

**RULES OF THE  
ENVIRONMENTAL PROTECTION  
COMMISSION  
OF HILLSBOROUGH COUNTY**

**CHAPTER 1-5  
WATER  
QUALITY STANDARDS**

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**Part I           GENERAL**

**1-5.01   DECLARATION AND INTENT**

The Environmental Protection Commission of Hillsborough County ("Commission"), in order to more properly protect the waters of Hillsborough County, declares that the presence of pollutants in excess of concentrations, standards, or criteria hereinafter provided is harmful to the waters of this county and the presence of pollution is deemed to be prima facie evidence of pollution of the waters of Hillsborough County and the same is expressly prohibited. In lieu of maintaining its own criteria, the Commission adopts the State of Florida's water quality criteria, as amended from time to time and, as detailed below, and finds that the criteria have been established through rigorous testing, review, and analysis by the Florida Department of Environmental Protection ("Department") and US Environmental Protection Agency. Where any standard or criteria for one pollutant or constituent conflicts in this rule, the more stringent shall apply.

*Section History - Amended 11/10/04; Amended 8/9/12 and effective 8/20/12.*

**1-5.011   DEFINITIONS**

In construing the Hillsborough County Environmental Protection Commission Act, as amended, and the Rules of the Commission, the following words and phrases shall have the following meanings unless some other meaning is clearly indicated within the content of this chapter:

(1) "Waters of Hillsborough County" shall consist of the waters and the physical features which, regularly or intermittently, contain water and shall include, but not be limited to, bays, rivers, streams, lakes, ponds, swamps, springs, impoundments and all other waters or bodies of water, including fresh, brackish or saline, tidal or intermittent, surface or groundwater, which are located, either entirely or partially, within the geographic boundaries of Hillsborough County.

(2) "Department" shall mean the Florida Department of Environmental Protection.

(3) "Groundwater" shall mean water beneath the surface of the ground within a zone of saturation, whether or not flowing through known and definite channels.

(4) "Surface water" shall mean water upon the surface of the earth, whether contained in bounds created naturally or artificially or diffused. Water from natural springs shall be classified as surface water when it exits from the spring onto the earth's surface.

*Section History - Amended 11/10/04; Amended 8/9/12 and effective 8/20/12.*

**Part II          WATER QUALITY**

**1-5.04   WATER QUALITY STANDARDS**

(1) **COMPLIANCE.** An action or omission that causes any Waters of Hillsborough County to fail to comply with any standard or criteria in this chapter shall be a violation of the Hillsborough County Environmental Protection Commission Act and rules.

(2) **SURFACE WATER QUALITY STANDARDS.** The surface water quality standards, classifications, definitions, and criteria established or adopted in Sections 62-4.242, 62-4.243, 62-4.244, 62-302.200, 62-302.300, 62-302.400, 62-302.500, 62-302.520, 62-302.530

(including the .530 Table), 62-302.700, and 62-302.800 Florida Administrative Code (F.A.C.) as they may be amended from time to time shall apply to all surface waters of Hillsborough County and are adopted and incorporated herein.

**(3) GROUNDWATER QUALITY STANDARDS.** The groundwater quality standards, groundwater classifications, and criteria established or adopted in Sections 62-520.400, 62-520.410, 62-520.420, 62-520.430, and 62-520.440, F.A.C. as they may be amended from time to time, shall apply to all groundwaters of Hillsborough County and are adopted and incorporated herein.

*Section History - Amended 11/10/04; Amended 8/9/12 and effective 8/20/12.*

### **Part III EARTHEN DAMS**

#### **1-5.05 EARTHEN DAMS - MINIMUM STANDARDS**

All earthen dams for impounding liquid wastes above natural ground elevation shall be constructed in accordance with the design prepared or approved by a Florida registered professional engineer competent in the field of dam design, construction, and maintenance and shall bear his signature and seal. Such dams shall be constructed in accordance with the following minimum standards and the requirements of Chapter 62-672, F.A.C., as it may be amended from time to time; however, subject to the approval of the Executive Director, the requirements of (12.0) shall be satisfied by filing a copy of any approval or permit for such a dam from the Department and supplying the Commission copies of all reports that are required by the Department concerning such a dam.

##### **(1.0) Site Preparation**

(1.1) Remove all trees, stumps, palmettos, and other vegetation.

(1.2) Remove all muck, mud, slime, and other material that has a tendency to flow under a heavy load, from the entire base of the dam.

(1.3) The original ground surface not disturbed in complying with Section 1.1 of these specifications shall be swept clean and scarified by disking, harrowing, bulldozing, or other similar treatment.

(1.4) The dam base shall be kept well

drained during construction, except when placing hydraulic fill.

(1.5) The foundation shall be safe from shear failure considering design shear strength, water pressures, and fill load weight distribution. Foundation stability calculations shall assume that the natural ground surface outside of the embankment is saturated. A foundation bearing capacity safety factor of not less than 1.5 shall be provided, based on inspection and testing of the foundation soils.

##### **(2.0) Dam Design**

###### **(2.1) Soil Testing**

A program of soil sampling adequate to determine the characteristics of the ground under the proposed dam and of the material to be used in dam construction shall be performed. Sampling shall include borings and/or in-place sampling from the exposed excavation face.

(2.1a) Tests including, but not limited to, the determination of shear strengths and permeabilities of the foundation and embankment soils, at soil densities to be used in construction, shall be performed.

(2.1b) All soil test data used for design shall be derived from tests performed in compliance with American Society of Testing Materials, American Association of State Highway Officials, or U.S. Corps of Engineering's soil testing specifications and procedures.

###### **(2.2) Stability Analysis, Basic Requirements**

A flow net analysis shall be made to determine the location of the phreatic surface, flow lines, and head lines within the foundation and dam being designed. The flow net analysis may be based on either graphical construction, electrical or liquid analogs, or on soil prototype methods; permeability's used for the analysis shall be based on the soil tests. The flow net and Stability analyses shall use the maximum pool elevation with not less than 5 feet below the inside crest of the dam.

###### **(3.0) Cord Ditching (cut-off trench)**

(3.1) A safety factor of at least 2.0 shall be used in design for protection against seepage instability. A core ditch (cut-off trench), clay dam core, core drain, blanket drain, toe drain, or other seepage control devices may be required to meet the 2.0 safety factor.

#### **(4.0) Drainage**

Drainage facilities shall be provided to maintain the water level on the outside of the dam within design limitations.

#### **(5.0) Cross Section Design**

(5.1) There shall be a minimum freeboard of five feet below the inside crest.

(5.2) Both inside and outside slopes shall be no steeper than two to one.

(5.3) The outside of the top should be higher than the inside top to force all crest drainage to the inside of the dam.

(5.4) A safety factor of at least 1.75 shall be provided against horizontal sliding of the embankment.

(5.5) A safety factor of at least 1.5 shall be provided against separation and horizontal sliding due to seepage through a portion of the other embankment.

(5.6) A safety factor of at least 1.5 for cast dams and for all other construction shall be provided against shear failure of any circular arc in either the inside or outside embankment slopes. It is imperative that water pressure distribution be included in the analysis.

#### **(6.0) Materials of Construction**

(6.1) Dams shall be constructed of material free of stumps, trees, palmettos and other vegetative material.

(6.2) Materials such as muck, mud, and slimes shall not be used.

#### **(7.0) Methods of Construction**

(7.1) Each dam shall be constructed to meet or exceed the minimum safety requirements of the specific design. Draglines, drag scrapers, tractors, or other earth-moving equipment may be used to place materials in dam construction.

(7.2) Regardless of the method of construction, the soil shall be compacted to densities equal to or greater than those required for seepage and structural stability as specified in Section 3.0.

#### **(8.0) Water Level Control Structure Installations**

(8.1) Seepage shall not be permitted to be concentrated around any water level control structure(s) pipe or any other conduit or discontinuity. All conduits through dams shall have a minimum of two seepage collars. The seepage collars shall be embedded in the middle 1/3 of the embankment. The seepage collar total width

shall be at least twice the conduit's outside diameter, or 4 feet, whichever is greater.

(8.2) All pipes and pipe joints extending through the dam shall be made leakproof, and shall be constructed of material suitable for the carried fluids and loads imposed.

(8.3) Backfill around conduits shall consist of soil compacted to densities equal to or greater than those of the surrounding embankment.

(8.4) In order to avoid cracks associated with differential settlement, conduits shall not be supported rigidly by piles or piers.

(8.5) A sufficient water level control structure(s) capacity must be installed in an area to release water as necessary during periods of heavy rainfall. Water level control structure(s) capacity shall be provided to release 12 inches of rain in 24 hours on the watershed. All ponds containing less than 25% solids and covering an area greater than 50 acres shall have at least 2 water level control structure(s). In situations where watershed drainage cannot be diverted and flow into a settling area, water level control structure(s) capacity shall be installed to release the additional flow.

#### **(9.0) Building of Dams in Mined-out Cuts**

(9.1) Cross or partition dams built through mined areas shall not be permitted unless they satisfy all of the seepage and structural stability requirements and safety factors of section 1.0 through 9.5.

(9.2) Tailings may be used to construct dams across a mined area, providing they satisfy all of the seepage and structural stability requirements and safety factors of Sections 1.0 through 9.5.

(9.3) Perimeter dams constructed in mined areas shall not be constructed on slimes or soft muds. Construction procedures may be required to displace slimes.

#### **(10.0) Building Dams using Pumped-in Tailings**

Dams using pumped-in tailings will be permitted under the following conditions:

(10.1) The dam shall meet the seepage and structural stability requirement of Section 1.0 through 9.5.

(10.2) Depositing Tailings on Slopes of Existing Dams: If water within the settling areas to be enclosed with a tailings dam is above

ground level, and if tailings are discharged inside or outside of an existing dam, any of the three following procedures may be used:

(10.2a) When the tailings are not de-watered, the discharge locations shall be changed at least every 8 hours and the section of dam pumped shall be allowed to drain at least 16 hours before pumping on this section again.

(10.3b) If the tailings are de-watered to not less than 50% solids by weight at the discharge point, the tailings may be deposited continuously.

(10.4c) If the discharge point is at or beyond the point at which the toe meets the foundation, or the discharge point is at least 75 feet from the point at which water meets the dam, the tailings may be deposited continuously.

#### **(11.0) Operational Requirements**

(11.1) The water level in a settling area shall not be raised or lowered more than one foot in a 24 hour period. It shall not be lowered more than 5 feet per month.

(11.2) A good growth of grass shall be planted and maintained on all exposed portions of dams to prevent wind and water erosion. Grasses such as Bermuda Carpet, Centipede, Bahia, and other varieties that do not grow very high, and which form a good sod, are satisfactory.

(11.3) Each active waste disposal area shall be inspected not less than once each day until one month after the area has been made inactive, and thereafter at least once each month for surface erosion, excessive toe seepage, cracking or sluffing, and condition of water level control structures and pool level measuring devices. A continuous maintenance program shall be followed, as required, to insure that the actual dam cross section meets design criteria.

(11.4) A navigable all weather roadway shall be provided at the top of the dam. Inspection access for the outside slope and toe shall be provided if the height of the dams precludes adequate inspection from the top and where a public roadway does not already provide such access.

#### **(12.0) Documentation**

(12.1) All soil tests, design calculations, and construction data and plans shall be maintained by the owner in a permanent file. A plan of the dam outline and typical dam design

cross sections shall be furnished to the Commission within 30 days after completion of the dam.

(12.2) All monthly and other inspection reports shall be maintained by the owner in a permanent file. A written report shall be submitted monthly to the Commission certifying compliance with these specifications as to:

- a. Inspection procedures and schedules, and
- b. Freeboard and level fluctuation requirements.

(12.3) Semi-annual inspections shall be made by a qualified Florida registered engineer who shall furnish a certified report of each inspection to the owner and to the Commission. The owner shall maintain these in a permanent file.

#### **(13.0) Contingency Plans.**

(13.1) The owner of the dam shall prepare contingency plans to be followed in the event of a dam failure. Each plan shall include mapping showing areas subject to downstream flooding and a notification of local and state officials. The contingency plans shall be updated annually and maintained on file for review by Commission staff upon request.

*Section History –Amended 8/9/12 and effective 8/20/12.*

### **Part IV PERMITS**

#### **1-5.06 PERMITS**

(1) A permit from the Executive Director may be required for the construction, alteration, expansion, or operation of any installation, facility, or activity if any of the aforementioned actions are exempt from or not regulated by Department rules, and which may reasonably be expected to discharge into Waters of the County pollutants or contaminants in excess of concentrations, standards, or criteria herein created or adopted. This section shall not limit the Executive Director's authority to issue permits or other authorizations established in any Commission rule.

(2) By adopting certain provisions of chapters 62-302 and 62-4, F.A.C. in section 1-5.04, the Commission recognizes mixing zones and site specific alternative criteria as water quality standard relief mechanisms. Applicants

may only seek these relief mechanisms from the Department.

(3) In an effort to streamline permitting, the Executive Director shall review permit applications received by the Department that are not specifically delegated to the Commission if they have a potential to pollute Waters of the County, and applicants shall submit a fee as detailed in Chapter 1-6.

*Section History - New 11/10/04*

***Rule History:***

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