



FACT SHEET

Office of Water Resources- Onsite Program

Obtaining a Permit for a New Home's Septic System

In Rhode Island, septic systems (onsite wastewater treatment systems or OWTS) must be designed by a DEM-licensed designer and installed by a DEM-licensed installer. There are four "classes" of OWTS licenses issued by DEM. New systems must be designed by a Class II or III designer; Class I designers may only design repairs to existing systems, but this can include the complete replacement of a cesspool or failing septic system. Information on design authority of Class II and III designers is available in the OWTS Rules in Rule 9, or in the Fact Sheet "OWTS Designer License Classes Described." New sites require a soil evaluation conducted by a licensed (Class IV) Soil Evaluator.

Locating and Contracting with Licensed OWTS Professionals

DEM maintains a list of Licensed Designers and installers; Soil Evaluators are listed with designers. These lists are available on the OWTS Program page on the DEM website (<http://www.dem.ri.gov>). Hard copies are available at the Water Resources Permitting Office at 235 Promenade Street, or by calling 222-4700. You may also search to find designers who may be active in your neighborhood by using DEM's Online Permit Search tool.

It is prudent to approach the process of selecting OWTS professionals as you would any other major purchase. Seek price quotes from more than one of each contractor required (installer, designer, Soil Evaluator). Be certain that proposals or contracts are based on the same scope of work (system type, components and landscaping or property restoration the contractor will provide, etc.). If your site is difficult or may require an advanced treatment system, inquire as to whether the contractors have experience with this type of system. Contracts should articulate installation procedure, costs and payment schedule. Designers are required to witness and inspect installation of systems they design, so you should know if inspection services are included in the proposal or contract or will be part of a separate contract with the designer. Some soils require monitoring during the wet season to obtain required design information; you should know if the Soil Evaluator's contract includes wet season monitoring if that should be necessary. Beware that situations may occur, or conditions may be encountered which will require cost adjustments. For example, if bedrock is encountered during the soil evaluation or during installation, ledge test holes must be excavated and costs will increase. It is important that the designer incorporate into the contract situations which may cause an increase in costs to occur. Request references and contact the parties provided by the contractors.

Permitting

1. *Soil Testing Application Form* (Submitted by Soil Evaluator)

Purpose: This form notifies DEM that the Soil Evaluator, working on behalf of the property owner, wishes to conduct a soil evaluation and identifies the property on which the soil evaluation will be conducted.

DEM Action: DEM processes the form, assigns an Application Number to the project and notifies the Soil Evaluator whether DEM will need to witness the testing work. DEM will either schedule a date and time with the Soil Evaluator to witness the testing work or elect not to witness.

2. *Soil Evaluation Form* (Submitted by Soil Evaluator)

Purpose: This form provides DEM with information about the site's suitability for an OWTS. It provides the soil profile description and additional data (including a recommended seasonal high groundwater table design depth) based on the Soil Evaluator's interpretation of the soil's morphology. Information on soil physical properties is used to determine the size of the system's leachfield. The soil evaluation form also provides other information about a site and its

surroundings, including its topography, the location of sensitive receptors such as drinking water wells, drinking water reservoirs and waterbodies, and the location of the test holes on the site.

DEM Action: DEM will do one of the following:

- a. Accept the soil evaluation;
- b. Determine that the soil evaluation is not in compliance with the rules or that more information is required. A revised soil evaluation form must be submitted. Additional information may include the need for monitoring a site during the wet season (See DEM's "Wet Season Groundwater Table Monitoring" Fact Sheet). DEM may subsequently accept the recommended Seasonal High Groundwater Table (SHGWT) indicated by the wet season readings or disclaim the water table data if the site location tested is unsuitable for an OWTS; or
- c. Disclaim the soil evaluation (the most common reason being that the recommended SHGWT design depth is less than 2 feet). If the reported SHGWT is disclaimed:
 - Another soil evaluation may be conducted in another location on the property or a request for variance may be made; or
 - Supplemental wet season readings may be compiled and submitted to DEM.Based on this new soil testing, DEM will either accept the recommended SHGWT indicated by the readings or disclaim the water table data if the site location tested is unsuitable for an OWTS.

3. **OWTS Application** – (Submitted by a Class II or III Designer)

Purpose: This form is used to obtain DEM's approval of a septic system design and includes information about the site, the owner and the proposed use of the property. It is accompanied by plans of the proposed system, which provide system specifications and a site plan depicting the location of the system and home on the site, current and proposed grading, and the location of roads and sensitive receptors such as drinking water supplies and waterbodies, etc.

DEM Action: Reviewed by Department.

- a. DEM will **approve the application** if it is complete, is in compliance with the rules, and there are no deficiencies or errors on the plan.
- b. DEM will **return the application to the designer, unapproved** if the application is not complete, is not in compliance with the rules, or contains errors or deficiencies.

Variance Applications

If your site can not accommodate a septic system in compliance with the OWTS Rules, you may apply to DEM for a variance from the rules which can not be met. Variance applications require more effort from your designer, **do not always result in an approval**, take longer to process, and involve greater costs than applications which are in compliance with the rules.

Using the Internet to Monitor Application Activity

OWTS application activity may be monitored from your computer using "OWTS Permit Search", a service available through DEM's website (<http://www.dem.ri.gov>).

Approved Application

Your approved application will indicate any special terms of approval on the lower right side of the form. When stamped "Approved" and signed by DEM, your application becomes your "permit to install." Once the OWTS design is approved by DEM, a copy of the approved permit is mailed to the owner, the designer, and the city/town Building Official. The Building Official cannot issue a building permit until he/she receives a copy of the OWTS permit. The permit is valid for 5 years from the date of approval.

System Installation

Following approval of the OWTS application, installation may begin. Your designer must call DEM to notify the Onsite program of the "Start of Construction" within 24 hours of beginning the installation. If DEM has indicated required

inspections in the permit, the designer will be required to contact DEM to arrange for the required inspection(s). The components of the system will be delivered to the site and your installer will excavate the soil to accommodate the components of the system. Beware that during excavation, conditions may be encountered that were not anticipated or uncovered during the soil evaluation. Should such a situation occur, the job will be halted and additional testing or additional design work may be required before the installation can resume. Once construction of the system is complete, your designer must certify to DEM that the system was installed in accordance with the design and meets DEM OWTS rules.

Certificate of Conformance

Once your system is installed and DEM receives the certification from your designer that the installation is proper, the application process is complete! DEM will issue a Certificate of Conformance, providing a copy to the city/town Building Official, and the system may then be used. The certificate is required before a home can be occupied.

Operation and Maintenance

Operation and maintenance needs differ based on whether a system is a conventional system (septic tank, distribution box and leachfield) or an alternative or experimental (A/E) system (components vary by type of system). However there are some fundamental operation and maintenance considerations common to all system types. Avoid excessive water use by distributing routine activities requiring a lot of water evenly over the week (laundry, running dishwasher) and quickly repairing leaky faucets and toilets. Septic systems function, in part, due to the contribution of bacteria; heavy use of bleach or strong cleaning materials, as well as dumping any paint, organic solvents or other chemical preparations down a sink or toilet, can interfere with the proper functioning of your system. If depleted, the bacterial population will ordinarily restore itself naturally over time provided use of the chemical agent is discontinued.

DEM requires that owners with certain alternative or experimental systems have a maintenance contract with a qualified service provider. DEM's requirements are specified in the system's certification. Your system's designer is required to provide you with detailed operating instructions for your A/E system.

It is wise to have your system inspected regularly, and pumped as needed. One can determine whether the tank needs pumping by measuring the thickness of solids on the bottom of the septic tank and scum on the surface of the wastewater in the septic tank. Systems should be inspected no less frequently than once every five years. Some communities have wastewater management ordinances that may have specific maintenance requirements. Contact your town to obtain current information concerning any such requirements.

Additional Information on Operation and Maintenance

Information on operation and maintenance of your septic system is available in the University of Rhode Island Cooperative Extension On-site Wastewater Training Center's information Sheet "*Maintaining Your Septic System*" (available online at: <http://www.uri.edu/ce/wq/OWT/Factsheets/index.htm>). Detailed information on maintaining a septic system is also available in the DEM publication "Septic System Checkup: The Rhode Handbook for Inspection" (available online at: <http://www.dem.ri.gov/pubs/regs/regs/water/isdsbook.pdf>).