

*Suffolk County Department of Health Services (SCDHS)*  
*Innovative/Alternative On-Site Sewage Disposal Systems (OSDS) Study*  
**Summary of Technology Assessment**

- As part of the study, the consultant (H2M) evaluated over 150 manufacturers of various advanced sewage treatment systems. The technologies were grouped into categories based upon process type and each group was evaluated to determine its feasibility of removing total nitrogen consistent with discharge standards.
- Technologies were grouped into the following 11 categories and each category was evaluated as to whether or not it was a viable technology for further study:
  - 1) Suspended Growth Aerobic System – viable for further study.  
*In these systems, microorganisms which treat sewage are suspended in the treatment fluid itself (e.g., “activated sludge” process).*
  - 2) Fixed-Film Processes – viable for further study.  
*In these systems, microorganisms which treat sewage grow on media and the sewage passes over its surface (e.g., trickling filters and rotating biological contactors).*
  - 3) Membrane Biological Reactors (MBR) – viable for further study.  
*These systems typically combine activated sludge treatment with a membrane liquid-solid separation process (microfiltration or ultra filtration membranes).*
  - 4) Sequencing Batch Reactor (SBR) systems – considered viable but no systems could be found in this flow range.
  - 5) Effluent Disinfection Processes – not viable for further study
  - 6) Vegetated Submerged Beds – not viable for further study
  - 7) Evapotranspiration Systems – not viable for further study
  - 8) Ponds/Constructed Wetlands – not viable for further study
  - 9) Intermittent Sand Filters – not viable for further study
  - 10) Recirculating Sand Filters – not viable for further study
  - 11) Land Treatment Systems – not viable for further study
- Based upon the above, 13 manufacturers were selected for further study in the individual home category:
  - 1) Manufacturer: Bio-Microbics
    - System Name: BioBarrier MBR
    - System Type: MBR
  - 2) Manufacturer: Bio-Microbics
    - System Name: MicroFAST
    - System Type: Suspended Growth
  - 3) Manufacturer: Bionest Technologies
    - System Name: Bionest WWST
    - System Type: Fixed-Film
  - 4) Manufacturer: Bord na Mona
    - System Name: Puraflo
    - System Type: Fixed-Film
  - 5) Manufacturer: BUSSE Green Technologies
    - System Name: BUSSE MF
    - System Type: Suspended Growth
  - 6) Manufacturer: Delta Environmental Products
    - System Name: Whitewater Series
    - System Type: Suspended Growth

- 7) Manufacturer: Ecological Tanks, Inc.
    - System Name: AquaAire
    - System Type: Suspended Growth
  - 8) Manufacturer: Ecological Tanks, Inc.
    - System Name: AquaSafe
    - System Type: Suspended Growth
  - 9) Manufacturer: Hoot Aerobic Systems
    - System Name: H-500-BNR
    - System Type: Suspended Growth
  - 10) Manufacturer: Norweco, Inc.
    - System Name: Singulair TNT
    - System Type: Suspended Growth
  - 11) Manufacturer: SeptiTech, Inc.
    - System Name: N-M Series
    - System Type: Fixed-Film
  - 12) Manufacturer: AquaPoint
    - System Name: BioClere
    - System Type: Fixed-Film
  - 13) Manufacturer: Lombardo
    - System Name: Nitrex
    - System Type: Suspended Growth
- Based upon the above, 8 manufacturers were selected for further study in the small community (<30,000 gpd) category:
    - 1) Manufacturer: Bio-Microbics
      - System Name: MicroFAST
      - System Type: Suspended Growth
    - 2) Manufacturer: Bord na Mona
      - System Name: PuraM
      - System Type: MBR
    - 3) Manufacturer: Bord na Mona
      - System Name: PuraMax
      - System Type: MBR
    - 4) Manufacturer: BUSSE Green Technologies
      - System Name: BUSSE MF
      - System Type: Suspended Growth
    - 5) Manufacturer: Delta Environmental Products
      - System Name: POD Series
      - System Type: Fixed-Film
    - 6) Manufacturer: SeptiTech, Inc.
      - System Name: N-M Series
      - System Type: Fixed-Film
    - 7) Manufacturer: AquaPoint
      - System Name: BioClere
      - System Type: Fixed-Film
    - 8) Manufacturer: Lombardo
      - System Name: Nitrex
      - System Type: Suspended Growth