

COUNTY OF SUFFOLK



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**STANDARDS PROMULGATED UNDER ARTICLE 19  
FOR THE APPROVAL AND MANAGEMENT OF INNOVATIVE  
AND ALTERNATIVE ONSITE WASTEWATER TREATMENT SYSTEMS**

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**SEPTEMBER 21, 2016**

## **19-101 INTRODUCTION**

- A. The purpose of these standards is to ensure a safe, sanitary means of disposing of household wastewater. When properly designed, sited, installed, managed, and maintained, Innovative and Alternative Onsite Wastewater Treatment Systems (I/A OWTS) provide a cost-effective and environmentally sound alternative to sewers in portions of the County that are outside the designated sewer areas.
- B. The policy of the Department is to facilitate development and use of I/A OWTS in Suffolk County as an environmental conservation and public health protection measure.
- C. These are Standards for the Suffolk County Department of Health Services for the Administration of Article 19 Management of Innovative and Alternative Onsite Wastewater Treatment Systems of the Suffolk County Sanitary Code.
- D. These Standards outline the role of the Department in serving as a Responsible Management Entity, to develop and use resources, capabilities and systems to ensure that I/A OWTS are properly managed and maintained, and provide intended levels of treatment.

## **19-102 DEFINITIONS APPLICABLE TO THESE STANDARDS**

**Commissioner** means the Commissioner of the Suffolk County Department of Health Services.

**Conventional Septic System or Conventional Onsite Wastewater Treatment System (OWTS)** mean, for the purposes of this Article, an onsite sanitary system consisting of a septic tank and any associated interconnecting piping, a leaching structure(s) and any associated interconnecting piping that does not have any active or mechanical means of treatment or any supplemental filtration components.

**Department** means the Suffolk County Department of Health Services (SCDHS).

**Design Professional** means a person licensed or registered in the State of New York and authorized by the State Education Law to design the systems described in the standards.

**Field-Built System** means non prefabricated units that are constructed on site such as sand/gravel filters, constructed wetlands, and soil based treatment systems.

**Innovative and Alternative Onsite Wastewater Treatment System (I/A OWTS)** means an onsite decentralized wastewater treatment system that, at a minimum, is designed to reduce total nitrogen in treated effluent to 19 mg/l. As used herein, OWTS may be singular or plural,

depending on the context. Not all I/A OWTS will meet the requirements for approval in Suffolk County.

**I/A OWTS Management Program** means comprehensive oversight and activities that address issues critical to I/A OWTS including planning, education, maintenance, residuals management, training certification, licensing, inspections, monitoring, corrective action and enforcement, recordkeeping, inventorying, reporting, financial assistance, and funding.

**Maintenance Provider** means a private entity hired by a Property Owner to provide operation and maintenance and contractual service of an I/A OWTS.

**Management Information System** means any computer-based system capable of capturing, storing, analyzing, and displaying specifically referenced information.

**Vendor** means the patent holder, manufacturer, distributor or creator of an I/A OWTS.

**Operation and Maintenance (O&M)** means the act of performing tasks specified by the Department and / or the manufacturer of the I/A OWTS including, but not limited to, cleaning, inspection, and adjustment of control settings to ensure proper operation of I/A OWTS and related components.

**Operation and Maintenance Contract** means a signed contract between the Property Owner and the Maintenance Provider setting forth all required Operation and Maintenance procedures and monitoring schedules along with effective dates of the contract.

**Property Owner(s)** means the owner(s) of the real property upon which such I/A OWTS is installed or proposed for installation.

**Registration** means the approval process by which a Property Owner completes and submits routine documentation required by the Department so as to certify his/her/its ownership and use of an I/A OWTS.

**Responsible Management Entity** means the Department, which shall administer and conduct a comprehensive set of activities and have the legal authority and technical capacity to ensure the long term operation, maintenance, and management of all I/A OWTS in Suffolk County.

**Written Notification** means the act or instance of notifying, making known or giving notice either through a written or printed notice, or electronic submission of written notice.

### **19-103 GENERAL CONDITIONS**

- A. No person shall submit an I/A OWTS design application for a technology unless such technology has been placed on the Department's list of Experimental, Pilot, Provisional, or General Use approved systems.

- B. The Department shall maintain a list of all approved technologies and all approved guidance documents.
- C. The Department may revoke approval of an I/A OWTS technology if there is a failure to comply with these standards, including but not limited to failure to submit reports, monitoring, and/or maintenance data; or failure to fulfill effluent performance standards, provided that before any such revocation, the Department shall provide written notice of the failure to the I/A OWTS vendor specifying a time period that is reasonable under the circumstances during which the failure may be remedied. More than three such notices for any I/A OWTS within a six-month period shall be grounds for revocation without further opportunities to remedy noncompliance.
- D. The installer must hold a current Liquid Waste License pursuant to Chapter 563 Article VII (Septic Industry Businesses) and Endorsement J (Innovative and Alternative Treatment System Installer) through the Suffolk County Department of Labor, Licensing and Consumer Affairs, pursuant to Suffolk County Code § 563-79(II) (J). The Department of Labor, Licensing, and Consumer Affairs maintains a list of liquid waste license holders.
- E. An I/A OWTS requires a permit issued by the Department prior to installation at a specific location. This applies to systems installed for piloting, provisional use and general use.
- F. All installed I/A OWTS are required to have an initial 3-year warranty inclusive of operation/maintenance services from the Vendor or Design and Installation Professional, in the case of field-built systems
- G. All installed I/A OWTS are required to have active O&M Agreements between the property owner and an authorized Maintenance Provider.
- H. Maintenance Providers must report all O&M activities to SCDHS in a manner to be prescribed by the Department.
- I. Covenants may be required on properties where I/A OWTS are installed on an Experimental, Pilot, or Demonstration basis requiring system replacement in event of failure; O&M requirement; access to DHS inspection/sampling on quarterly basis, if needed; and any other requirements that SCDHS deems necessary.
- J. This Suffolk County program is subject to the continuing approval of the New York State Department of Health and Department of Environmental Conservation.

## **19-104 APPROVAL PROCESS**

### **A. Experimental Approval**

1. Experimental technologies designed to reduce total nitrogen (TN) to a minimum of 19 mg/L that are not yet certified by ETV or National Sanitation Foundation (NSF) 245 testing, or do not have NSF 40 certification and are not approved for 19 mg/l TN in a minimum of two (2) other jurisdictions with climate conditions similar to Suffolk County, may be installed in Suffolk County as an Experimental I/A OWTS provided the following items are submitted to the Department for initial review:
  - a. The Vendor shall submit an engineering report prepared by a licensed professional engineer in the State of New York completely describing the technology with process design calculations and product design drawings.
  - b. Documentation showing that systems employing the Vendor's technology have been previously installed and tested at a testing facility acceptable to the Department.
    - i. The tested system(s) must have been a full-scale system with a minimum design capacity of at least 400gpd.
    - ii. Sampling results for the tested system(s) must be submitted and include both influent and effluent results. The results must be for a minimum of a 12-month period with samples taken at a maximum of 30-day intervals. Sampling results must include, at a minimum, TN, TKN, NH<sub>3</sub>, NO<sub>2</sub>, NO<sub>3</sub>, PH, BOD<sub>5</sub>, TSS, and alkalinity. Samples must be taken and analyzed by a certified laboratory within the jurisdiction in which the system was tested.
  - c. Any other items the Vendor and/or Department determines to be advisable for a complete review and evaluation of the technology as embodied in the specific system(s) tested.
2. The Department shall review the submitted items and provide a written determination within sixty (60) days to the Vendor either approving or disapproving the technology as an Experimental I/A OWTS within Suffolk County.
3. Vendors receiving Department approval to install their unit in Suffolk County as an Experimental I/A OWTS must install a minimum of three (3) units and no more

than five (5) units at year round residences within Suffolk County as experimental units.

4. Experimental I/A OWTS must be installed with a by-pass system and by-pass piping allowing the Experimental I/A OWTS to be by-passed and function as a system meeting conventional OWTS standards.
5. Effluent samples from Experimental systems shall be tested by a New York State certified laboratory to assess the systems' success in achieving treatment standards of no greater than 19 mg/l of total nitrogen (TN). Samples shall be taken no less frequently than every 30 days after the system reaches a steady state of operation. The Department shall consider an Experimental I/A OWTS in steady state after a three-month period unless actual field results demonstrate otherwise. Sampling results must include TN, TKN, NH<sub>3</sub>, NO<sub>2</sub>, NO<sub>3</sub>, PH, BOD<sub>5</sub>, TSS, alkalinity and such other parameters as the Department may prescribe.
6. Testing on the initial set of 3-5 Experimental systems must be performed for at least twelve (12) months and result in a full technical reporting of results in a format acceptable to the Department. At that time the Department will determine whether to approve the Experimental I/A OWTS for Piloting (pursuant to subsection B) or require an additional period of testing on an Experimental basis.
7. Any Experimental technology or system may be ordered removed in Suffolk County based on unsatisfactory results in the yearly technical report(s), based on other information indicating the Experimental I/A OWTS is not functioning properly to produce an effluent of no greater than 19 mg/l TN, or if the technology or system has been determined to be a public health threat by the Department. Any installed system ordered to be removed must be replaced with a system meeting Department standards within sixty days of removal as an Experimental I/A OWTS.
8. Experimental I/A OWTS may be approved for Piloting if at least 75% of the installed systems perform at the expected level of treatment for at least twelve (12) months.
9. Experimental systems that meet performance goals are allowed to remain in place long-term, provided that they are monitored no less frequently than every thirty (30) days as set forth above. If the technology advances to the Piloting phase, installed Experimental systems count as part of the total number of systems required under the Piloting phase.

## B. Pilot Approval

1. Piloting involves the installation, field testing, and technical evaluation to demonstrate that an I/A OWTS technology can function effectively under the physical and climatological conditions at pilot sites in Suffolk County.
2. A piloted I/A OWTS must consistently produce an effluent with a nitrogen concentration that is 19mg/l or less and provide overall environmental protection equivalent to or better than a Conventional OWTS.
3. The Suffolk County Department of Health Services (SCDHS) will allow piloting of I/A OWTS that have attained verification and/or certification status consistent with:
  - a. Verification through the National Sanitation Foundation/American National Standards Institute (“NSF/ANSI”) that the technology meets Standard 245 for nitrogen reduction, or
  - b. Certification for advanced nitrogen removal through the USEPA Environmental Technology Verification Program, or
  - c. General approval for use for nitrogen reduction in at least two comparable jurisdictions with established I/A OWTS programs.
4. Piloting of a particular I/A OWTS technology may be conducted at either existing or new construction. Eight (8) to twelve (12) systems per manufacturer and technology must be successfully piloted prior to proceeding to Provisional approval. Systems must be occupied year round. Systems from the same Vendor that utilize the same technology but have different daily sanitary flow volumes can be used. Sites appropriate for pilot systems will be agreed upon by the manufacturer and the Department.
5. Effluent samples from Pilot systems shall be tested by a New York State certified laboratory to assess the systems’ success in achieving treatment standards of no greater than 19 mg/l of total nitrogen (TN). Samples shall be taken no less frequently than every 30 days after the system reaches a steady state of operation. Sampling results must include TN, TKN, NH<sub>3</sub>, NO<sub>2</sub>, NO<sub>3</sub>, PH, BOD<sub>5</sub>, TSS, alkalinity and such other parameters as the Department may specify. Piloting must be done for at least 12 months and result in a full technical reporting of results in a format acceptable to SCDHS.

6. Piloting is generally not intended to address long-term operation and maintenance, although the information gathered during piloting should be used to understand these issues.
7. At the close of the 12-month Pilot test period, the Department may allow the technology to proceed to the Provisional Use approval stage, require additional Piloting, or disapprove the system. Piloting is considered successful if at least 75% of the pilot sites performed at the expected level of treatment for at least 12 months.
8. Piloted systems that meet performance goals are allowed to remain in place long-term. For pilot systems that do not meet the expected parameters, adjustments to system design and operation may be required by the Department for installed systems and incorporated into future systems employing the same technology. In extreme circumstances, a sub-performing Piloted system may need to be removed or replaced at the discretion of the Department, in consultation with the Vendor and Property Owner.

#### C. Provisional Use Approval

1. In the Provisional Use stage, the Department will evaluate whether an I/A OWTS technology can provide treatment exceeding that of a Conventional OWTS with effluent nitrogen reduction to 19 mg/l or less under actual field conditions in Suffolk County and with a broader range of uses than in the controlled environment of Piloting. Sampling every two months is required during the Provisional Use stage.
2. Provisional Use Approval can occur when, in the Department's judgment, a technology has been Piloted successfully in Suffolk County. The Department will consider Provisional Use Approval after the first eight (8) Pilot systems have finished twelve (12) months of operation.
3. A technology approved for Provisional Use can be installed in existing or new construction where a Conventional OWTS in compliance with Article 6 of the Suffolk County Sanitary Code could be approved.
4. In the Provisional Use stage, a minimum of 20 systems (including Experimental and Pilot systems) must be installed. The installed systems shall be evaluated every two months for at least 24 months prior to a technology becoming eligible for General Use Approval. The 20 systems must be occupied year round in order for the Department to accept the data.
5. In the Provisional Use stage, systems will be evaluated based on operation, maintenance, and monitoring issues. Overall sampling of the installed systems as a

group will be coordinated by the Vendor and the Department to determine how the systems are performing throughout the year. The Department will use the data to set final discharge standards and other conditions for General Use.

6. Provisional Use is considered successful if the installed systems, based on the total dataset of sampled installations, have demonstrated over 24 months that they can achieve a level of environmental protection at least equivalent to a Conventional OWTS and a mean effluent nitrogen concentration of 19mg/l or less. Provisional approval can be suspended or revoked if problems develop in the performance of the approved technology or of particular systems.

**D. General Use Approval**

1. When an I/A OWTS technology has successfully completed the Provisional Use stage, it receives Certification for General Use.
2. I/A OWTS technology certified for General Use can be installed at any site where a Conventional OWTS in compliance with Article(s) 5 and/or 6 of the Suffolk County Sanitary Code could be approved.
3. An O&M contract and annual O&M shall be required for all I/A OWTS.
4. Systems approved for General Use must be sampled every 36 months and result in a full technical reporting of results in a format acceptable to the Department. Sampling results must include TN, TKN, NH<sub>3</sub>, NO<sub>2</sub>, NO<sub>3</sub>, PH, BOD<sub>5</sub>, TSS, alkalinity and other parameters as the Department may specify.

**Table 19-104.1: Approval Chart**

# of Systems	Approval Phase	Sampling Frequency	Performance Requirement
<b>3-5</b>	Experimental	Monthly Sampling 12 months rolling average	75 % of systems must have a mean of 19 mg/L or better
<b>8-12</b>	Piloting	Monthly Sampling 12 months rolling average	75 % of systems must have a mean of 19 mg/L or better
<b>20 (min)</b>	Provisional	Every 2 Months 24 month rolling average	The dataset must have a mean of 19 mg/L or better
<b>20+</b>	General Use	Every 36 months	

*Note: The number of required systems is a cumulative number. The minimum of 20 systems for Provisional Use includes the number of systems installed as part of Experimental and Piloting processes.*

E. Demonstration Programs

1. The Department may from time to time solicit participation in I/A OWTS Demonstration Programs whereby a Vendor installs, tests and maintains systems free of charge or at a reduced cost to a Property Owner.
2. The purpose of the Demonstration program is to facilitate the installation and performance monitoring of new nitrogen reducing technologies proposed in Suffolk County.
3. Systems being piloted as part of a Demonstration Program may be subject to a streamlined path to Provisional Use Approval, subject to the Department's discretion.
4. If a Vendor participating in the Demonstration Program wishes to sell or install additional units not part of the Demonstration Program, these additional systems will be subject to the Piloting Use Approval outlined above and will not be subject to a streamlined path to Provisional Use.

F. New England Coastal States and Long Island Data Sharing Project

1. The New England Coastal States and Long Island Data Sharing Project (Data Sharing Project) was developed to document the performance of I/A OWTS for nitrogen reduction and, therefore, to simplify and expedite the approval processes for these technologies in each individual state, as well as to reduce costs to residents and manufacturers arising from repetitive testing. Data sharing within the New England/Long Island coastal region will support the restoration of New England/Long Island coastal shores.
2. Technologies seeking approval for nitrogen reduction in jurisdictions within the New England coastal region, including Maine, Massachusetts, New Hampshire, Rhode Island, and Suffolk County, NY may participate in the Data Sharing Project by submitting a Test Plan Application maintained by the Department.
3. A Vendor's participation in the Data Sharing Project is optional. If a Vendor chooses not to participate, the number of systems outlined in the approval processes above must all be installed in Suffolk County.
4. Vendors participating in the Data Sharing Project shall install the number of systems outlined in the approval processes above. A minimum of five (5) systems must be

installed in Suffolk County, and the remainder of the systems can be split among any of the jurisdictions participating in the Data Sharing Project.

#### G. Guidance Document

1. Once a technology is approved for Piloting, Provisional, or General Use by the Department, the Vendor (or Designer in the instance of field-built technologies) shall submit a finalized guidance document detailing all design, installation, and operation and maintenance requirements (“Vendor Guidance Document”).
  - a. The Vendor Guidance Document shall include but not be limited to the following:
    - i. Engineering design drawings and calculations
    - ii. Installation manual and training documents
    - iii. Operation and maintenance specifications for the I/A OWTS
    - iv. Sample copy of standard 3-year product warranty
    - v. Sample copy of O&M Agreement with typical costs
    - vi. Sample copy of O&M service form used by Vendor
    - vii. A description of local distribution and O&M support network established in Suffolk County.
  - b. The Guidance Document for field-built systems shall include but not be limited to the following:
    - i. Engineering design drawings and calculations
    - ii. Installation manual and training documents
    - iii. Operation and maintenance specifications
    - iv. Sample copy of standard 3-year product warranty
    - v. Sample copy of O&M Agreement with typical costs
    - vi. Sample copy of O&M service form
    - vii. A description of :
      - a. Types of media used
      - b. Media Specifications (including estimated longevity and replacement procedures)
      - c. Proposed loading rates
      - d. Distribution manifold and laterals
      - e. Site construction precautions
  - c. I/A OWTS shall be installed, operated, and maintained in accordance with the process outlined in the appropriate Guidance Document and comply with all conditions outlined in the approval document for that specific technology. In addition to Department inspections, a Design Professional shall supervise the installation of field-built technologies, certify that the system was built in accordance with the approved plan, and submit as-built plans of the system to the Department.

- d. The Vendor (or Design Professional in the instance of field-built technologies) shall provide training with respect to the technology in question in accordance with Chapter 563 Article VII (Septic Industry Businesses) and Endorsement K (Innovative and Alternative Treatment System Service Provider Endorsement) through the Suffolk County Department of Labor, Licensing and Consumer Affairs, pursuant to Suffolk County Code § 563-79(II) (K)

**19-105 TECHNOLOGY VERIFICATION AND PERFORMANCE STANDARDS**

- A. I/A OWTS must demonstrate that they are engineered to a sound biological, chemical, or physical nitrogen removal process through the following:

1. I/A OWTS must have attained verification and/or certification status through:
  - a. The United States Environmental Protection Agency (“USEPA”) Environmental Technology Verification Program (“ETV”), or
  - b. National Sanitation Foundation/ American National Standards Institute (“NSF/ANSI”) Standard 245, or
  - c. Have current approval for 19 mg/l of Total Nitrogen (TN) in a minimum of two (2) comparable jurisdictions in similar climate conditions to Suffolk County. This includes all States who have signed the Memorandum of Cooperation for the US EPA’s New England Coastal States and Long Island Data Sharing Project.
2. I/A OWTS that have not attained verification and/or certification through the above listed procedure shall be considered Experimental Technologies and must follow procedures for experimental technologies as outlined in the approval process.

- B. Performance Standards for I/A OWTS Technologies:

1. I/A OWTS must meet treated effluent concentrations for total nitrogen of nineteen (19) mg/L or less. The following criteria shall be used to evaluate the effluent data through the different approval processes:
  - a. Experimental and Piloting Approval: 75% of technologies shall meet treated effluent concentrations for total nitrogen of nineteen (19) mg/L or less over a 12-month rolling average

- b. Provisional and General Use Approval: The technology dataset must maintain a mean of nineteen (19) mg/L or less.

C. Annual Review of Technologies:

- 1. The Department shall perform an evaluation of new I/A OWTS technologies to ensure that performance standards represent the best available technologies. This evaluation shall occur, at a minimum, on an annual basis, and more frequently if advances in technology so warrant.

**19-106 REGISTRATION REQUIREMENTS**

- A. Any Property Owner whose property is served by an I/A OWTS shall be required to register the system.
- B. Property Owner(s) shall register new I/A OWTS prior to construction.
- C. Upon the transfer by a Property Owner of real property upon which an I/A OWTS is installed or proposed to be installed, the transferor Property Owner shall notify the Department, in writing, of such transfer. Such notification shall take place no later than sixty (60) days after the property transfer.
- D. Upon the transfer by a Property Owner of real property upon which an I/A OWTS is installed or proposed to be installed, the successor Property Owner shall register the I/A OWTS no later than sixty (60) days after such property transfer.
- E. Every Property Owner shall reregister the I/A OWTS every 36 months after the initial Registration by such Property Owner.
- F. In order to register an I/A OWTS, the Property Owner shall submit a Registration form provided by the Department.
- G. For condominiums and townhouses, the homeowner association shall complete the registration of I/A OWTS.
- H. A fully executed Operation and Maintenance Contract between Maintenance Provider(s) and Property Owner(s) must be in place and submitted to the Department prior to receiving approval of the Registration from the Department.
- I. Registration requirements shall include, at a minimum:
  - i. Tax Map Number
  - ii. Property Owner's name

- iii. Address where system will be or is installed
- iv. Property Owner's permanent address if different than location of system
- v. Property Owner's phone number(s)
- vi. Property Owner's e-mail address

J. Registration requirements may include questions regarding the Property Owner's opinions and experience with:

- a. The technology as a whole
- b. The installation
- c. Appearance of the system
- d. Their overall satisfaction with the system
- e. O&M
- f. Operating costs

K. By completing the Registration process, the Property Owner shall agree to:

1. Provide access to the Commissioner or his authorized representative to inspect and sample the I/A OWTS and its discharges upon reasonable notice for the purpose of determining compliance with this Article.
2. Provide access to the Commissioner or his authorized representative, for inspection of all records required by this Article or the Department, upon reasonable notice to the Property Owner, for the purpose of determining compliance with the Article.
3. Execute any documents required for release of required information to the Department when requested by a Maintenance Provider.

### **19-107 OPERATION AND MAINTENANCE REQUIREMENTS**

- A. Every Property Owner shall have an active Operation and Maintenance Contract with a company that has a current Liquid Waste License pursuant to Chapter 563 Article VII (Septic Industry Businesses) and Endorsement K (Innovative and Alternative Treatment System Service Provider Endorsement) through the Suffolk County Department of Labor, Licensing and Consumer Affairs, pursuant to Suffolk County Code § 563-79(II) (K). The Department of Labor, Licensing, and Consumer Affairs maintains a list of licensed I/A OWTS Maintenance Providers.
- B. The Property Owner shall notify the Department in writing within thirty (30) days in the event there is a change in Maintenance Provider.
- C. Maintenance Providers shall notify the Department in writing within thirty (30) days when an Operation and Maintenance Contract is not renewed or is canceled.

- D. The Property Owner is responsible for implementing all necessary repairs and maintenance for a properly functioning I/A OWTS.
- E. The Operation and Maintenance Contract shall require the Property Owner to authorize the Maintenance Provider to enter onto the Property Owner's property, when necessary, for periodic inspection, pumping, maintenance, and repair of an I/A OWTS.
- F. At a minimum, annual O&M shall be required for all I/A OWTS.
- G. In addition to O&M procedures outlined in the Vendor Guidance Document, the following procedures shall be required of Maintenance Providers:
  - 1. The septic tank/trash chamber shall be measured for solids accumulation and a pump out should be scheduled if the amount of solids exceeds the manufacturer's specifications. More actively used systems may need to be placed on more frequent inspection or maintenance schedules.
  - 2. All electrical components should be checked annually for functionality and safety.
    - a. All control switches should be activated and timer should be checked to ensure accurate settings.
    - b. All visual and audible alarms shall be tested
    - c. All submerged floats should be activated and checked for proper function.
    - d. If moisture is encountered in any splice box, the source shall be identified and corrections made.
  - 3. All effluent screens should be cleaned at a minimum, on a yearly basis, and whenever the tanks are pumped.
  - 4. Biosolids hosed off of filters, pumps, pump vaults, and treatment material shall be placed into the inlet end of the septic/trash tank.
- H. Alarms:
  - 1. In the event of an audible alarm, the alarm may be silenced. In cases where a high water alarm is caused by too much water entering the system at a particular time the system will typically correct itself. However, in the event of a repeat alarm, the O&M provider should be contacted to address the situation.
- I. Maintenance Providers shall maintain records relating to all routine O&M service and any emergency service for each I/A OWTS for which the Maintenance Provider is contractually responsible. Using forms and procedures specified by the Department, including any Management Information Systems adopted by the Department for this

purpose, the Maintenance Provider shall make prompt reports to the Department following routine and emergency service. Maintenance Providers shall maintain records for at least five (5) years after the date of service and make such records available for inspection by the Commissioner or his designee upon request.

- J. Maintenance Providers shall identify high risk systems and increase maintenance as needed to prevent nuisance alarms, clogging, and backup.

## **19-108 SAMPLING PROTOCOL**

- A. Sampling should be conducted in accordance with NSF/ANSI Standard 360 and at a minimum:
  - 1. Grab sampling on an individual unit will begin one month after start-up. Grab sampling is only used to determine when a unit has reached steady-state of operation. Once reaching steady-state, the unit shall transition to 24-hour composite sampling the following month.
  - 2. Effluent samples will be 24-hour time composite samples using the same sampling method for all sites being tested. The Vendor must describe how the composite sample will be collected and how it takes a representative composite sample of the 24-hour flow through the system.
  - 3. Influent samples may be requested where practical.
  - 4. Measurements to be conducted on effluent samples include CBOD<sub>5</sub>, TSS, DO, pH, NO<sub>2</sub>, NO<sub>3</sub>, TKN, ammonia-N, total-nitrogen, and alkalinity. Wastewater temperature and ambient air temperature will also be recorded as depicted in Table 19-108.1.
  - 5. Additionally, if on public water, an estimate of influent flow shall be included based on the site's water bill. If no water bill is available, the pump event counter or telemetry system can be used to estimate the flow.
  - 6. SCDHS reserves the right to sample, test, or inspect the units at any time provided appropriate notice is given to the Property Owner.

**Table 19-108.1: Sampling Summary**

<b>Parameter</b>	<b>Sample Type</b>	<b>Testing Location</b>
CBOD5	24 h composite	Laboratory
Total suspended solids	24 h composite	Laboratory
pH	Grab	Test site
Temperature (wastewater)	Grab	Test site
Temperature (ambient air)	Grab	Test site
Dissolved Oxygen	Grab	Test site
Effluent Alkalinity (as CaCO <sub>3</sub> )	24 h composite	Laboratory
TKN (as N)	24 h composite	Laboratory
Ammonia-N (as N)	24 h composite	Laboratory
Nitrite-N (as N)	24 h composite	Laboratory

**B. Quality Assurance Project Plan (QAPP)**

1. The manufacturer is responsible for submitting a QAPP that follows the guidelines in NSF 360 Section 7: Quality Assurance/Quality Control. The QAPP shall address the following points:
  - a. Procedures to maintain chain-of-custody (e.g., custody seals, records) during sample transfer from the field to the laboratory, in the laboratory, among contractors, and subcontractors shall be described in the QAPP to ensure that sample integrity is maintained.
  - b. The QAPP shall include quantitative acceptance criteria for QA objectives associated with accuracy, precision, detection limits, and completeness for critical measurements (process, physical, and analytical, as applicable) for each matrix.
  - c. Any additional test-specific QA objectives shall be presented in the QAPP, including acceptance criteria. This includes items such as mass balance requirements.
  - d. The specific procedures used to assess all identified QA objectives shall be fully described in the QAPP.
  - e. The QAPP shall list and define all other QC checks and/or procedures (i.e., blanks, surrogates, controls, etc.) used for the verification testing, both field and laboratory.
  - f. For each specified QC check or procedure, required frequencies, associated acceptance criteria, and corrective actions to be performed, if acceptance criteria are not met, shall be included in the QAPP.
  - g. The QAPP shall describe how the sampling equipment is calibrated and the frequency of calibration.
  - h. The QAPP shall describe how cross-contamination between samples is avoided.
  - i. All QA Managers and their relationship in the organizations (i.e. location within each organization) shall be identified in the QAPP with evidence that the QA Manager is independent of project management.

- j. Responsibilities of all other project participants shall be identified in the QAPP, meaning that organizations responsible for planning, coordination, sample collection, sample custody, measurements (i.e. chemical, physical, and process), data reduction, data validation, and report preparation shall be clearly identified in the QAPP.
- k. Any change from the approved sampling procedures must be approved in advance by the Department.

C. Data Reporting Requirements

- 1. Vendor shall identify the unit and method for each measurement required
- 2. Vendor shall provide description of the site and installation
- 3. Vendor shall list key participants included on the Chain of Custody
- 4. Vendor shall report all testing results including all sample data and any statistical analyses or data summaries or evaluations
- 5. If the Department requires use of a particular Management Information System, Vendor shall report all data electronically using the prescribed Management Information System.

**19-109 APPROVAL BY THE COMMISSIONER OF HEALTH SERVICES**

In accordance with Article 2, Article 6, and Article 19 of the Suffolk County Sanitary Code, the foregoing are Standards for Approval and Management of Innovative and Alternative Onsite Wastewater Treatment Systems approved by the Suffolk County Commissioner of Health Services and include the required details for submission of information to the Suffolk County Department of Health Services to assure conformity to the approved Standards. These Standards are effective September 21, 2016.

September 21, 2016

Date

*Signature on File*

James L. Tomarken, MD, MPH, MBA, MSW  
Commissioner of Health Services