

Section 11.11 Advanced Wastewater Treatment Systems (Where Required)

- A. Purpose and Applicability: The purpose of this section is to preserve and protect public health, safety, and welfare by ensuring that advanced wastewater treatment systems installed in the Town of North Yarmouth function as designed and that owners of advanced wastewater treatment systems provide for their proper maintenance. Advanced wastewater treatment systems are required for lots in the Village Center District to take advantage of reduced minimum lot size requirements, as further specified in Table 7.2, Footnote 4; are required for nursing homes and congregate care facilities located in the Groundwater Overlay District, as further specified in Table 7.1, Footnote 4; and provide a mechanism for clustered housing developments and open space developments to take advantage of reduced minimum lot sizes, as further specified in Section 11.3.C.9.a.2.
- B. Standards and Requirements for Advanced Wastewater Treatment Systems:
1. Nitrogen Removal.
Advanced wastewater treatment systems shall employ a denitrification process and shall have a nitrogen removal capacity that meets the standards of NSF 245: Certification for Global Wastewater Market Acceptance.
 2. Form HHE-300 Required.
 - a. The owner(s) of an advanced wastewater treatment system constructed, expanded, enlarged, rebuilt, or replaced, on or after the effective date of this section, shall prepare, execute, and record in the Cumberland County Registry of Deeds a Pre-treatment Maintenance Agreement form (Form HHE-300, prepared by Maine Department of Health and Human Services, Maine Center for Disease Control and Prevention).
 - b. The owner(s) shall provide a copy of the recorded Form HHE-300 with recording information to the CEO prior to receiving a certificate of occupancy for the dwelling unit.
 - c. Replacement of an advanced wastewater treatment system shall require the owner(s) of the dwelling unit to complete and record a new Form HHE-300 and to submit a copy of the recorded form within fourteen (14) days of the date of installation.
 3. Maintenance Agreement Required.
 - a. The owner(s) of a property that is served by an advanced wastewater treatment system installed on or after the effective date of this section must execute a maintenance agreement providing for maintenance and repair of the advanced wastewater treatment system in accordance with the requirements of that system's manufacturer, with a company certified to provide such maintenance. A copy of an executed maintenance agreement must be provided to the CEO within 180 days of the installation of the advanced wastewater treatment system. The property owner shall provide the CEO with a copy of a substitute or replacement maintenance agreement within ten (10) days of the expiration or cancellation of a prior maintenance agreement. New owners of a property shall provide a copy of a replacement maintenance agreement, or shall

provide written certification that the previously-existing maintenance agreement has been transferred to them, to the CEO within sixty (60) days of closing.

b. Maintenance agreements required under this section shall specify the manufacturer's maintenance and repair requirements for the advanced wastewater treatment system, and shall provide for annual sampling and testing of the system's effluent. The results of such effluent tests shall be provided to the CEO and to the Yarmouth Water District (YWD) within one (1) year of the effective date of this section, and then again by December 31 of each calendar year following. The CEO shall annually provide written notice of this requirement to all affected property owners on or about September 1 of each calendar year.

c. Effluent testing shall include, but not be limited to: Total Suspended Solids (TSS), Five Day Biological Oxygen Demand (BOD5), and total nitrogen concentration.

d. The CEO and YWD shall coordinate to establish and maintain a database of advanced wastewater treatment systems in order to enforce this provision.

4 Minimum Lot Size:

a. The minimum lot size can be reduced in the VC to 20,000 square feet when the lot is served by an advanced wastewater treatment system, or the existing system is retrofitted with an advanced wastewater system that that meets or exceeds the standards and requirements imposed by Section 11.11.B of this Article.

b. GPD or gallon per day design flows may be utilized when presented and proven to not exceed the assumed 4 bedroom or 360 gpd flows of a typical residential home per lot, this type of development requires Planning Board approval.

c. Pocket Neighborhoods allow for the use of reduced lot size below 20,000 sf, consistent with Section 7.2(D).

Section 3a. System Components and Specifications - Summary

FUJI CLEAN USA RESIDENTIAL SYSTEM SPECIFICATION TABLE	CE Series BOD, TSS, TN*				CEN Series BOD, TSS, Enhanced TN		
	Model	CE5	CE7	CE10	CE14	CEN5	CEN7
Load Hydraulic** (GPD)	500	700	900	1000	500	700	900
Effluent*** (assumes domestic strength influent)							
BOD (mg/L)	10-20	10-20	10-20	10	10	10	10
TSS (mg/L)	10-20	10-20	10-20	10	10	10	10
TN (mg/L)	10-20	10-20	10-20	10	10	10	10
Blower Model / CFM (Standard)	FujiMAC 80RII 2.8 CFM	FujiMAC 80RII 2.8 CFM	FujiMAC 100RII 3.5 CFM	FujiMAC 100RII 3.5 CFM	FujiMAC 80RII 2.8 CFM	FujiMAC 100RII 2.8 CFM	FujiMAC 100RII 3.5 CFM
Power Use (kWh/day)	1.2	1.2	1.7	1.7	1.2	1.7	1.7
Tank Detail:							
Material	Fibre-reinforced plastic				Fibre-reinforced plastic		
Height (Inches)	61.8	65.4	73.2	77.4	65.4	73.2	77.4
Length (Inches)	85	95.7	98.8	118.9	95.7	98.8	118.9
Width (Inches)	43.7	49.2	56.7	68.9	49.2	56.7	68.9
Weight (lbs.)	397	463	705	926	463	705	926
Inlet Invert (Inches, to 1/8")	49	53	61	62	53	61	62
Outlet Invert (Inches to 1/8")	47	51	59	59.5	51	59	59.5
Access Ports (number)	3	3	3	3	3	3	3
Access Port Diameter (Inches)	3@20"	2@20" 1@24"	2@20" 1@24"	2@20" 1@24"	2@20" 1@24"	2@20" 1@24"	2@20" 1@24"
Volume Total (gallons)	540	749	1069	1498	749	1069	1498
Volume Chamber 1, Sedimentation (gal)	198	277	397	558	277	397	558
Vol Chamber 2, Anaerobic (gal)	198	278	396	556	278	396	556
Vol Chamber 3, Aeration (gal)	95	127	181	248	127	181	248
Vol Chamber 3a, Storage (gal)	44	63	90	124	63	90	124
Volume Chamber 3b, Disinfection (gal)	4	4	6	12	4	6	12

* TN data was obtained during CE testing, but not to NSF245 testing protocol. CEN testing was to NSF245 protocol.

** Please consult with distributor or Fuji Clean USA for commercial models designed to treat hydraulic flows above those listed in this table.

*** Please consult with distributor or Fuji Clean USA for system specification and sizing in cases where influent biologic strength is greater than domestic strength.