

# Technical Reclamation Memorandum

## TRM # 15

Date: February 22, 1984  
From: Robert E. Nickel, Director  
Division of Permits *(Signature)*



Subject: Sediment Pond Design Standard  
for Meeting Settleable Solids

The OSM revised final regulations pertaining to sediment pond design (FR 44032, September 26, 1983) allow a pond to be sized to "contain" the runoff from the 10-year, 24-hour storm as one acceptable method of demonstrating that the pond can meet the settleable solids effluent limitation. OSM has defined the "contained" volume as the volume between the sediment pool (sediment clean-out) elevation and the principal spillway crest or invert elevation.

Analysis by the Division of Permits confirms that ponds designed to contain the 10-year, 24-hour runoff volume should produce a settleable solids concentration equal to or less than the effluent limitation. In most cases, ponds designed using the "Kentucky Graphical Method for Sediment Pond Design" (TRM #13) have a storage volume between the sediment pool and principal spillway which is significantly less than the 10-year, 24-hour runoff volume. Since the new OSM design standard is conservative and does not conflict with existing Kentucky regulations, the division will accept ponds sized with this design standard as adequate to meet the settleable solids effluent limitation.

The following procedure should be used to design a pond to contain the 10-year, 24-hour runoff volume.

- (1) Provide a storage volume between the top of the sediment pool and the crest or invert of the principal spillway equal to the runoff volume from the entire watershed (both disturbed and undisturbed areas) for the 10-year, 24-hour storm. The 10-year runoff volume may be calculated using TRM #13 (Figure 2), the SCS curve number method, or other appropriate procedures. It is not necessary to provide pumps, siphons, or other methods of dewatering to empty the pool between storm events.
- (2) Using storage routing or other applicable methods, design a single open spillway or combination principal and emergency spillway system consistent with the structure size and design storm requirements contained in 405 KAR 16:090 or 18:090. It is not necessary to design the emergency spillway such that there will be no flow out the emergency at the 10-year, 24-hour storm event.

Questions concerning the application of the settleable solids design standard should be directed to Jim Wade or Bobby Salyers at (502)564-2320.