackte.com</a>	631-204-9367	
Quakenbush Cesspools	<a href="mailto:QuackCesspools@gmail.com">QuackCesspools@gmail.com</a>	631-907-4426	
Roman Stone Systems LLC	<a href="mailto:tmontalbine@romanstonesystems.com">tmontalbine@romanstonesystems.com</a>	631-667-0566 Ext.114	
S.L. Worby & Son, Inc.	<a href="mailto:cworby@optonline.net">cworby@optonline.net</a>	631-653-9300	
Shelter Island Sand, Gravel & Contracting Inc.	<a href="mailto:sisandgravel@gmail.com">sisandgravel@gmail.com</a>	631-749-1040	
South Fork Septic	<a href="mailto:john@southforkseptic.com">john@southforkseptic.com</a>	631-283-0333	
SYP Industries	<a href="mailto:sypindustries@gmail.com">sypindustries@gmail.com</a>	631-924-1703	



# SUFFOLK COUNTY SIP & NY STATE SSRP HISTORY

- Suffolk County SIP Implemented July 2017; NYS SSRP Began October 2018
- Suffolk County Invested \$21,700,000.00 in Grant Funding
  - Plus Additional \$4,500,000.00 in Grant Funding recently awarded to the County SIP Program
- New York State Invested \$20,050,000.00 in Grant Funding in Suffolk County
  - In response to request for 3<sup>rd</sup> disbursement of funds, on 7/7/22 Governor Hochul Announced an Additional \$20 Million towards the NYS SSRP Grant Funding in Suffolk County
- Grant funding\* enables Suffolk County to implement upgrades in accordance with Subwatersheds Wastewater Plan, prior to the establishment of a Countywide Wastewater Management District and Countywide Water Quality Protection Fund



# Septic Improvement Program Update

- As of July, 2022:
  - 3,444 – Applications submitted through the ROW website
  - 1,910 – Total County SIP Grants Issued
    - 600 County SIP Grants Currently Active
  - 1,949 – Total NYS SSRP Grants Issued
    - 700 NYS SSRP Grants Currently Active
  - 1,158 Grant Funded I/A OWTS Installations
  - \$11.5M **County SIP** Funds Paid
    - Over \$20M Allocated to Grant Awardees
  - \$10.9M **NYS SSRP** Funds Paid
    - Over \$17.9M Allocated to Grant Awardees

<u>Average Applications Received per Month</u>
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2017: 30
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2018: 17
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2019: 70
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2020: 77
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2021: 74
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2022: 77
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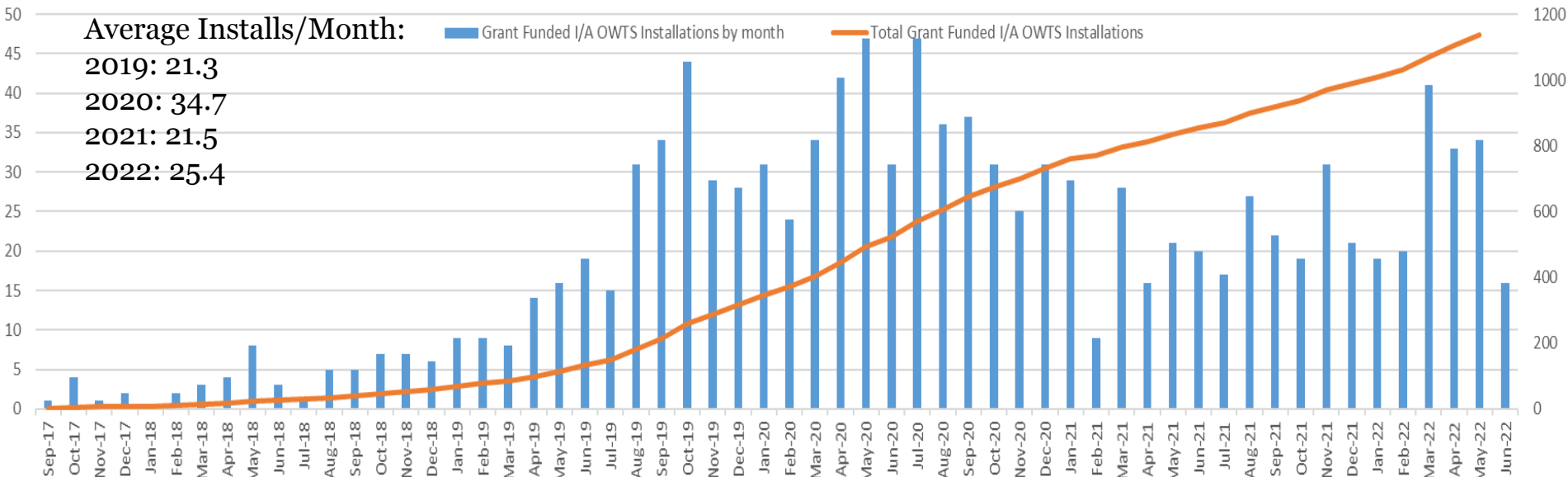


# SUFFOLK COUNTY SIP & NY STATE SSRP - INSTALLATIONS

Year	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Year Total
2017	-	-	-	-	-	-	-	-	1	4	1	2	8
2018	0	2	3	4	8	3	1	5	5	7	7	6	51
2019	9	9	8	14	16	19	15	31	34	44	29	28	256
2020	31	24	34	42	47	31	47	36	37	31	25	31	416
2021	29	9	28	16	21	20	17	27	22	19	31	21	260
2022	19	20	41	33	34	16	4						167

**Total of 1,158 SIP & SSRP Funded I/A OWTS Installations as of 7/21/2022**

Grant Funded I/A OWTS Installations



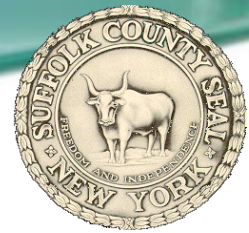




# I/A OWTS SOUTHOLD TOWN

- 256 County SIP and NYS SSRP Grant Applications
- 134 County SIP and NYS SSRP Grants Issued
- 70 County SIP and NYS SSRP Grant Funded Installations

Year	SIP I/A OWTS Installations in Southold Town
2017	1
2018	2
2019	12
2020	24
2021	15
2022	16
<b>Total</b>	<b>70</b>



# REVISED SIP RULES AND REGULATIONS\*\*\*

## **1. Prioritize Grant Issuance for Public Health and Safety Concerns**

- ✓ Modify Grant Application Scoring
- ✓ Add Definitions for Catastrophic and Non-Catastrophic Failure

## **2. Upgrade Priority Areas Maps using SWP Mapping**

- ✓ Add-in Drinking Water Protection

\*\*\*Revised Rules and Regulations are intended to expedite grant issuance for homeowners with failed sanitary systems and to establish priority areas for the protection of drinking water. These revisions are in effect and the website is presently under revision.

# NEW 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

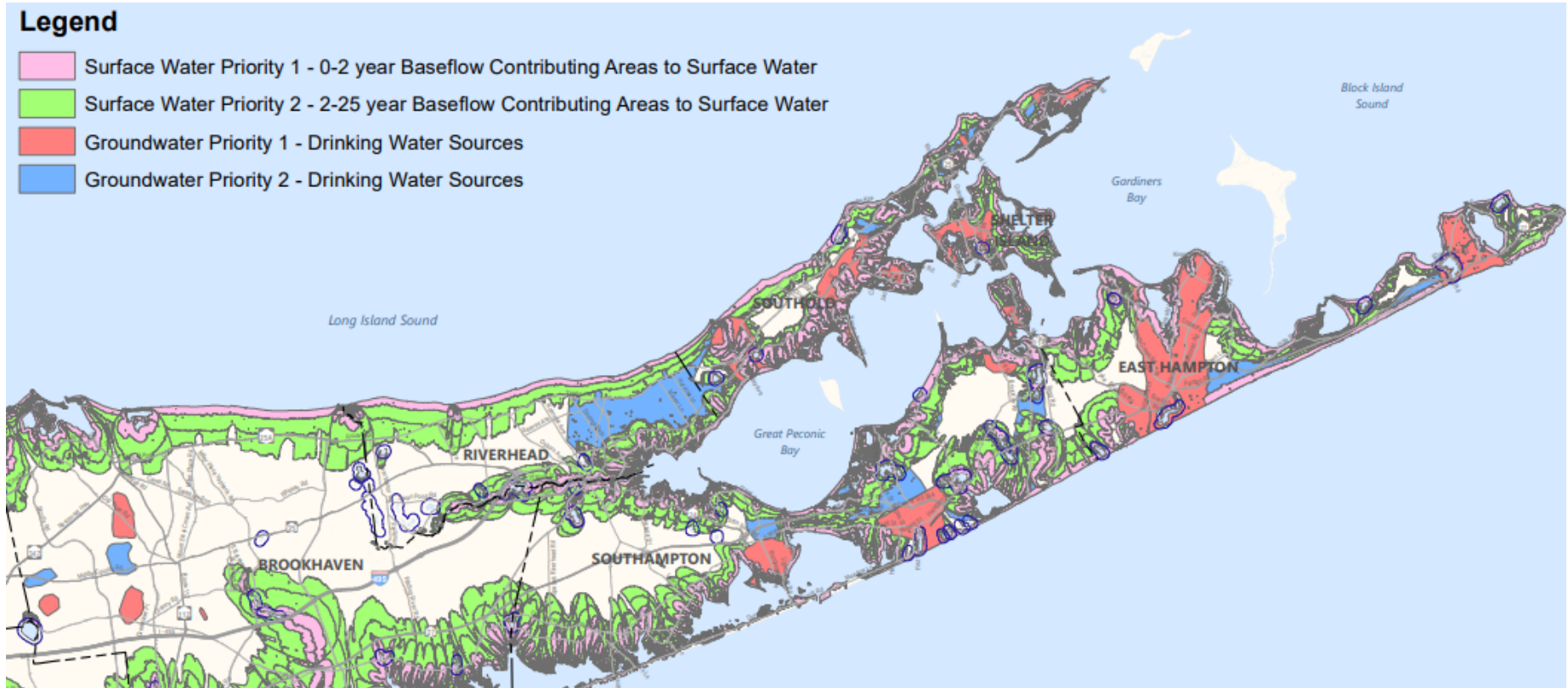




# UPDATED PRIORITY AREA MAP

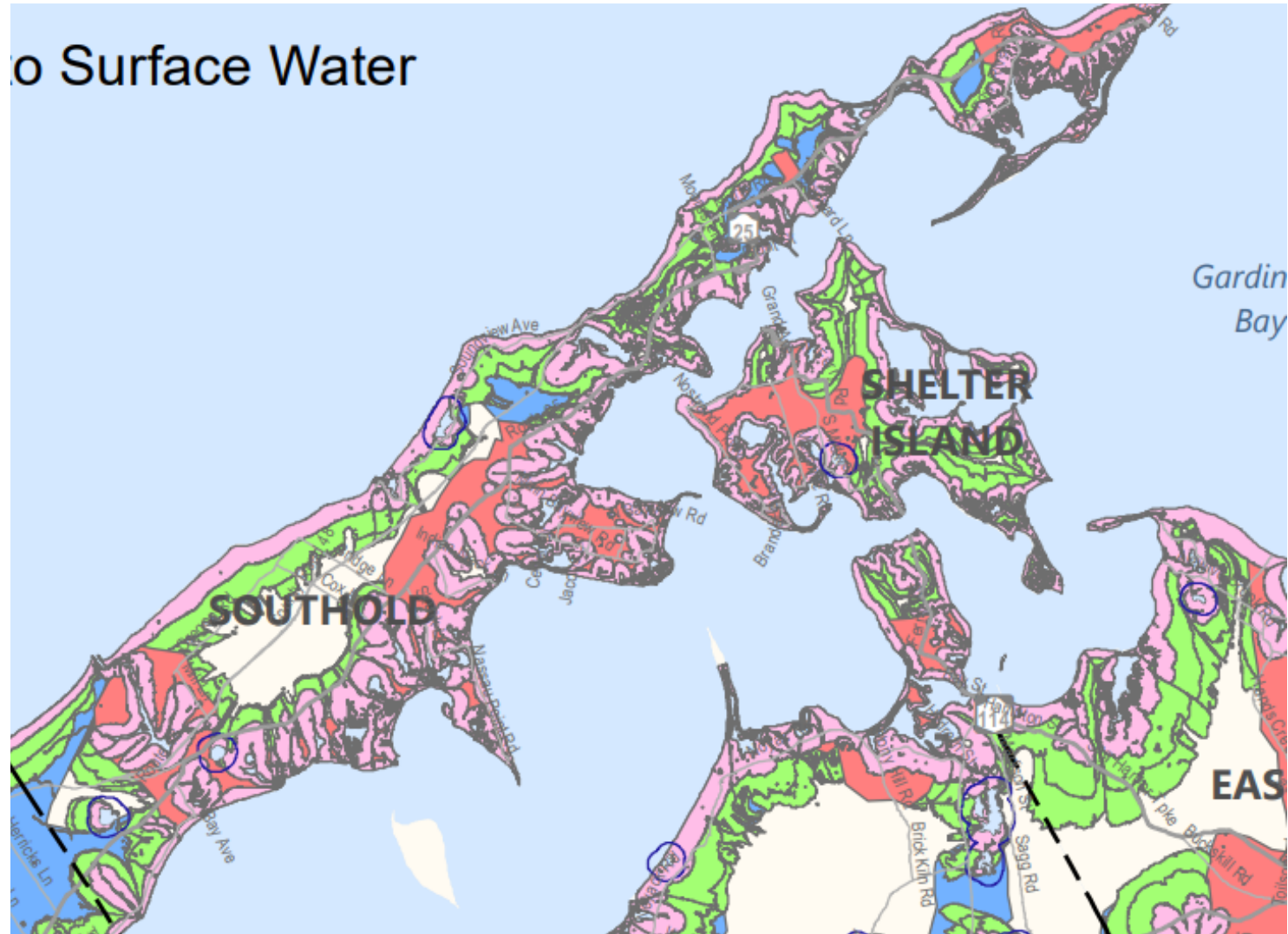
## Legend

-  Surface Water Priority 1 - 0-2 year Baseflow Contributing Areas to Surface Water
-  Surface Water Priority 2 - 2-25 year Baseflow Contributing Areas to Surface Water
-  Groundwater Priority 1 - Drinking Water Sources
-  Groundwater Priority 2 - Drinking Water Sources





# UPDATED PRIORITY AREA MAP







**[WWW.RECLAIMOURWATER.INFO](http://WWW.RECLAIMOURWATER.INFO)**

**QUESTIONS?**

**JULIA PRIOLO, PRINCIPAL ENVIRONMENTAL ANALYST**

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Thank you!

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