

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES

OWTS Guidance for Repairs in Critical Erosion Areas

May 23, 2014

Recent storms have caused coastal erosion in certain areas of the south shore which may have undermined structures and exposed components of Onsite Wastewater Treatment Systems (OWTS), also known as septic systems. Coastal erosion is a continual process that threatens many structures along Rhode Island's coastline. OWTS repair in these highly vulnerable areas, which are designated by the Rhode Island Coastal Resources Management Council (CRMC) as Critical Erosion Areas, requires a permit from the Rhode Island Department of Environmental Management (DEM) and an assent from CRMC.

The DEM "Rules Establishing Minimum Standards Relating to Location, Design, Construction, and Maintenance of Onsite Wastewater Treatment Systems" (OWTS Rules - <http://www.dem.ri.gov/pubs/regs/regs/water/owts12.pdf>) provide the Department with discretion in approving applications for repair (Rule 17.7.2) on lots with limiting conditions. As such, each application is reviewed on a case-by-case basis with the objective that the design meets the requirements of the regulations to the greatest extent possible and environmental and public health risks are minimized. Because of the unique circumstances posed by coastal erosion, DEM in conjunction with CRMC has developed the guidance below to address OWTS repairs in the CRMC designated Critical Erosion Areas. This guidance applies to residential and commercial facilities located along or near the shoreline subject to coastal erosion or storm surge inundation.

DEM Contact Information for Storm Related OWTS damage and repairs:

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Repairs:

This Repair Guidance consists of a three-tiered structure based on distance from the actively eroding edge of the coastal feature, typically the dune crest or bluff scarp. It is assumed that insufficient land area is available for OWTS repair components to comply with the system location requirements of OWTS Rule 22 (Minimum Setback Distances). The table below applies to OWTS Applications for Repair in critical erosion areas.

| Distance from the Actively Eroding Edge of the Coastal Feature to Any OWTS Component | OWTS Requirement for systems <5000 gpd |
|--|---|
| Less than or equal to 50 feet | Zero Discharge System required. |
| Between 50 and 100 feet | Zero Discharge System or an approved Alternative/Experimental (A/E) system. |
| Beyond 100 feet | Any system that fully complies with all applicable regulations (DEM, CRMC, zoning, etc.). |

The location of the actively eroding edge of the coastal feature must be shown on the site plans and confirmed by CRMC staff. See Administration procedures below.

Please note that expansion of use or increase in wastewater flow is not permissible under a repair application. On some properties erosion from storm action has been so severe that there is no upland property landward of the coastal feature on which to install a new holding tank or approved OWTS. In these cases, an in-ground holding tank or OWTS could not be allowed. Alternatively, holding tanks may need to be installed and elevated with the structure in accordance with DEM requirements and the state building code requirements. Assigned storm damage contacts at DEM and CRMC should be consulted to discuss acceptable remedies for wastewater disposal.

Structural Damage:

In some cases storm forces or erosion may have damaged a structure so extensively that the existing OWTS may need to be reviewed for compliance with current OWTS standards. Rule 17 of the OWTS regulations describes the requirements for upgrades. A new OWTS may be required even if there is no apparent damage to the existing OWTS. The existing OWTS must be evaluated for compliance with the OWTS rules when the following structural repairs are required or proposed:

- if the structure damage is greater than 50%, as determined by the local building official;
- if CRMC determines that the building must be moved to a different location on the lot; or
- if the property owner elevates the structure to meet FEMA flood base elevation requirements

A System Suitability Determination (SSD) Application may be filed to obtain a determination of compliance or if an upgrade is required. Where an upgrade is required, an approval under an Application for Alteration must be obtained prior to undertaking construction. A variance application will not be required where OWTS rule setbacks are not met provided that any and all variances are identified, no increase in flow is proposed, the replacement system complies with the setback table above, and no other feasible alternative exists. Systems that were installed after February 6, 2002 but not damaged by a storm are expected to be compliant with current standards. Should there be any questions concerning the upgrade requirements as it may apply to a specific case, please call the DEM OWTS program contacts. DEM will be available to meet with the designer and/or owner onsite to facilitate a determination of the requirements. In cases falling

below these structural damage thresholds where the OWTS was also damaged, needed repairs may be installed after receiving approval under the Application for Repair.

Zero Discharge System:

Zero Discharge Systems include, but are not limited to:

- Holding tanks for all wastewater; or
- Compost toilet or incinerator toilet for blackwater and a holding tank for graywater.

A/E Technology:

A listing of Department approved A/E technology may be found at:

<http://www.dem.ri.gov/programs/benviron/water/permits/isds/pdfs/ialist.pdf>

Holding Tank Requirements:

Holding tanks must comply with Rule 28 of the OWTS Rules. Holding tanks may be reduced in volume by 40% where composting toilets or incinerator toilets are used in lieu of all conventional flush toilets.

Placement of Fill or Structures:

Placement of fill or structures within velocity/flood zones should be avoided. Exterior composting chambers and holding tanks should be located below existing grade where possible and suitably anchored to resist buoyant forces. However, if this is not possible then chambers or tanks may be installed above base flood elevation or within the structure, subject to the approval of local building officials.

Priority with respect to other standards:

With the exception of setback distances to drinking water supplies, the Department will generally give priority to maximizing the setback of any tank, treatment structure, or leachfield to the eroding edge of the coastal feature when evaluating competing constraints. For example, the Department will generally favor maximizing the setback distance to the eroding edge of the coastal feature and allow encroachment into the ten (10) foot setback from the property line or street line. Likewise, the Department may allow closer setbacks to building foundations. In particular, placement of OWTS components within fifteen (15) feet of pilings will ordinarily be allowed. Any proposed reduction in separation distances to water lines or water services must be approved by the local water utility and meet all construction requirements including sleeving or relocation.

Please note that local building or zoning codes may apply and affect the location of OWTS components. Local requirements should be taken into consideration during design.

Easements:

Applicants may propose obtaining rights or easements to nearby properties for OWTS components, including leachfields, where such option will achieve greater compliance with this guidance or standards in the OWTS rules. Fully executed agreements, easements and local approvals for street crossings, in proper legal form, must be submitted with the application.

Administration:

The respective agency applications to place system components within 100 feet of the actively eroding edge of the coastal feature in Critical Erosion Areas should be submitted to CRMC and DEM concurrently. DEM and CRMC will undertake joint reviews. If errors in plans concerning the location of the actively eroding edge of the coastal feature are uncovered during preliminary review, the application will be found deficient and returned to the applicant. Designers are urged to contact DEM or CRMC prior to submittal for further guidance on special problems that may arise during design.