

**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 detailed in section 1-5.04, and finds that the criteria have been established through rigorous testing, review, and analysis by the Department of Environmental Protection 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

1-5.011 DEFINITIONS

In construing the Hillsborough County Environmental Protection Commission Act, as amended, and the Rules of the Environmental Protection Commission of Hillsborough County, 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 the waters 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 underground, 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

Part II WATER QUALITY

**1-5.02 MINIMUM CONDITIONS OF ALL
WATERS; TIMES AND PLACES**

The following minimum conditions are applicable to all waters, at all places and at all times. Within the limits of this county all such waters shall be free from:

1. Settleable Substances - substances attributable to municipal, industrial, agricultural, or other discharges that will settle to form putrescent or otherwise objectionable sludge

deposits.

2. Floating Substances - floating debris, oil, scum, and other floating materials attributable to municipal, industrial, agricultural, or other discharge in amounts sufficient to be unsightly or deleterious.

3. Deleterious Substances - materials attributable to municipal, industrial, agricultural, or other discharges producing color, odor, or other conditions in such degree as to create a nuisance.

4. Toxic Substances - substances attributable to municipal, industrial, agricultural or other discharges in concentrations or combinations which are toxic or harmful to humans, animal, plant or aquatic life.

1-5.03 GENERAL WATER QUALITY

Sewage, Industrial Wastes or Other Wastes - Any industrial wastes or other wastes shall be effectively treated by the latest modern technological advances to comply with permit conditions and this rule's established criteria and standards, unless other relief or condition is granted in a Department permit or order.

Section History - Amended 11/10/04

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. **CLASSIFICATIONS.** The surface waters of Hillsborough County are classified by the Department according to their usage as follows:

a. Class I - Public Water Supplies: any waters from which water is withdrawn for treatment and distribution as a potable supply.

b. Class II - Shellfish Harvesting: waters in areas to be utilized for shellfish harvesting.

c. Class III - Recreation - Propagation and Management of Fish and Wildlife: waters to be used for recreational purposes, including such body contact activities as swimming and water skiing; and for the maintenance of a well-balanced fish and wildlife population.

d. Class IV - Agricultural and Industrial Water Supply: waters to be used for agricultural or stock watering, or industrial water supply.

e. Class V - Navigation, Utility and Industrial Use: waters which will be suitable for navigation and any other uses except for waters previously classified above.

3. **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 as amended on July 19, 2004 (62-302) and May 1, 2003 (62-4) shall apply to all surface waters of Hillsborough County and are adopted and incorporated herein.

4. **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 amended on December 9, 1996 shall apply to all groundwaters of Hillsborough County and are adopted and incorporated herein.

Section History - Amended 11/10/04

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; however, subject to the approval of the Pollution Control Director the requirements of 12.0 shall be satisfied by filing a copy of any approval or permit for such a dam from the Florida Air and Water Pollution Control Commission and supplying the Commission copies of all reports with the said Florida

Commission 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, electri-

cal 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 as soon as available.

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.

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 - Created 11/10/04

Rule History:

Adopted 10/14/76

Amended in part 11/10/04