

NASSAU COUNTY, NEW YORK'S NITROGEN REDUCING SEPTIC SYSTEM GRANT PROGRAM 2024 UPDATE

Justin Jobin, Derek Betts, and Olivia Calandra,¹

ABSTRACT

Nitrogen pollution from cesspools and septic systems has been identified as a leading cause of degraded surface water quality on Long Island, contributing to restrictions on shell fishing, toxic algae blooms, and massive fish kills. Approximately 40,000 residential properties on the North Shore of Nassau County are currently served by cesspools and septic systems. Reversing degradation of water quality depends on the replacement of existing systems with new nitrogen reducing technologies.

This need is addressed in Nassau County's Nine Key Element Watershed Plan for Nitrogen which advances efforts to restore and protect the water quality of the groundwater and embayments around Nassau County by recommending a variety of best management practices and actions, including the replacement of antiquated and failing septic systems and cesspools with innovative alternative on-site treatment systems. Combined with the Long Island Nitrogen Action Plan (LINAP), the Nine Element Plan is part of the larger regional effort to coordinate nitrogen reduction efforts on the island.

In an effort to incentivize the use of these technologies and protect public and environmental health, Nassau County and New York State have created a septic system replacement program for eligible properties. The Septic Environmental Program to Improve Cleanliness (S.E.P.T.I.C.) provides grant funding of up to \$20,000.00 to eligible homeowners, not-for-profits, and small businesses to replace conventional septic systems and cesspools with nitrogen-reducing innovative and alternative onsite wastewater treatment systems (IA OWTS).

Launched in May of 2021, the S.E.P.T.I.C. Program is administered by the Nassau County Soil and Water Conservation District (the District) on behalf of Nassau County. The District has been awarded over \$8 million to fund over 400 upgrades to nitrogen-reducing technologies. The Program has funded approximately 147 installations to date and has allocated over 50% of the available funding and expended over \$2.5 million in grant funds to property owners. The Program's success has led to national attention and a recent federal investment of an additional \$4.125 million through Federal Bipartisan Infrastructure Legislation (BIL).

BACKGROUND AND INTRODUCTION

Nassau County New York, located between Queens and Suffolk counties on Long Island, is largely sewerred. However, Nassau's North Shore is 90 % unsewerred and relies primarily on cesspools and deep leaching pools (Figure 1) which provide minimal soil treatment and do not reduce a

¹ Justin Jobin, Environmental Scientist with Coastal Wastewater Solutions, LLC; Derek Betts, District Manager, Nassau County Soil and Water Conservation District; Olivia Calandra, Conservation Technician, Nassau County Soil and Water Conservation District

significant amount of nutrients, nitrogen specifically. This concentrated area of approximately forty thousand onsite systems is in the contributing area of the Long Island Sound, an identified Estuary of National Significance. Historically, the estuary has been greatly impacted by nitrogen pollution although significant advances have been made over the last several decades in reducing nitrogen loading to the sound. In addition to the concerns of environmental impacts of onsite systems, Long Island receives its drinking water from the ground underneath these deep leaching systems, and is an EPA designated sole source aquifer with trends of increasing nitrate levels.

In light of the demonstrated threats to the sole source aquifer, harbors, and bays and the fact that conventional septic systems and cesspools offer only minimal treatment of nitrogen, the New York State DEC considers all conventional systems on Long Island to be failing.

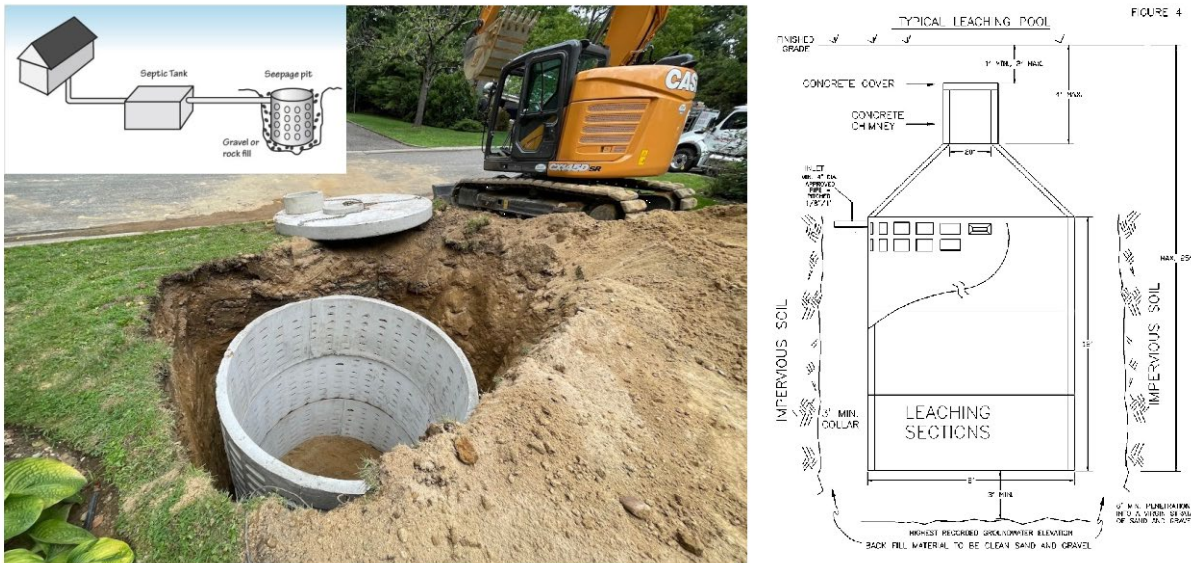


Figure 1: Typical Leaching Pool Structure on Long Island. Photo Source: Coastal Wastewater Solutions, LLC Diagram Source: Suffolk County Department of Health Services

The average residential septic system discharges between 4.8 to 13.7 lbs. of nitrogen per person per year (US EPA, 2002). There are on average 2.95 persons per household in Nassau and Suffolk Counties on Long Island (US 2020 CENSUS) which amounts to a range of 14 to 40 lbs. of nitrogen per household per year. Cesspools and deep leaching structures were never designed to remove significant amounts of nutrients. In addition, low oxygen transfer and limited treatment capacity makes them substandard technologies (US EPA, 2002). All of Nassau County’s bays and harbors have been identified as impaired according to the 2018 NYS 303(d) List of Impaired TMDL Waters due to pathogens. Onsite wastewater sources represent the largest source of nitrogen loading to all north shore bays and harbors in Nassau County. Impairments from excessive nitrogen loading have been documented in recent decades and include hypoxia and harmful algal blooms caused by multiple phytoplankton species. (Nine Key Element Watershed Plan for Nitrogen, 2022).

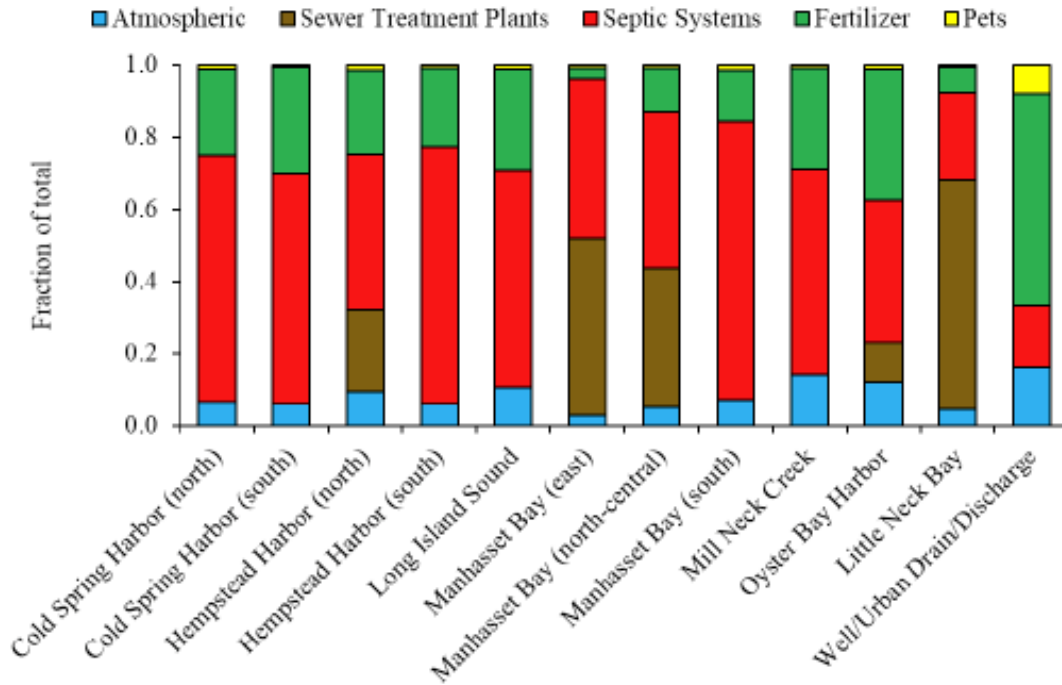


Figure 2: Relative Contribution of atmospheric, wastewater, fertilizer, and pets to the total N load of each north shore water body. (Source 2022 Nassau County Nine Key Watershed Elements for Nitrogen)

Reversing this decline in water quality is dependent on the replacement of existing cesspools and septic systems with new nitrogen-reducing technologies also referred to as Innovative and Alternative Onsite Wastewater Treatment Systems (IA OWTS, or IA). When properly designed, sited, installed, managed, and maintained, these IA systems provide a cost-effective and environmentally sound alternative to sewers in areas that are outside designated sewer areas. These systems significantly reduce nitrogen, biochemical oxygen demand and total suspended solids, before being discharged below grade to leaching structures.

In 2021, to incentivize these technologies and protect public and environmental health, Nassau County created the Septic Environmental Program to Improve Cleanliness (S.E.P.T.I.C.) which provides grant funding of up to \$20,000.00 to eligible homeowners, not-for-profits, and small businesses to replace conventional septic systems and cesspools with a nitrogen-reducing innovative and alternative onsite wastewater treatment system (IA OWTS).

\$10,000 of the grant funding is provided by the New York State Septic System Replacement Program (SSRP) through the New York State Department of Environmental Conservation in cooperation with the New York State Environmental Facilities Corporation (EFC), and additional funding from the Coronavirus Local Fiscal Recovery Fund (CLFRF), established by Subtitle M of Title IX of the American Rescue Plan Act of 2021 (ARPA), was used to increase the grant award to \$20,000 per eligible tax parcel.

MATERIALS AND METHODS

The S.E.P.T.I.C. Program utilized a similar 5-pronged approach as Suffolk County to transition from conventional septic systems and cesspools, as depicted in Figure 3.

LINAP & 9 Element Plan 5-Pronged Approach to the Evolution to I/A Septic Systems As outlined in 9 element plan

1. Develop Capacity to Evaluate, Approve, Permit, and Regulate Technologies
2. Train, Inform, and Prepare the Industry and Public on Nutrient Reducing Technologies
3. Update Outdated Regulations (Code, Ordinances, Guidance Documents and Memos)
4. Study and Identify Priority Areas for Advanced Treatment
5. Provide Public Funding to Incentivize Large Number of Installation & Eventually the Development of Long-Term Funding Sources



Figure 3: 5-Pronged Approach to the Evolution to IA Septic Systems

Although the S.E.P.T.I.C. grant program was modeled after the Suffolk County program, several differences between the two counties dictated the need for Nassau to develop a more streamlined and condensed grant program. The Nassau Program consists of the following key elements: 1) funding; (2) administration; (3) management and acceptance of technologies; (4) grant eligibility; (5) application process; (6) design process; (7) permitting; (8) installation; (9) payment process; (10) outreach and training; and (11) Responsible Management Entity (RME).

S.E.P.T.I.C. Funding Sources

The S.E.P.T.I.C. program currently utilizes two sources of funding for grants, both State and County. The New York (NY) Clean Water Infrastructure Act of 2017 established the New York State Septic System Replacement Fund (SSRP) which is administered by the NY State Department of Environmental Conservation (DEC) and New York State Environmental Facilities Corporation (EFC.) Nassau County has been allocated \$4,030,000 to date through SSRP funding sources. The County of Nassau has received and appropriated monies from the Coronavirus Local Fiscal Recovery Fund (CLFRF), established by Subtitle M of Title IX of the American Rescue Plan Act of 2021 (ARPA). Published CLFRF Program Guidance provides a nonexclusive listing of permissible uses for CLFRF funding, including making necessary investments in water, sewer, and broadband infrastructure. The County has dedicated \$4,030,000 in ARPA funds towards grants for the coordinated installation of Innovative and Alternative Onsite Wastewater Treatment

Systems (IA OWTS), which constitute a necessary improvement and as such, are considered eligible projects pursuant to the terms of the Clean Water State Revolving Fund.

Table 1: Existing S.E.P.T.I.C. Program Funding

Year	Funding Source	Amount	Comments
2018	EFC #1	\$1,000,000.00	COMBINED FUNDING OF \$8,060,000.00 ALLOWS 03 GRANTS OF UP TO \$20,000.00 EACH
2021	EFC #2	\$1,000,000.00	
2021	ARPA #1	\$2,000,000.00	
2022	EFC #3	\$2,030,000.00	
2023	ARPA #2	\$2,030,000.00	

In addition to these State and County funds, the County recently received notice of the award of \$4.125 million through Federal Bipartisan Infrastructure Legislation (BIL) and will be establishing the framework for incorporating these funds in 2024.

Program Administration

The Nine Key Element Watershed Plan for Nitrogen has a stated goal of providing financial incentives of \$20,000 for the installation of 2,000 nitrogen-reducing IA systems between January 1, 2023 and December 31, 2032. To achieve this goal, the Nassau County Legislature has directed the Nassau County Soil and Water Conservation District to administer the Program on behalf of Nassau County. Soil and Water Conservation Districts are political subdivisions of New York State and are established to coordinate assistance from all available sources, public and private, local, state, and federal to develop locally driven solutions to natural resource concerns. Nassau County felt that the District was better suited and positioned to be able to handle the day-to-day operation of the program. This is a unique situation compared to Suffolk County as their Program is run out of the County Department of Health Services. This innovative approach has streamlined program development and implementation and serves as a model for other New York counties to use to administer a septic replacement program. The Program operates in accordance and under the authority in existing agreements between the County, State, and District and receives money from Nassau County to administer the program. As a result, the district was able to hire a wastewater management consultant and an additional conservation technician. Currently, the District has 4 full time employees, 1 part-time employee, an IT consultant, and a wastewater management consultant. The S.E.P.T.I.C. responsibilities are split among the staff and assistance is provided from various County Departments.

The District is responsible for the overall day-to-day management and operation of the program including but not limited to application intake, website and portal management, program design and development, outreach and promotion, contract and document tracking, and payment process review and preparation. The District interacts with many County departments as part of administering the Program, for example the Department of Public Works takes the lead on County S.E.P.T.I.C. requirements, while Consumer Affairs ensures all participating contractors are properly licensed and insured, and the County Comptroller’s Office issues the grant payments. Administrative funding of approximately \$300,000 per year is currently provided to the District through ARPA and LINAP sources. It is important to note that administrative funding is not

proportionally tied to the amount of grants issued as up-front funding was required to build the programmatic infrastructure needed to implement the program, as indicated in Figure 4.

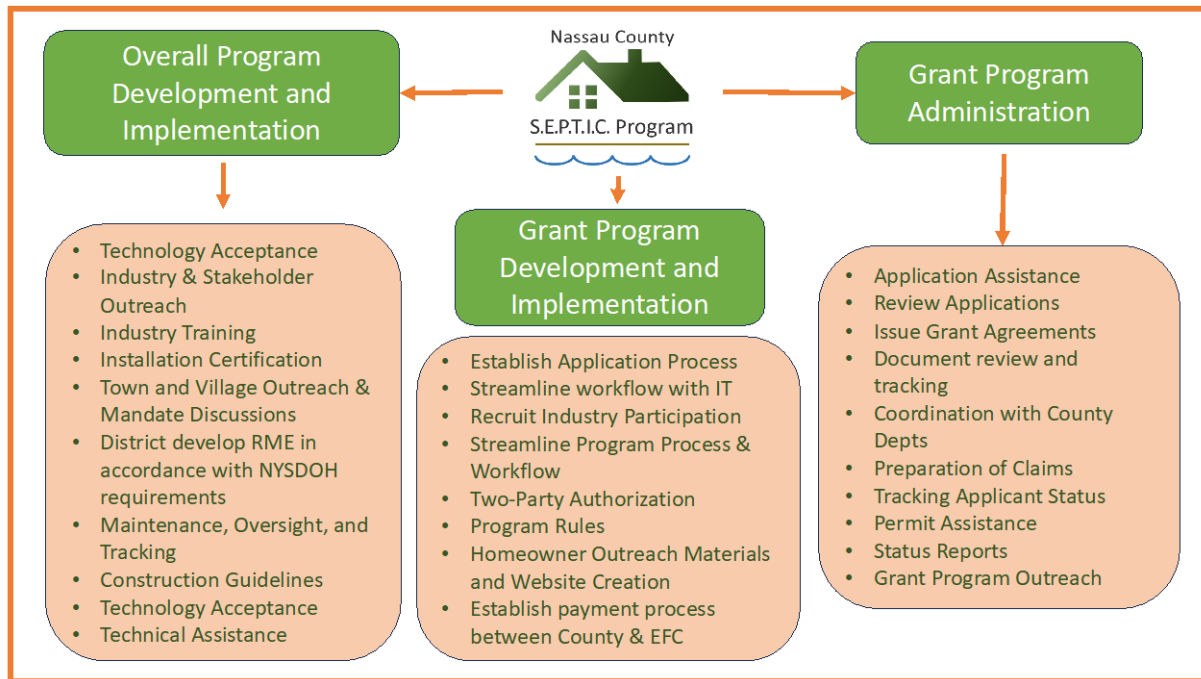


Figure 4: Nassau S.E.P.T.I.C. Program Development and Implementation Chart

Management and Acceptance of Nitrogen-Reducing Technologies

As previously mentioned, because of the work Suffolk County has done testing and certifying systems for use, Nassau County decided to launch their program simply by acknowledging that the technologies approved for use in Suffolk County may also be used in Nassau County. Although this decision was necessary to get the program off the ground, it became apparent that the District needed to establish procedures for new manufactures to be able to enter the market and for existing manufacturers to provide routine sampling results to the District. The guidelines do allow for reciprocity with Suffolk County but establish submission requirements and enforcement provisions to remove a technology if they fail to meet nitrogen limits of 19 mg/l. These guidelines were reviewed by NYDEC and publicly posted in February of 2023.

Eligibility – Grant

The S.E.P.T.I.C. grant replacement program is subject to the availability of funds and is offered to Property Owners of single-family and two-family homes, not-for-profit organizations, small businesses, and local governments with existing and proposed sanitary design flow not exceeding 1,000 gallons per day (GPD). Vacant lots or any properties with property tax liens or foreclosure actions are not eligible for S.E.P.T.I.C.

Participating properties must have a valid certificate of occupancy, certificate of completion, or equivalent issued by the pertinent city, town, or village. The property must be served by an existing septic system or cesspool and not be connected to a public or private sewer or located within an existing or proposed sewer district. There are two exceptions to the sewer rule: (1)

If the property is located in an existing sewer district but is unable to connect due to site constraints documented by the Sewer District in question, the property may be eligible, provided the applicant meets all other eligibility requirements; and (2) a qualifying Residential Parcel may, at the sole discretion of the County, be located in a proposed sewer district where such Residential Parcel is served by an existing septic system or cesspool, and there is documentation that such septic system or cesspool has failed or is failing.

Eligibility - Costs

For costs to be covered by the grant incurred costs must be reasonable and necessary for work done. The grant will cover the purchase of the IA OWTS and associated leaching materials and required electrical components. It will cover the cost of labor installation of the IA system and associated leaching structures. It will also cover the system warranty and excavation and backfilling.

Design costs are eligible only as a reimbursement to the property owner if additional grant funds remain after the installation. Applicants are expected to pay for the design out-of-pocket. Reimbursement is limited only to work needed to complete an approved design, including needed site investigation, as-built drawings, and inspections.

There are several items that are not covered under the grants. These include irrigation repairs, non-essential site restoration and beautification, and any other improvements not necessary for the installation of the system. In addition, funds cannot be used for sales tax, fines, penalties, or permitting fees. Finally, the grant does not cover pumping and abandonment of the existing system, routine pumping, or maintenance of the installed system.

Grant Application Process

Conservation technicians are available to provide support and information to the applicants to ensure they understand the program specifics and potential financial implications. Interested applicants can then apply online at nassaucountyny.gov/SepticReplace. The District worked with County IT staff to create a very quick and simple application process. Upon successful submission of the application, the District reviews the applicant for compliance with the eligibility criteria and will issue Provisional Approval if all the criteria are met and there are available spots in the grant queue. The property owner will then receive an automated provisional approval award letter and have thirty (30) days to sign and execute the Grant Agreement with Nassau County. The entire process can be done online. The applicant can electronically sign the grant agreement and then upload it back to the application portal, the District then checks the agreement, and if correct, can update their status to "Approved".

The Property Owner has sixty (60) days to enter into a contract with a design professional, and a total of twelve (12) months from the date of the executed Grant Agreement with the County to install their I/A System. Property Owners may be granted an extension if they can demonstrate they are moving forward with the Program and submit an updated timeline for Project completion.

Nassau's S.E.P.T.I.C. Program – Workflow

Part 1: Application Process



Part 2: Payment Process

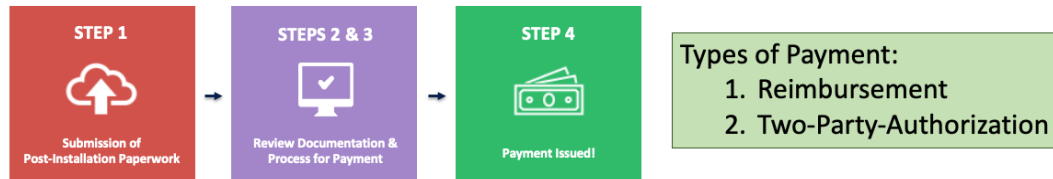


Figure 5: Nassau S.E.P.T.I.C. Grant Process

Design Process

After successful execution of the Provisional Grant Agreement, the Property Owner has 60 days to submit a signed contract with a Design Professional, which in NY is a Registered Architect or Professional Engineer. The Property Owner is responsible for direct payment to the design professional, but these fees can be reimbursed if grant funds remain after payment/reimbursement for the installation. Upon being hired by the Property Owner, the Design Professional will prepare design plans for submission to the property's corresponding village, city, or town on behalf of the property owner. The Design Professional shall also secure any other permits, such as New York State wetlands permit or town plumbing or electrical permit(s), if required.

After the completion of the Design and acquisition of any State Permits, the Property Owner has sixty days to select and enter into a contract with an Installer. The installers must be properly licensed by the Nassau County Department of Consumer Affairs and meet that Department's insurance requirements. The Property Owner is required to upload a copy of the accepted contract to the website. The Installer and Designer will then work with the Property Owner to submit to the property's corresponding village, city, or town for approval of the septic system designs.

Permitting

The Nassau County Department of Health regulates the design of new sanitary systems to serve realty subdivisions of five (5) or more lots. The Department also requires and approves engineering plans for commercial sanitary sewage disposal system having a design flow of 1,000 gallons per day or more and issues Specific Pollutant Discharge Elimination System (SPDES) permits under the delegated authority of the NYSDEC. The Department, however, does not regulate the design of individual replacement sanitary systems for single family homes but does require that engineering plans be submitted to the Department for regulated commercial modified or replacement sanitary systems.

The permitting authority for individual replacement sanitary systems for most of the S.E.P.T.I.C. applicants then falls to the individual towns and villages, of which there are 40 on the North Shore of Nassau County. Each town and village may have their own individual requirements. The District has provided the towns and villages with recommended construction guidelines, checklists, and inspection certification forms. Future efforts to streamline and standardize these practices will be needed.

Installation

The Installer is responsible for coordinating the installation date with the property owner, permitting entity, District, and the Designer. The installer installs the IA system and completes the Installation Completion Packet created by the District. The issuing village, city or town may also complete inspection of the installation and issue a certificate of completion (or equivalent). In addition, the property owner would need a copy of the final itemized invoice and signed maintenance agreement before the District can prepare the payment voucher.

Payment Process

Grant recipients can elect to pay for the entire project cost out of pocket and be reimbursed or elect a “Two-Party Authorization” process by which the property owners minimize out-of-pocket expenses by paying only for the design services out of pocket and the grant funds are then paid to the contractor in a two-party check that must be endorsed by both the property owner and the contractor. This process is riskier for the Installer as they have to rely on the property owner to submit completed documents in a timely manner to the County and then wait approximately four weeks for the County to audit the file and process the payment. Due to this risk, not all participating S.E.P.T.I.C. installers are willing to partake in the two-party authorization. However, property owners looking to pay out-of-pocket and get reimbursed by the County should apply and enter into agreement with the County prior to installation because reimbursements are not guaranteed and are contingent on the availability of funds, with grant funds being allocated to the property owner when the grant agreement has been fully executed with the County.

Outreach and Training

Outreach and engagement has been key to the success of the S.E.P.T.I.C. Grant Program. The District has worked with the Nature Conservancy and the North Shore Land Alliance and others to promote the grant program. This consisted of coordinated outreach to both towns and villages and property owners as well as dedicated staff to assist property owners through every step of the process. Over the last three years of the Program, the District and County worked with over 16 partner groups and offered over 26 public presentations, 5 press conferences, 13 presentations to Towns and Villages, 4 industry information exchanges, and participated in the 2023 NOWRA conference in Hamilton, Virginia.

The District has drafted Rules and Regulations for Septic System Installer Licensing and hopes to work with the Nassau County Department of Consumer Affairs to finalize and implement the regulations in 2024. For conducting the training, the District is looking into partnering with the New England Onsite Wastewater Training Program (NEOWTP) at the University of Rhode Island to adapt and modernize existing IA OWTS training for Nassau County. NEOWTP has a history of conducting training on Long Island, they have held prior Septic System training classes in

Nassau County and currently hold several classes per year specifically catered to the Suffolk County Reclaim Our Water Program.

Responsibility Management Entity and Maintenance

It is also important to note that the New York State Department of Health Design Handbook for Residential Onsite Wastewater Treatment Systems identifies the need to develop a Responsible Management Entity type structure for these IA OWTS that includes defining program goals and requirements, educating engineers, contractors, and the public on these technologies including design, site evaluation, construction, and maintenance, providing tracking of systems, maintenance verification and record keeping, confirming the availability of service providers for products to be used and establishing adequate authority, enforcement, and compliance incentives. Currently, the District requires that the installation of the nitrogen-reducing systems include a three-year manufacturers parts warranty and a three-year maintenance agreement. Annual maintenance, at a minimum, is required for the life of the system and the property owner’s failure to maintain the system in accordance with these requirements can result in the claw back of grant funds received.

If a maintenance provider is not completing the maintenance in accordance with manufacturer certification and best management practices, they can be removed from participating in the S.E.P.T.I.C. Program moving forward and the manufacturer would need to identify a new service provider to honor the existing agreements. The County’s grant application portal was constructed with very basic maintenance tracking features for the first five years. The District began implementing additional RME and maintenance tracking tools in February of 2023.

Nassau’s S.E.P.T.I.C. Program – Operating Costs

Maintenance Costs Associated with Clean-Water Septic Systems

ANNUAL SERVICE DETAILS

- ✓ \$300 - \$400.00 a year
- ✓ Site Visit every 6-months
- ✓ First 3-years included with Project Participation
- ✓ Check Controls and Panel Function
- ✓ Inspect and Clean filters, floats, and pump intake
- ✓ Inspect tank compartments and measure solids accumulations

SYSTEM MANUFACTURERS ARE RESPONSIBLE FOR IDENTIFYING, TRAINING, AND CERTIFYING SERVICE PROVIDERS IN NASSAU COUNTY, NY

NOTE: FAILURE TO MAINTAIN AN ACTIVE SERVICE CONTRACT MAY RESULT IN THE VOIDING OF THE SYSTEM WARRANTY



Electric costs range from approximately \$60 - \$200 per year depending on the technology

Approximate Repair and Replacement Costs

It is also important to note that the complete replacement of a control panel is very rare and usually associated with lightning strikes or power surges. The typical control panel cost is \$1,200 if it needs to be replaced.

Item	Cost	Life Expectancy
Blower / Aerator Replacement	\$400.00	10 years
Blower / Aerator Rebuild	\$150.00	10 years
Float Replacement	\$100.00	5 - 10 years
Recirculation Pump Replacement	\$700.00	10 years

Figure 6: Operating Costs

RESULTS

The Program has been allocated \$8,060,00 in funding to date, which allows for 403 IA Systems to be installed with a \$20,000 grant incentive. The interest in the program is strong as it provides property owners with solutions to wastewater water problems they have had to deal with for decades. Many of the installations occurred in areas that would be difficult for conventional systems as seen in Figure 4. To-date there have been 668 applicants, 331 of which are current applicants, 272 executed grant agreements, and 147 installations with an additional 22 installations pending. A total of \$2,680,000 has been paid out with an additional \$260,000 being processed as indicated in Table 2.

Table 2: S.E.P.T.I.C. Funds Expended, Allocated, and Remaining:

Item	Amount
Total Amount of funds allocated to Nassau County	\$8,060,000.00
Total amount of funds Reimbursed as of 08/23/2024	\$2,680,000.00
Total Amount of pending payments as of 08/23/2024	\$260,000.00
Total Amount of funds Allocated as of 08/23/2024	\$5,440,000.00
Total Amount of Unallocated Funds Allocated as of 08/15/2023	\$2,590,000.00
Average Grant Award	\$20,000.00

Figures 7 and 8 depict the breakdown of grant applications and installations by the month. The orange lines indicate significant Grant Program events. The Program coverage received from Clean Water Vendor Day and the County Executive's Press conference announcing an increase in funding in July and August 2021 were by far the most successful at attracting applicants. Being cognizant of the most effective methods to increase public awareness and interest in the Program will allow the District to work with partners to host more of these types of events.

Nassau's S.E.P.T.I.C. Program— Program Statistics

Nassau S.E.P.T.I.C. Applicants per month to Date

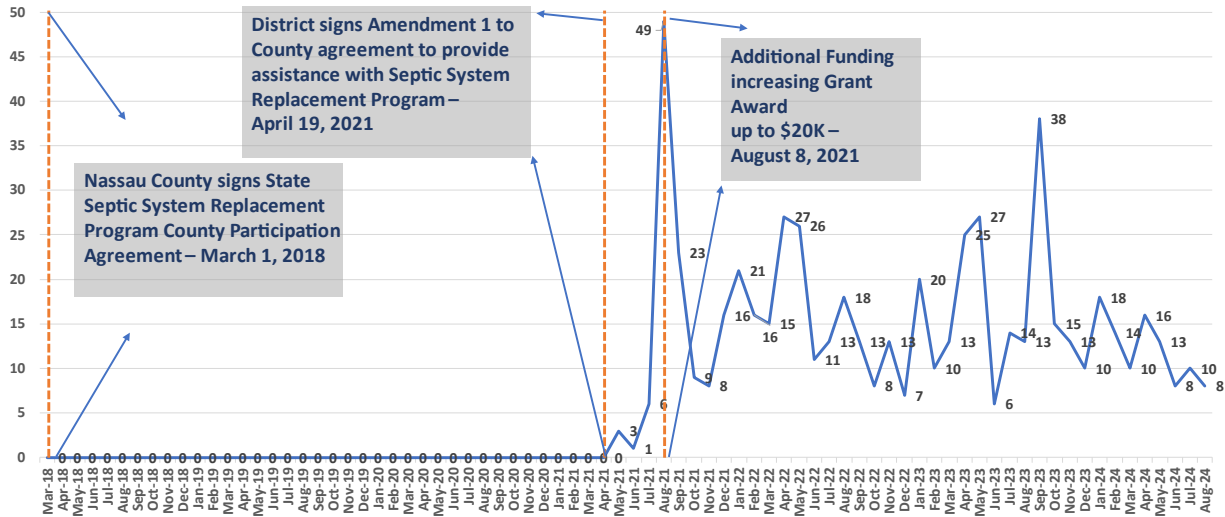


Figure 7: Nassau S.E.P.T.I.C. Applicant Timeline

Nassau's S.E.P.T.I.C. Program— Program Statistics

Nassau S.E.P.T.I.C. Installations per month to Date

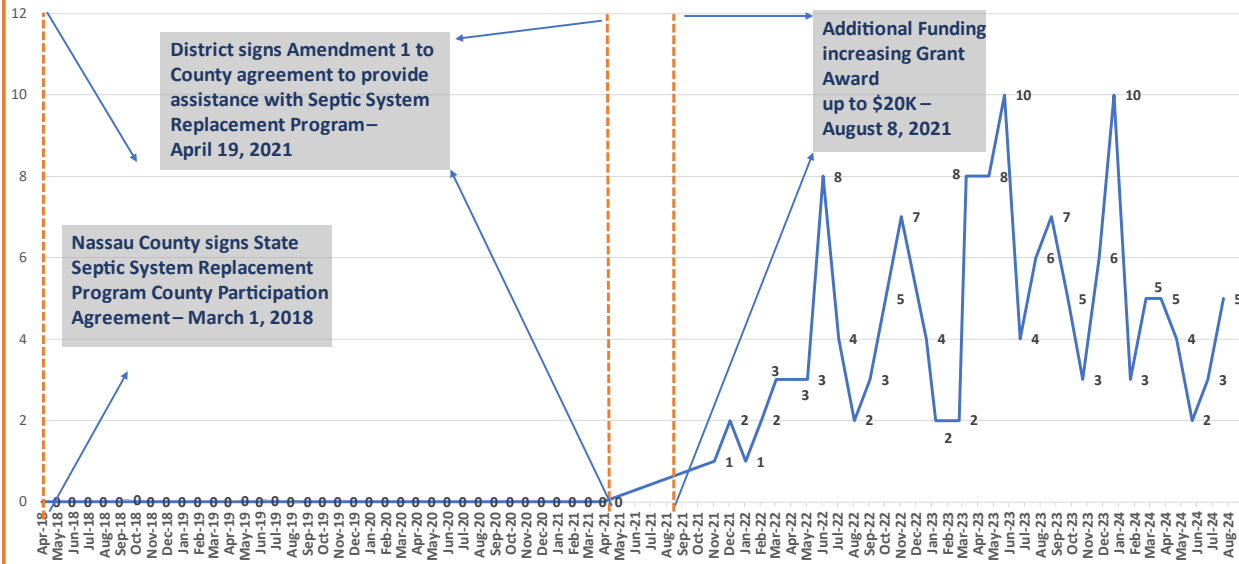


Figure 8 : Nassau S.E.P.T.I.C. Installation Timeline

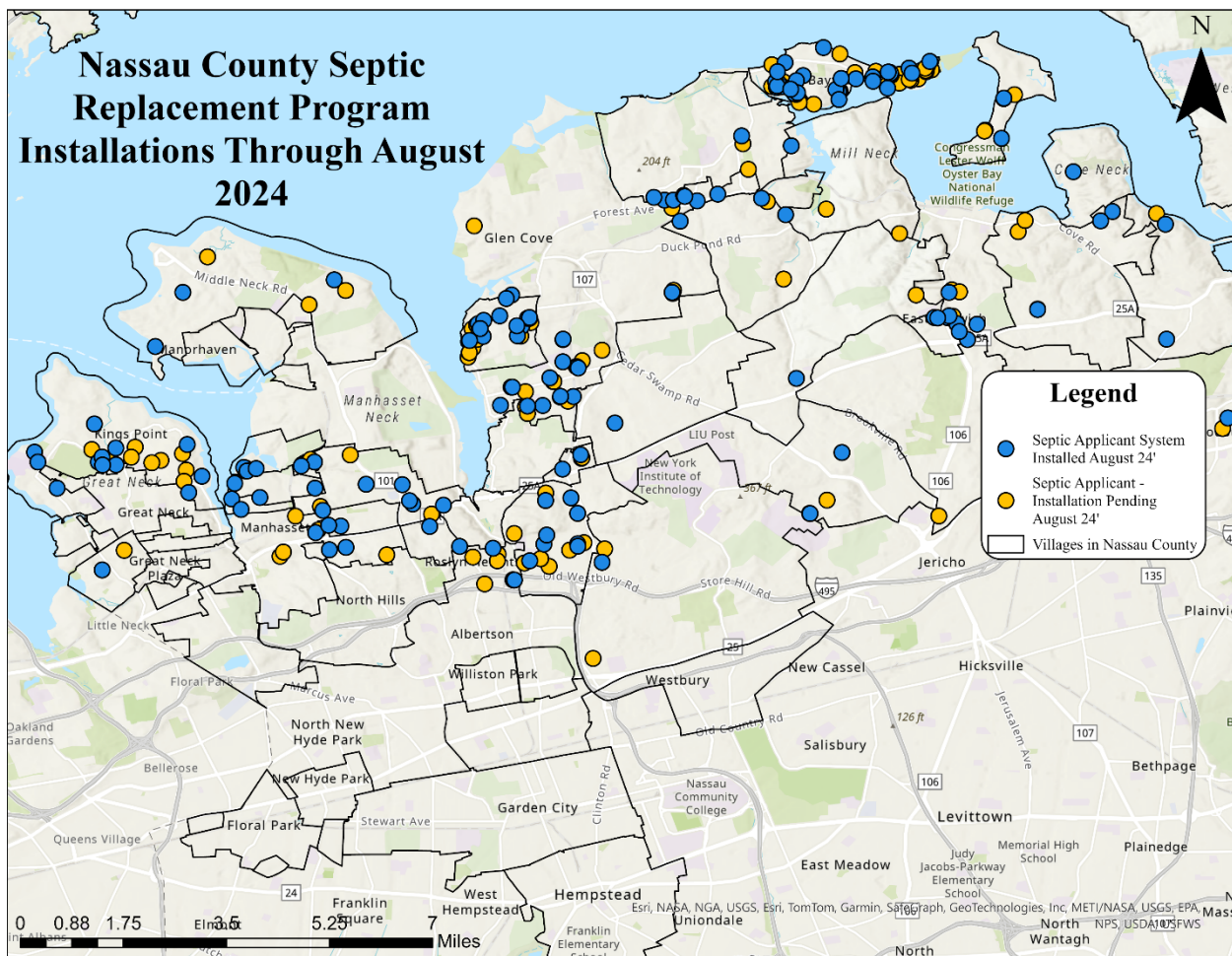


Figure 9. Nassau S.E.P.T.I.C. Applications as of 08/23/2024

Of the installations paid out to date, the average cost for design and installation was \$29,559.50 representing an average out-of-pocket expense of around \$9,000.00. The project cost depends on specific site characteristics such as depth to water table, slope, lot size, location of system, and depth of the building sewer. As such, the installations costs can be significantly different from one lot to the next. The lowest cost installation was \$19,892.31 which is in stark contrast to the highest installation cost of \$70,650.00.

DISCUSSION

The materials and methods in this report detailed key components that jurisdictions need to consider and account for in developing a septic system grant program. However, the process must be adapted and modified for a grant program to remain successful. It is important to point out some of the obstacles and lessons learned throughout the process.

After the Program launch in May of 2021, it became apparent that there needed to be some program modifications to better serve the needs of the applicants. Standing weekly meetings between the District and the County have been held with participation of our partners The Nature Conservancy

and the North Shore Land Alliance. In addition, weekly meetings have also been held with the County's IT Department to fine-tune the online process.

The District put in place the following Program Modifications to further incentivize and streamline the process for property owners looking to upgrade their existing cesspools and septic systems to help the County and State to realize nitrogen load reduction goals.

Identification and Allocation of Additional Funding

The initial grant amount of \$10,000 was not enough to offset the cost of IA materials. On July 12, 2021, the Nassau County Legislature approved the County's request to appropriate \$3,000,000 of ARPA funding to provide for a total grant of up to \$20,000.00.

Simplified the Application Process

Initially there were many questions about the condition of the existing system and the service history. Most property owners did not know this information and as a result either guessed their responses or grew frustrated and did not finish the application. The District decided to eliminate questions on the application that were not applicable to nitrogen reducing septic systems, or changed the workflow so that certain information is collected at different stages of the Process.

Decision to Allow Two-Party Authorizations

Property Owners may now choose to assign their grant payment directly to an installer on the District's list to minimize out-of-pocket expenses. Initially the program was set-up for reimbursement only, and this prevented many early adopters from moving forwards because they didn't have the funds easily available to install the system without a guarantee that they were going to receive the reimbursement.

Issue a Request for Expression of Interest (RFEI) for Designers and Installers

This process allows Installers and Designers who are interested in participating in the Grant Program to submit documentation through an online portal. If the interested companies meet State and County requirements, they are added to a list maintained by the District.

Consultation and Guidance to Local Jurisdictions

As mentioned, the permitting authority for retrofits and replacement of existing systems lies at the local City, Town, or Village level. These systems are totally new to most building officials, and they requested some guidance to follow when reviewing Designer's plan submissions. The District's consultant produced several guidance documents that outlined industry recognized procedures and construction details that should be included on a site plan. Since 2023, the District has been working with several Towns and Villages to develop code to require IA systems on substantial renovations and new home constructions. The Villages of Oyster Bay Cove and East Hills were the first to adopt the new regulations.

LOOKING FORWARD

The Nassau County S.E.P.T.I.C. program is quickly becoming a valuable resource for Nassau County residents who wish to safeguard Long Island's waters by replacing their conventional septic systems and cesspools with nitrogen-reducing technologies. While initially slow to start, the involvement of the Nassau County Soil and Water Conservation District helped to jumpstart the program, and the District currently provides both the daily administrative services necessary to promote the program and assist program applicants, as well as the program development expertise needed to position the Program for long-term success.

The triumphs of the program to date would not be possible without the cooperation and coordination of numerous County departments, and we are confident that this continued support will enable Nassau County to contribute greatly to the nitrogen reduction goals outlined in both the Long Island Nitrogen Action Plan and the County's Nine Key Element Watershed Plan for Nitrogen.

The District is looking forward to the recently announced funding through the Long Island Sound Study from the Bipartisan Infrastructure Legislation (BIL) and will work to develop the framework needed to implement the additional grants in 2024, 2025, and 2026. Finally, as Program success and momentum continue to grow, the District is dedicated to addressing unresolved program obstacles such as working with various permitting jurisdictions to streamline permits for system upgrades, developing unified permitting procedures, developing a streamlined management system for tracking system performance, inspections, and maintenance, and implementing a septic industry training program.

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LITERATURE CITED

Nassau County Department of Public Works. 2022. Nine Key Element Watershed Plan for Nitrogen. Stony Brook University School of Marine and Atmospheric Sciences

US EPA. 2002. Onsite wastewater treatment systems manual. EPA/625/R-00/008. US Environmental Protection Agency, Office of Water. Washington, D. C.

U.S. Census Bureau. 2020. 2020 Census. Families and Living Arrangements [Table] retrieved from <https://www.census.gov/quickfacts/fact/table/nassaucountynewyork,US/PST045221>

Suffolk County Department of Health Services. 2020. Suffolk County Subwatersheds Wastewater Plan. Yaphank, NY

New York State Department of Environmental Conservation and Department of Environmental Facilities Corporation. 2021. State Septic System Replacement Fund [Program Outline] retrieved from https://efc.ny.gov/system/files/documents/2021/10/septic-replacement-fund-outline-2021101865_1.pdf

New York Department of Health. 2012. Residential Onsite Wastewater Treatment Systems Design Handbook. Bureau of Water Supply Protection. Albany, NY.

APPENDICES – LIST OF NASSAU COUNTY, NY S.E.P.T.I.C. PROGRAM RESOURCES

1. [Nassau County S.E.P.T.I.C. Grant Program Portal](#)
2. [Nassau County S.E.P.T.I.C. Grant Program Information](#)
3. [Nassau County S.E.P.T.I.C. Resources Page](#)
4. [Nassau County S.E.P.T.I.C. Industry Resources Page](#)