

**SUBCHAPTER G: SURFACE WATER DRAINAGE**  
**§§330.301, 330.303, 330.305, 330.307**  
**Effective March 27, 2006**

**§330.301. Applicability.**

Permits and registrations for units that existed before the comprehensive rule revisions in this chapter as adopted in 2006 (2006 Revisions) to this subchapter became effective remain valid, except as provided by this subchapter. If existing authorizations do not comply with the 2006 Revisions, the permittee or registrant is under an obligation to apply for a modification not subject to public notice in accordance with §305.70(1) of this title (relating to Municipal Solid Waste Permit and Registration Modifications) within 180 days to comply with the 2006 Revisions to this subchapter. Timely submission of an application to modify qualifies the owners or operators of existing units to operate under requirements contained in the existing authorization until a final decision is made on the application.

Adopted March 1, 2006

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**§330.303. Surface Water Drainage for Municipal Solid Waste Facilities.**

(a) A facility must be constructed, maintained, and operated to manage run-on and runoff during the peak discharge of a 25-year rainfall event and must prevent the off-site discharge of waste and feedstock material, including, but not limited to, in-process and/or processed materials.

(b) Surface water drainage in and around a facility shall be controlled to minimize surface water running onto, into, and off the treatment area.

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**§330.305. Additional Surface Water Drainage Requirements for Landfills.**

(a) Existing or permitted drainage patterns must not be adversely altered.

(b) The owner or operator shall design, construct, and maintain a run-on control system capable of preventing flow onto the active portion of the landfill during the peak discharge from at least a 25-year rainfall event.

(c) The owner or operator shall design, construct, and maintain a runoff management system from the active portion of the landfill to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

(d) The landfill design must provide effective erosional stability to top dome surfaces and external embankment side slopes during all phases of landfill operation, closure, and post-closure care in accordance with the following.

(1) Estimated peak velocities for top surfaces and external embankment slopes should be less than the permissible non-erodible velocities under similar conditions.

(2) The top surfaces and external embankment slopes of municipal solid waste landfill units must be designed to minimize erosion and soil loss through the use of appropriate side slopes, vegetation, and other structural and nonstructural controls, as necessary. Soil erosion loss (tons/acre) for the top surfaces and external embankment slopes may be calculated using the Soil Conservation Service of the United States Department of Agriculture's Universal Soil Loss Equation, in which case the potential soil loss should not exceed the permissible soil loss for comparable soil-slope lengths and soil-cover conditions.

(e) Dikes, embankments, drainage structures, or diversion channels sized and graded to handle the design runoff must be provided. The slopes of the sides and toe will be graded in such a manner as to minimize the potential for erosion. The surface water protection and erosion control practices must maintain low non-erodible velocities, minimize soil erosion losses below permissible levels, and provide long-term, low maintenance geotechnical stability to the final cover.

(1) The owner or operator shall maintain the collection, drainage, and/or storage units as designed, and shall restore and repair the drainage system in the event of washout or failure; and

(2) The owner or operator shall control erosion and sedimentation, including having interim controls for phased development.

(f) The owner or operator shall assess the existing and proposed drainage characteristics of the facility using the following methods.

(1) Calculations for areas of 200 acres or less must follow the rational method and utilize appropriate surface runoff coefficients, as specified in the Texas Department of Transportation (TxDOT) Bridge Division Hydraulic Design Manual. Time of runoff concentration as defined within the manual generally will not be less than ten minutes for rainfall intensity determination purposes. The owner or operator may use equivalent or better methods approved by the executive director.

(2) Calculations for discharges from areas greater than 200 acres must be computed by using United States Geological Survey/Department of Transportation Federal Highway Administration hydraulic equations compiled by the United States Geological Survey and the TxDOT (TxDOT Administrative Circular 36-86); the Hydrologic Engineering Center-Hydrologic Modeling System, Hydraulic Engineering Center-River Modeling System, or legacy computer programs developed through the Hydrologic Engineering Center of the United States Army Corps of Engineers; or equivalent or better methods approved by the executive director.

(g) The owner or operator shall handle, store, treat, and dispose of surface or groundwater that has become contaminated by contact with the working face of the landfill or with leachate in accordance with §330.207 of this title (relating to Contaminated Water Management). Storage areas for this contaminated water must be designed with regard to size, locations, and methods.

**§330.307. Flood Protection for Landfills.**

(a) The facility shall be protected from flooding by suitable levees constructed to provide protection from a 100-year frequency flood and in accordance with the rules of the commission relating to levee improvement districts and approval of plans for reclamation projects or the rules of the county or city having jurisdiction under Texas Water Code, §16.236, as implemented by Chapter 301, Subchapter C of this title (relating to Approval of Levees and Other Improvements).

(b) Flood protection levees must be designed and constructed to prevent the washout of solid waste from the facility.

(1) A freeboard of at least three feet must be provided except in those cases where a greater freeboard is required by the agency having jurisdiction under Texas Water Code, §16.236.

(2) Such levees must not significantly restrict the flow of a 100-year frequency flood nor significantly reduce the temporary water storage capacity of the 100-year floodplain.

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