RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES

Information Sheet on the New Onsite Wastewater Treatment System (OWTS) Rules

March 2008

Application Forms

Use the old forms until such time as new forms are available. The new forms will be posted on the website as they are developed, except for the multi-part forms which will be available by contacting the Office of Water Resources at 401-222-4700.

Changes to Tank Standards

The new standards for grease tank construction, septic tank construction, holding tank construction and pump tank construction become effective January 1, 2009, one year after the effective date for the rest of the new Rules. The new Rules allow for continued use of such tanks, including single compartment septic tanks, that meet the former Rules for:

- All valid applications received by DEM prior to January 1, 2008 and which have been approved under former Rules. Permits are valid for 5 years, therefore tanks in these applications are approved for use over this 5 year period.
- Any application that is submitted to DEM from January 1, 2008 through December 31, 2008. However, whenever a septic tank that meets the former Rules is proposed in such an application, the tank must be equipped with an effluent screen pursuant to Rule 26.6.2 of the new Rules.

Applicants with an approved application with a tank meeting the former Rules can substitute a tank that meets the requirements of the new Rules, provided that as-built plans are submitted to DEM upon completion of construction.

Subdivision Certification – Individual Lots

Applications for individual lots submitted to DEM after January 1, 2008 that are within a subdivision with a Subdivision Site Suitability Certification approved under former Rules must meet the requirements of the new Rules. Lot specific circumstances may require that plans be revised in order to meet the requirements of the new Rules. If the new standards can not be met for an individual application in a subdivision approved by DEM between June 20, 1995 and December 31, 2007, the Department will use its discretion in determining the acceptability of the proposed design. In such situations, the licensed designer must submit a letter to DEM with the application identifying the new standards that can not be met and the attempts that have been made in the revised plan to comply with the new standards. Applications for lots in subdivisions approved by DEM prior to June 20, 1995 where a new standard can not be met will require review under the variance procedures of the OWTS Rules. Note that lots subject to nitrogen reducing requirements in the critical resource areas pursuant to Rule 39 will be subject to those requirements regardless of a prior Subdivision Site Suitability Certification approval from the Department.

Soil Evaluations Conducted Prior to January 1, 2008

The Designer of Record shall ensure that all applications submitted after January 1, 2008 are based on a soil evaluation that is consistent with the new Rules. Some soil category designations in the new Rules (Table 15.11) have changed. The correct soil category must be designated for the design. This may require that the data collected by a soil evaluation conducted prior to January 1, 2008 be re-evaluated based on the new Rules. A new soil evaluation is not required.

Bottomless Sand Filter – Hydraulic Loading Rates

Table 1. "Hydraulic loading rates for bottomless sand filters" in the RI DEM "Guidelines for the Design and Use of Bottomless Sand Filters" (November 2001) has been revised as provided below. This table incorporates the revised soil categories in the new Rules in Table 15.11 and is based on the revised design flow for residential systems – 115 gallons per day per bedroom. The new lower loading rates in the following table in conjunction with the new lower design flows result in similar sized residential bottomless sand filters that would result from using the 2001 loading rates with the higher design flows from the expired Rules.

Table 1. Hydraulic Loading Rates for Bottomless Sand Filters -- for Use with the New OWTS Rules

Soil Category	**Soil Texture**	**Soil Structure**	**Soil Consistence**		**Category 1 Systems Loading Rate**	**Category 2 Systems Loading Rate**
			Consistence In-Hand Using Soil Clods	**Excavation Difficulty**	gal/ft^2/day	gal/ft^2/day
1	cos, s, lcos, ls, cosl, fs	structureless- single grain subangular blocky	loose friable	none	2.3	1.5
2	vfs, lvfs	structureless- single grain	loose	none	2.7	1.9
3	ls, sl, l	granular, subangular blocky	very friable to friable	low	3.5	2.3
4	lfs, lvfs, fsl, vfs	granular, subangular blocky	very friable to friable	low	3.1	2.0
5	sil, si, vfsl	subangular blocky	very friable to friable	low	2.7	1.9
6	lcos, cosl, lfs, ls, sl, l,	structureless massive	very friable to friable	low	2.3	1.5
7	fsl, vfsl, sil, si, vfs	structureless-massive	very friable to friable	low to moderate	2.1	1.5
8	all textures	structureless-massive	firm to very firm	moderate	1.9	1.3
9	all textures	platy, structureless-massive	firm to very firm	high	1.5	1.0
10	all textures	platy, structureless-massive	extremely firm	very high to extremely high	Not Allowed	Not Allowed

Category 1 Systems = Any advanced treatment unit that is **time dosed** according to the specifications of this guide and has been classified by the Department as meeting treatment standards of less than or equal to 20 mg/l for both BOD and TSS and FOG of less than or equal to 5 mg/l.
Category 2 Systems = Any advanced treatment unit that is **not time dosed** according to the specifications of this guide and has been classified by the Department as meeting treatment standards of 30 mg/l or less for both BOD and TSS and FOG of less than or equal to 5 mg/l.

Notes:

1. Soil textures are defined in the glossary.
2. Loading rates shall be based upon texture, structure, and consistence of the most restrictive horizon within 1.5 feet below the proposed base of the BSF.

Shallow – Narrow Drainfield Loading Rates

Table 3. "Hydraulic loading rates for drainfields in critical resource areas receiving sand filter effluent" in the RIDEM "Guidelines for the Design and Use of Sand Filters in Critical Resource Areas" (April 2000) has been revised as provided below. The new lower loading rates in the following table in conjunction with the new lower design flows (115 gallons per day per bedroom) result in similar sized shallow – narrow drainfields that would result from using the 2000 loading rates with the higher design flows from the expired Rules.

Table 3. Hydraulic loading rates for pressurized shallow narrow drainfields in critical resource areas receiving advanced treated wastewater – for Use with the New OWTS Rules.[1]

Predominant USDA Soil Texture of Receiving Soils*	Soil Structure	Soil Consistence	Shallow – Narrow Drainfield Loading Rates[2] (gal/ft^2/day)
cos, vcos, gravelly or very gravelly soils	structureless – single grain	loose	1.8[3]
med. sand	structureless -- single grain	loose	2.1
fs, lfs, ls	granular to subangular blocky	loose – friable	2.5
fsl, sl, l	granular to subangular blocky	friable	2.8
vfs, lvfs, vfsl, sil	subangular blocky	loose to friable	2.3
vfsl,sil, si	structureless – massive B horizons	friable to firm	1.7
ls, sl, l	structureless massive; dense glacial till substrata	firm to extremely firm	1.2
sicl	structureless – massive	firm	1.0

*Soil textures defined in glossary.

[1]Advanced treated wastewater shall meet the BOD5 and TSS concentrations of less than or equal to 30/30 mg/L.

[2]Drainfield loading rates shall be based upon texture, structure, and consistence of the most restrictive horizon within 3 feet of the infiltration surface.

[3]Sand lined shallow narrow pressure dosed trenches shall be used when one of these soil textures is the receiving layer (see Figure 14).