



# FACT SHEET

Office of Water Resources- Onsite Program

## WET SEASON GROUNDWATER TABLE MONITORING

Wet season monitoring of the seasonal high groundwater table may be conducted either before or after a soil evaluation in accordance with Rule 15.12 of the Onsite Wastewater Treatment System (OWTS) Rules. The "wet season" extends from January 1 to April 1 of each year. When installing monitoring wells, precautions must be taken to ensure excessive fines do not enter the test pipe. Filter fabric must be placed around test pipes to minimize soil intrusion. The pipe must be capped and the ground surface immediately surrounding the test pipe mounded and tamped to prevent surface water from influencing the monitoring observations.

All wet season monitoring submittals must be completed in full and accompanied by a locus map, with the site identified, and plot plan depicting location of test holes on the site, referenced to fixed points such as a street, utility pole, or other permanent, marked object such as a large tree or boulder. Include lot lines, plat and lot numbers, street names, north arrow and location of subsurface drains. Submittal must include proper fee; submittals received with the incorrect fee will be returned. Test holes and fixed points must be clearly labeled and flagged in the field for easy identification.

**Subdrains-** Subsurface drains used to lower the groundwater table must be monitored through one complete wet season. Subdrains must be constructed before the start of the wet season and monitored by the designer between January 1 through April 15 (Note: The period for subdrain monitoring is longer than the "wet season"). The Request for Water Table Verification (WTV) to monitor the effectiveness of subdrains must be submitted to the Onsite Program prior to January 30. The "Wet Season Monitoring Data" form should be used to report supplemental readings taken *after* Water Table Verification Applications have been submitted.

### Wet Season Monitoring

Wet season groundwater table monitoring may be deemed necessary based on the results of a soil evaluation, pursuant to OWTS Rule 15.5.3. Applicants may elect to conduct wet season groundwater monitoring during the wet season prior to conducting a soil evaluation. Note that a soil evaluation **will still be required** in order to determine site suitability as part of a complete OWTS application to the Department. DEM recommends against undertaking the wet season monitoring procedure without first having conducted a soil evaluation because it may involve an unnecessary expense.

To conduct wet season testing at the site a licensed Class II or Class III Licensed Designer or Soil Evaluator follows the procedure established in OWTS Rule 15. The Designer or Soil Evaluator monitors and takes measurements of the groundwater table depth in each test pipe at appropriate times during the wet season. The information is recorded on the Water Table Verification form and submitted to DEM, postmarked by April 1. The "Wet Season Monitoring Data" form should be used to report supplemental readings taken after the WTV application has been submitted or if the Designer wishes to change his/her determination of the seasonal high groundwater table.

### Individual Lots

Wet season groundwater monitoring forms for individual lots are available at DEM's offices on the second floor of the Foundry Building, 235 Promenade Street, Providence; by calling the Onsite Program at (401)222-6820; or on DEM's website at <http://www.dem.ri.gov>.

For each test hole, at least three groundwater table measurements must be taken. The observations must be made a minimum of 5 days apart. Per OWTS Rule 15.12.4(B), the first reading must be taken no sooner than 48 hours after excavation. Wet season groundwater monitoring submittals which do not include at least 3 readings for each test hole will be returned. On lots where the depth to groundwater is expected to be less than 4 feet, monitoring should be conducted throughout the entire wet season to assure that the seasonal high groundwater table has been observed.

The fee for wet season monitoring is \$100.00 per OWTS.

### **Subdivisions**

Submittals shall be made on the postcard-size "Request for Verification of Ground Water Table" form and shall include the Subdivision Suitability Application and the proper fee. A plan depicting test hole location and trails (as applicable) must also be included. All trails and test holes must be flagged in the field with trail flagging placed not more than 50 feet apart.

"Request for Verification of Ground Water Table" forms are available at DEM's offices at the Foundry Building, 235 Promenade Street, Providence or by calling the OWTS Program at 222-6820.

The fee for wet season monitoring for subdivision lots is \$100.00 per OWTS.

### **Monitoring Depth to Groundwater and Estimating the Seasonal High Groundwater Table**

DEM monitors water table fluctuations throughout the year by periodically measuring water table depths at test wells in various locations around the state. DEM posts summaries of the data on its website at <http://www.dem.ri.gov>.

The United States Geological Survey also maintains a database of hydrological information for Massachusetts and Rhode Island. Information on groundwater table levels may be found via a link titled "USGS Water Table Information" located on the web page of DEM's Groundwater Table Adjustment Factors.

A technique for estimating the seasonal high groundwater table using reference test wells is described in a report published by the U.S. Geological Survey entitled "A Technique for Estimating Groundwater Levels at Sites in Rhode Island from Observation-Well Data" by Socolow, Frimpter, Turtora, and Bell dated 1994. Copies are available online from the USGS at <<http://pubs.water.usgs.gov/wri944138/pdfs/wrir944138.pdf>>.