

# Article 10. Erosion Control and Stormwater Management

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## **Article 10. Erosion Control and Stormwater Management**

Article 10 contains the requirements that relate to the impact of rainfall events on the natural and manmade environment, including the erosion and siltation effects of site grading and land disturbance activities and the control of stormwater flows and dams.

### **Sec. 1001. Standards Incorporated by Reference.**

#### **1001.01 Stormwater Management.**

The design, construction, operation and maintenance of the stormwater system, including stormwater detention facilities and all conveyances whether piped or open, shall conform to the provisions of the Georgia Stormwater Management Manual, published August 2001 and as may be amended by local addenda of Harris County from time to time, or as periodically updated or expanded based on improvements in science, engineering, monitoring or local maintenance experience.

#### **1001.02 Owner Responsibilities.**

Any property where erosion problems are resulting in sedimentation or where sediment leaves the property is in violation of this Development Code, regardless of whether construction activity is occurring or whether a permit has been issued.

- (a) Proper notice shall be considered a notice of the violation mailed via certified mail to the property owner's address on record with the Tax Assessor's office on the date of the violation.
- (b) Once proper notice has been issued, the property owner shall have five days to correct this violation.

### **DIVISION 1. SOIL EROSION, SEDIMENTATION AND POLLUTION CONTROL ORDINANCE.**

#### **Sec. 1002. Purpose and Intent.**

The purpose of this Division is to control erosion and sedimentation by requiring proper provisions for storm water runoff and the protection of soil surfaces during and after any land disturbing activity so as to promote the safety, public health and general welfare of the people of Harris County.

#### **Sec. 1003. Definitions Related to Erosion, Sedimentation and Pollution Control.**

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning. For additional definitions that applicable to entire Development Code and not just this Division, see Article 13 (Glossary) of this Development Code.

**Best Management Practices (BMP's)-Erosion and Sedimentation Control:** These include sound conservation and engineering practices to prevent and minimize erosion and resultant sedimentation, which are consistent with, and no less stringent than, those practices contained in the Manual for Erosion and Sediment Control in Georgia published by the Commission as of January 1 of the year in which the land-disturbing activity was permitted.

**Board (DNR):** The Board of the Georgia Department of Natural Resources.

Buffer: The area of land immediately adjacent to the banks of state waters in its natural state of vegetation, which facilitates the protection of water quality and aquatic habitat. (Stream Buffer)

Certified Personnel (GSWCC): A person who has successfully completed the appropriate certification course approved by the Georgia Soil and Water Conservation Commission (GSWCC).

Commission (GSWCC): The Georgia Soil and Water Conservation Commission (GSWCC).

CPESC: Certified Professional in Erosion and Sediment Control with current certification by EnviroCert, Inc., which is also referred to as CPESC or CPESC, Inc.

Department: The Georgia Department of Natural Resources (DNR).

Design Professional: A Professional licensed by the State of Georgia in the field of: engineering, architecture, landscape architecture, forestry, geology, or land surveying; or a person that is a Certified Professional in Erosion and Sediment Control (CPESC) with a current certification by EnviroCert, Inc. Design Professionals shall practice in a manner that complies with applicable Georgia law governing professional licensure.

Land Disturbance Permit: The authorization necessary to initiate and conduct a land-disturbing activity and to carry out the planned development of land and structures.

Director (EPD): The Director of the Environmental Protection Division or an authorized representative.

District (Conservation): The Pine Mountain Soil and Water Conservation District.

Division (EPD): The Environmental Protection Division (EPD) of the Department of Natural Resources.

EPD: The Environmental Protection Division of the Georgia Department of Natural Resources.

EPD Director: The Director of the Environmental Protection Division of the Georgia Department of Natural Resources.

Erosion, Sedimentation and Pollution Control Plan: A plan required by the Erosion and Sedimentation Act, O.C.G.A. chapter 12-7 that includes, as a minimum, protections at least as stringent as the State General Permit, best management practices, and requirements in Sec. 1006 of this Article.

Final Stabilization: All soil disturbing activities at the site have been completed, and that for unpaved areas and areas not covered by permanent structures and areas located outside the waste disposal limits of a landfill cell that has been certified by EPD for waste disposal, 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or landscaped according to the Plan (uniformly covered with landscaping materials in planned landscape areas), or equivalent permanent stabilization measures as defined in the Manual (excluding a crop of annual vegetation and seeding of target crop perennials appropriate for the region). Final Stabilization applies to each phase of construction.

Metropolitan River Protection Act (MRPA): A state law referenced as O.C.G.A. 12-5-440 et seq., which addresses environmental and developmental matters in certain metropolitan river corridors and their drainage basins.

Nephelometric Turbidity Units (NTU): Numerical units of measure based upon photometric analytical techniques for measuring the light scattered by finely divided particles of a substance in suspension. This technique is used to estimate the extent of turbidity in water in which colloiddally dispersed particles are present.

NOI: A Notice of Intent form provided by EPD for coverage under the State General Permit.

NOT: A Notice of Termination form provided by EPD to terminate coverage under the State General Permit.

Operator: The party or parties that have: 1) operational control of construction project plans and specifications, including the ability to make modifications to those plans and specifications; or 2) day-to-day operational control of those activities that are necessary to ensure compliance with an erosion, sedimentation and pollution control plan for the site or other permit conditions, such as a person authorized to direct workers at a site to carry out activities required by the erosion, sedimentation and pollution control plan or to comply with other permit conditions.

Properly Designed: Designed in accordance with the design requirements and specification contained in the Manual for Erosion and Sediment Control in Georgia (Manual) published by the Georgia Soil and Water Conservation Commission (GSWCC) as of January 1 of the year in which the land-disturbing activity was permitted and amendments to the Manual as approved by the GSWCC up until the date of NOI submittal.

Qualified Personnel: Any person who meets or exceeds the education and training requirements of O.C.G.A. 12-7-19.

Soil & Water Commission: The State Soil and Water Conservation Commission.

Soil and Water Conservation District Approved Plan: An erosion, sedimentation and pollution control plan approved in writing by the Pine Mountain Soil and Water Conservation District.

Soil & Water District: The Pine Mountain Soil and Water Conservation District.

State General Permit: The National Pollution Discharge Elimination System general permit or permits for storm water runoff from construction activities as is now in effect or as may be amended or reissued in the future pursuant to the State's authority to implement the same through federal delegation under the Federal Water Pollution Control Act, as amended, 33 U.S.C. Section 1251, et seq., and subsection (f) of O.C.G.A. 12-5-30.

Stream Buffer: See "Buffer"

Structural Erosion and Sedimentation Control Measures: Practices for the stabilization of erodible or sediment-producing areas by utilizing the mechanical properties of matter for the purpose of either changing the surface of the land or storing, regulating or disposing of runoff to prevent excessive sediment loss. Examples of structural erosion and sedimentation control practices are riprap, sediment basins, dikes, level spreaders, waterways or outlets, diversions, grade stabilization structures, and sediment traps, etc. Such practices can be found in the publication Manual for Erosion and Sediment Control in Georgia.

Vegetative Erosion and Sedimentation Control Measures: Measures for the stabilization of erodible or sediment-producing areas by covering the soil with:

1. Permanent seeding, sprigging or planting, producing long-term vegetative cover; or
2. Temporary seeding, producing short-term vegetative cover; or

3. Sodding, covering areas with a turf of perennial sod-forming grass.

Such measures can be found in the publication Manual for Erosion and Sediment Control in Georgia.

## **Sec. 1004. Exemptions.**

### **1004.01 Applicable exemptions.**

This article shall apply to any land-disturbing activity undertaken by any person on any land except for the following:

- (a) Surface mining, as the same is defined in O.C.G.A. § 12-4-72, "The Georgia Surface Mining Act of 1968";
- (b) Granite quarrying and land clearing for such quarrying;
- (c) Such minor land-disturbing activities as home gardens and individual home landscaping, repairs, maintenance work, fences, and other related activities which result in minor soil erosion;
- (d) The construction of single-family residences, when such construction disturbs less than 1 acre and is not a part of a larger common plan of development or sale with a planned disturbance of equal to or greater than 1 acre and not otherwise exempted under this paragraph; provided, however, that construction of any such residence shall conform to the minimum requirements as set forth in O.C.G.A. § 12-7-6 and this paragraph shall be enforced by the local issuing authority. Before any land-disturbing activity covered under this subsection begins, the property owner must provide at least 48 hours' notice, in writing, to the Community Development Department stating that a land-disturbing activity is about to begin and that all BMPs will be followed;
- (e) Agricultural operations as defined in O.C.G.A. § 1-3-3, "definitions", to include raising, harvesting or storing of products of the field or orchard; feeding, breeding or managing livestock or poultry; producing or storing feed for use in the production of livestock, including but not limited to cattle, calves, swine, hogs, goats, sheep, and rabbits or for use in the production of poultry, including but not limited to chickens, hens and turkeys; producing plants, trees, fowl, or animals; the production of aqua culture, horticultural, dairy, livestock, poultry, eggs and apiarian products; farm buildings and farm ponds;
- (f) Forestry land management practices, including harvesting; provided, however, that when such exempt forestry practices cause or result in land-disturbing or other activities otherwise prohibited in a buffer, as established in Section 1005.03(o), no other land-disturbing activities, except for normal forest management practices, shall be allowed on the entire property upon which the forestry practices were conducted for a period of three years after completion of such forestry practices;
- (g) Any project carried out under the technical supervision of the Natural Resources Conservation Service (NRCS) of the United States Department of Agriculture;
- (h) Any project involving less than one acre of disturbed area; provided, however, that this exemption shall not apply to any land-disturbing activity within a larger common plan of development or sale with a planned disturbance of equal to or greater than one acre or within 200 feet of the bank of any state waters, and for purposes of this paragraph, "state waters" excludes channels and drainageways which have water in them only during and immediately after rainfall events and intermittent streams which do not have water in

them year-round; provided, however, that any person responsible for a project which involves less than one acre, which involves land-disturbing activity, and which is within 200 feet of any such excluded channel or drainageway, must prevent sediment from moving beyond the boundaries of the property on which such project is located and provided, further, that nothing contained herein shall prevent the local issuing authority from regulating any such project which is not specifically exempted by paragraphs (a), (b), (c), (d), (e), (f), (g), (I) or (j) of this section;

- (i) Construction or maintenance projects, or both, undertaken or financed in whole or in part, or both, by the Georgia Department of Transportation (GDOT), the Georgia Highway Authority (GHA), or the state road and tollway authority (SRTA); or any road construction or maintenance project, or both, undertaken by Harris County; provided, however, that construction or maintenance projects of GDOT, GHA, or SRTA which disturb one or more contiguous acres of land shall be subject to provisions of O.C.G.A. § 12-7-7.1; except where the GDOT, the GHA, or the SRTA is a secondary permittee for a project located within a larger common plan of development or sale under the state general permit, in which case a copy of a NOI under the state general permit shall be submitted to the local issuing authority, and the local issuing authority shall enforce compliance with the minimum requirements set forth in O.C.G.A. § 12-7-6 as if a permit had been issued, and violations shall be subject to the same penalties as violations by permit holders;
- (j) Any land-disturbing activities conducted by any electric membership corporation or municipal electrical system or any public utility under the regulatory jurisdiction of the public service commission, any utility under the regulatory jurisdiction of the Federal Energy Regulatory Commission, any cable television system as defined in O.C.G.A. § 36-18-1, or any agency or instrumentality of the United States engaged in the generation, transmission, or distribution of power; except where an electric membership corporation or municipal electrical system or any public utility under the regulatory jurisdiction of the public service commission, any utility under the regulatory jurisdiction of the Federal Energy Regulatory Commission, any cable television system as defined in O.C.G.A. § 36-18-1, or any agency or instrumentality of the United States engaged in the generation, transmission, or distribution of power is a secondary permittee for a project located within a larger common plan of development or sale under the state general permit, in which case the local issuing authority shall enforce compliance with the minimum requirements set forth in O.C.G.A. § 12-7-6 as if a permit had been issued, and violations shall be subject to the same penalties as violations by permit holders; and
- (k) Any public water system reservoir.

**Sec. 1005. Minimum Requirements for Erosion, Sedimentation and Pollution Control Using Best Management Practices.**

**1005.01 General Provisions.**

Excessive soil erosion and resulting sedimentation can take place during land-disturbing activities if requirements of the article and the NPDES general permit are not met. Therefore, plans for those land-disturbing activities which are not exempted by this article shall contain provisions for application of soil erosion, sedimentation and pollution control measures and practices. The provisions shall be incorporated into the erosion, sedimentation and pollution control plans. Soil erosion, sedimentation and pollution control measures and practices shall conform to the minimum requirements of Sections 1005.02 and 1005.03 of this article. The

application of measures and practices shall apply to all features of the site, including street and utility installations, drainage facilities and other temporary and permanent improvements. Measures shall be installed to prevent or control erosion, sedimentation and pollution during all stages of any land-disturbing activity in accordance with requirements of this article and the NPDES general permit.

#### **1005.02 Minimum Requirements/BMPs.**

- (a) Best management practices (BMPs) as set forth in Sections 1005.02 and 1005.03 of this article shall be required for all land-disturbing activities. Proper design, installation, and maintenance of BMPs shall constitute a complete defense to any action by the director or to any other allegation of noncompliance with paragraph (b) of this subsection or any substantially similar terms contained in a permit for the discharge of storm water issued pursuant to O.C.G.A. § 12-5-30(f), the "Georgia Water Quality Control Act". As used in this subsection, the terms "proper design" and "properly designed" mean designed in accordance with the hydraulic design specifications contained in the "Manual for Erosion and Sediment Control in Georgia" specified in O.C.G.A. § 12-7-6(b).
- (b) A discharge of storm water runoff from disturbed areas where BMPs have not been properly designed, installed, and maintained shall constitute a separate violation of any land-disturbing permit issued by a local issuing authority or of any state general permit issued by the division pursuant to O.C.G.A. § 12-5-30(f), the "Georgia Water Quality Control Act", for each day on which such discharge results in the turbidity of receiving waters being increased by more than 25 nephelometric turbidity units for waters supporting warm water. The turbidity of the receiving waters shall be measured in accordance with guidelines to be issued by the director. This paragraph shall not apply to any land disturbance associated with the construction of single family homes which are not part of a larger common plan of development or sale unless the planned disturbance for such construction is equal to or greater than five acres.
- (c) Failure to properly design, install, or maintain BMPs shall constitute a violation of any land-disturbing permit issued by a local issuing authority or of any state general permit issued by the division pursuant to O.C.G.A. § 12-5-30(f), the "Georgia Water Quality Control Act", for each day on which such failure occurs.
- (d) The director may require, in accordance with regulations adopted by the Board of Natural Resources, reasonable and prudent monitoring of the turbidity level of receiving waters into which discharges from land disturbing activities occur.
- (e) The local issuing authority may set more stringent buffer requirements than stated in subsection 1005.03(o), in light of O.C.G.A. § 12-7-6(c).

#### **1005.03 Required Protections.**

The rules and regulations, ordinances, or resolutions adopted pursuant to O.C.G.A. § 12-7-1 et seq. for the purpose of governing land-disturbing activities shall require, as a minimum, protections at least as stringent as the state general permit; and BMPs, including sound conservation and engineering practices to prevent and minimize erosion and resultant sedimentation, which are consistent with, and no less stringent than, those practices contained in the Manual for Erosion and Sediment Control in Georgia published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, as well as the following:



- (a) Stripping of vegetation, regrading and other development activities shall be conducted in a manner so as to minimize erosion;
- (b) Cut-fill operations must be kept to a minimum;
- (c) Development plans must conform to topography and soil type so as to create the lowest practical erosion potential;
- (d) Whenever feasible, natural vegetation shall be retained, protected and supplemented;
- (e) The disturbed area and the duration of exposure to erosive elements shall be kept to a practicable minimum;
- (f) Disturbed soil shall be stabilized as quickly as practicable;
- (g) Temporary vegetation or mulching shall be employed to protect exposed critical areas during development;
- (h) Permanent vegetation and structural erosion control practices shall be installed as soon as practicable;
- (i) To the extent necessary, sediment in runoff water must be trapped by the use of debris basins, sediment basins, silt traps, or similar measures until the disturbed area is stabilized. As used in this paragraph, a disturbed area is stabilized when it is brought to a condition of continuous compliance with the requirements of O.C.G.A. § 12-7-1 et seq.;
- (j) Adequate provisions must be provided to minimize damage from surface water to the cut face of excavations or the sloping surfaces of fills;
- (k) Cuts and fills may not endanger adjoining property;
- (l) Fills may not encroach upon natural watercourses or constructed channels in a manner so as to adversely affect other property owners;
- (m) Grading equipment must cross flowing streams by means of bridges or culverts except when such methods are not feasible, provided, in any case, that such crossings are kept to a minimum;
- (n) Land-disturbing activity plans for erosion, sedimentation and pollution control shall include provisions for treatment or control of any source of sediments and adequate sedimentation control facilities to retain sediments on-site or preclude sedimentation of adjacent waters beyond the levels specified in Section 1005.02(b) of this article;
- (o) There is established a 25-foot buffer along the banks of all state waters, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, except where the director determines to allow a variance that is at least as protective of natural resources and the environment, where otherwise allowed by the director pursuant to O.C.G.A. § 12-2-8, where a drainage structure or a roadway drainage structure must be constructed, provided that adequate erosion control measures are incorporated in the project plans and specifications, and are implemented; or along any ephemeral stream. As used in this provision, the term "ephemeral stream" means a stream that under normal circumstances has water flowing only during and for a short duration after precipitation events; that has the channel located above the ground-water table year round; for which ground water is not a source of water; and for which runoff from precipitation is the primary source of water flow. Unless exempted as along an ephemeral stream, the buffers of at least 25 feet established pursuant to O.C.G.A. Part 6 of Article 5, Chapter 5 of Title 12, the "Georgia Water Quality Control Act", shall remain in force unless

a variance is granted by the director as provided in this paragraph. The following requirements shall apply to any such buffer:

- (1) No land-disturbing activities shall be conducted within a buffer and a buffer shall remain in its natural, undisturbed state of vegetation until all land-disturbing activities on the construction site are completed. Once the final stabilization of the site is achieved, a buffer may be thinned or trimmed of vegetation as long as a protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed; provided, however, that any person constructing a single-family residence, when such residence is constructed by or under contract with the owner for his or her own occupancy, may thin or trim vegetation in a buffer at any time as long as protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed; and
- (2) The buffer shall not apply to the following land-disturbing activities, provided that they occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream; cause a width of disturbance of not more than 50 feet within the buffer; and adequate erosion control measures are incorporated into the project plans and specifications and are implemented:
  - a. Stream crossings for water lines; or
  - b. Stream crossings for sewer lines; and
- (p) Nothing contained in O.C.G.A. § 12-7-1 et seq. shall prevent any local issuing authority from adopting rules and regulations, ordinances, or resolutions which contain stream buffer requirements that exceed the minimum requirements in section 1005.02 and 1005.03 of this article.
- (q) The fact that land-disturbing activity for which a permit has been issued results in injury to the property of another shall neither constitute proof of nor create a presumption of a violation of the standards provided for in this article or the terms of the permit.

#### **Sec. 1006. Application and Permitting Process.**

Consideration of the effects of soil erosion, sedimentation and pollution the issuance of permits, approval of rezoning requests and review of subdivision plans is found under the "Other Permits" Division of Article 11 (Procedures and Permits) of this Development Code.

#### **Sec. 1007. Inspection and Enforcement.**

##### **1007.01 Inspection and Enforcement Responsibilities and Processes.**

- (a) Community Development Department will periodically inspect the sites of land-disturbing activities for which permits have been issued to determine if the activities are being conducted in accordance with the plan and if the measures required in the plan are effective in controlling erosion, sedimentation and pollution. Also, the local issuing authority shall regulate primary, secondary and tertiary permittees as such terms are defined in the state general permit. Primary permittees shall be responsible for installation and maintenance of BMPs where the primary permittee is conducting land-disturbing activities. Secondary permittees shall be responsible for installation and maintenance of best management practice where the secondary permittee is conducting land-disturbing activities. Tertiary permittees shall be responsible for installation and

maintenance where the tertiary permittee is conducting land-disturbing activities. If, through inspection, it is deemed that a person engaged in land-disturbing activities as defined herein has failed to comply with the approved plan, with permit conditions, or with the provisions of this article, a written notice to comply shall be served upon that person. The notice shall set forth the measures necessary to achieve compliance and shall state the time within which such measures must be completed. If the person engaged in the land-disturbing activity fails to comply within the time specified, he shall be deemed in violation of this article.

- (b) The local issuing authority must amend its ordinances to the extent appropriate within 12 months of any amendments to the Erosion and Sedimentation Act of 1975.
- (c) The Community Development Department shall have the power to conduct such investigations as it may reasonably deem necessary to carry out duties as prescribed in this article, and for this purpose to enter at reasonable times upon any property, public or private, for the purpose of investigation and inspecting the sites of land-disturbing activities.
- (d) No person shall refuse entry or access to any authorized representative or agent of the local issuing authority, the commission, the district, or division who requests entry for the purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper or interfere with any such representative while in the process of carrying out his official duties.
- (e) The district or the commission or both shall semi-annually review the actions of counties which have been certified as local issuing authorities pursuant to O.C.G.A. § 12-7-8(a). The district or the commission or both may provide technical assistance to any county for the purpose of improving the effectiveness of the county's erosion, sedimentation and pollution control program. The district or the commission shall notify the division and request investigation by the division if any deficient or ineffective local program is found.
- (f) The division may periodically review the actions of counties which have been certified as local issuing authorities pursuant to O.C.G.A. § 12-7-8(a). Such review may include, but shall not be limited to, review of the administration and enforcement of a governing authority's ordinance and review of conformance with an agreement, if any, between the district and the governing authority. If such review indicates that the governing authority of any county certified pursuant to O.C.G.A. § 12-7-8(a) has not administered or enforced its ordinances or has not conducted the program in accordance with any agreement entered into pursuant to O.C.G.A. § 12-7-7(e), the division shall notify the governing authority of the county in writing. The governing authority of any county so notified shall have 90 days within which to take the necessary corrective action to retain certification as a local issuing authority. If the county does not take necessary corrective action within 90 days after notification by the division, the division shall revoke the certification of the county as a local issuing authority.

## **Sec. 1008. Penalties and Incentives.**

### **1008.01 Failure to Obtain a Permit for Land-Disturbing Activity.**

If any person commences any land-disturbing activity requiring a land-disturbing permit as prescribed in this Article without first obtaining said permit, the person shall be subject to revocation of his business license, work permit or other authorization for the conduct of a business and associated work activities within the jurisdictional boundaries of Harris County.

#### **1008.02 Stop-Work Orders.**

- (a) For the first and second violations of the provisions of this article, Community Development Director or designee shall issue a written warning to the violator. The violator shall have 5 days to correct the violation. If the violation is not corrected within 5 days, the Community Development Director or designee shall issue a stop-work order requiring that land-disturbing activities be stopped until necessary corrective action or mitigation has occurred; provided, however, that if the violation presents an imminent threat to public health or waters of the state or if the land-disturbing activities are conducted without obtaining the necessary permit, the director or the local issuing authority shall issue an immediate stop-work order in lieu of a warning;
- (b) For a third and each subsequent violation, the director or the local issuing authority shall issue an immediate stop-work order; and;
- (c) All stop-work orders shall be effective immediately upon issuance and shall be in effect until the necessary corrective action or mitigation has occurred.
- (d) When a violation in the form of taking action without a permit, failure to maintain a stream buffer, or significant amounts of sediment, as determined by the local issuing authority or by the director or his or her designee, have been or are being discharged into state waters and where BMPs have not been properly designed, installed, and maintained, a stop work order shall be issued by the local issuing authority or by the director or his or her designee. All such stop-work orders shall be effective immediately upon issuance and shall be in effect until the necessary corrective action or mitigation has occurred. Such stop-work orders shall apply to all land-disturbing activity on the site with the exception of the installation and maintenance of temporary or permanent erosion, sedimentation and pollution controls.

#### **1008.03 Bond Forfeiture.**

If, through inspection, it is determined that a person engaged in land-disturbing activities has failed to comply with the approved plan, a written notice to comply shall be served upon that person. The notice shall set forth the measures necessary to achieve compliance with the plan and shall state the time within which such measures must be completed. If the person engaged in the land-disturbing activity fails to comply within the time specified, he shall be deemed in violation of this article and, in addition to other penalties, shall be deemed to have forfeited his performance bond, if required to post one under the provisions of Section 1006.02(g) of this article. The Board of Commissioners or designee may call the bond or any part thereof to be forfeited and may use the proceeds to hire a contractor to stabilize the site of the land-disturbing activity and bring it into compliance.

#### **1008.04 Monetary penalties**

Any person who violates any provisions of this article, or any permit condition of limitation established pursuant to this article, or who negligently or intentionally fails or refuses to comply with any final or emergency order of the director issued as provided in this article shall be liable for a civil penalty not to exceed the dollar amount approved by DNR/EPD per day. Notwithstanding any limitation of law as to penalties which can be assessed for violations of county ordinances, any magistrate court or any other court of competent jurisdiction trying cases brought as violations of this article under county ordinances approved under this article shall be authorized to impose penalties for such violations not to exceed -the dollar amount

approved by DNR/EPD for each violation. Each day during which violation or failure or refusal to comply continues shall be a separate violation.

## **Sec. 1009. Education and Certification.**

### **1009.01 Education and Certification Requirements.**

- (a) Persons involved in land development design, review, permitting, construction, monitoring, or inspection or any land-disturbing activity shall meet the education and training certification requirements, depending on their level of involvement with the process, as developed by the commission in consultation with the division and the Stakeholder Advisory Board created pursuant to O.C.G.A. § 12-7-20.
- (b) For each site on which land-disturbing activity occurs, each entity or person acting as either a primary, secondary, or tertiary permittee, as defined in the state general permit, shall have as a minimum one person who is in responsible charge of erosion, sedimentation and pollution control activities on behalf of said entity or person and meets the applicable education or training certification requirements developed by the commission present on site whenever land-disturbing activities are conducted on that site. A project site shall herein be defined as any land-disturbing site or multiple site within a larger common plan of development or sale permitted by an owner or operator for compliance with the state general permit.
- (c) Persons or entities involved in projects not requiring a state general permit but otherwise requiring certified personnel on site may contract with certified persons to meet the requirements of this article.
- (d) If a state general permittee who has operational control of land-disturbing activities for a site has met the certification requirements of O.C.G.A. § 12-7-19(b)(1), then any person or entity involved in land-disturbing activity at that site and operating in a subcontractor capacity for such permittee shall meet those educational requirements specified in O.C.G.A. § 12-7-19(b)(4) and shall not be required to meet any educational requirements that exceed those specified in said paragraph.

## **Sec. 1010. Administrative Appeal.**

### **1010.01 Administrative Remedies.**

The suspension, revocation, modification or grant with condition of a permit by the Community Development Department, upon finding that the holder is not in compliance with the approved erosion, sedimentation and pollution control plan; or that the holder is in violation of permit conditions; or that the holder is in violation of any ordinance; shall entitle the person submitting the plan or holding the permit to appeal this administrative decision to the Board of Commissioners within 30 days after receipt by the local issuing authority of written notice of appeal.

### **1010.02 Administrative Appeal.**

Any person, aggrieved by a decision or order of the local issuing authority after exhausting his administrative remedies, shall have the right to appeal de novo to the Superior Court of Harris County in accordance with the "Appeals" Division of Article 11 (Procedures and Permits).

## **Sec. 1011. Liability.**

**1011.01 Liability Standards.**

- (a) Neither the approval of a plan under the provisions of this article, nor the compliance with provisions of this article shall relieve any person from the responsibility for damage to any person or property otherwise imposed by law nor impose any liability upon the local issuing authority or district for damage to any person or property.
- (b) The fact that a land-disturbing activity for which a permit has been issued results in injury to the property of another shall neither constitute proof of nor create a presumption of a violation of the standards provided for in this article or the terms of the permit.
- (c) No provision of this article shall permit any persons to violate the Georgia Erosion and Sedimentation Act of 1975, the Georgia Water Quality Control Act or the rule and regulations promulgated and approved thereunder or pollute any waters of the state as defined thereby.

**DIVISION 2. STORMWATER MANAGEMENT.**

**Sec. 1012. Purpose and Intent.**

This division provides requirements for application of stormwater management measures to new developments and maintenance of existing stormwater management measures and facilities.

**Sec. 1013. Applicability and Exemptions.**

**1013.01 Applicability.**

- (a) An adequate drainage system, designed in accordance with this section, including necessary ditches, pipes, culverts, drains, inlets, bridges, etc., shall be provided for the proper drainage of all surface water.
- (b) All persons proposing development or construction in the county shall prepare a stormwater management plan. The stormwater management plan shall address the requirements of this section, and the on-site drainage including lot-to-lot drainage and off-site impacts. The stormwater management plan shall also meet the minimum standards of the current edition of the "Georgia Stormwater Management Manual." No final subdivision plat shall be approved and no development or building permit shall be issued until and unless the stormwater management plan has been reviewed and approved by the Community Development Department Director, except as exempt below.

**1013.02 Exemptions.**

The following development activities are exempt from the provisions of this section and the requirement to provide a stormwater management plan:

- (a) Agricultural land management.
- (b) Additions or modifications to existing single-family detached dwellings.
- (c) New construction of single-family detached dwellings on lots that are not included in a major subdivision.

**Sec. 1014. Stormwater Management Facilities.**

**1014.01 Development Plan Requirements.**

All development plans shall require a hydrology study certified by a registered design professional. If detention has been waived or provided in a previous phase or unit of development then a letter from the design professional with supporting documents shall be provided.

#### **1014.02 Standards for Stormwater Management.**

- (a) All stormwater detention facilities shall be designed to detain the 1-year storm runoff, for the area draining to the pond, for 24 hours. For the project, this volume, called the channel protection volume, shall be equal to or greater than the 1-year storm runoff volume from the project. In addition, these facilities shall control the peak flow rates associated with storms having 2-year, 5-year, 10-year, and 25-year return frequencies so that flows from the developed site do not exceed those associated with predevelopment conditions at the project boundary nor increase the peak flows downstream from the project to the point in the drainage basin where the project area is 10% of the total basin. Where adverse impacts occur during the 100-year storm, the 100-year storm shall also be regulated.
- (b) To eliminate detention facilities for stormwater, a registered design professional shall evaluate the basin utilizing the ten percent rule as defined in the current edition of the "Georgia Stormwater Management Manual." The design professional shall demonstrate that post-developed peak flows at the ten percent point of analysis are not increased for all storm events up to and including the 25-year storm. Where adverse effects occur for the 100-year storm, the 100-year storm shall also be regulated.
- (c) Non-detained, post development runoff shall leave the project site as sheet flow and will not have an adverse impact on downstream properties.
- (d) As part of the hydrological study, the design professional shall complete a downstream analysis in accordance with the current edition of the "Georgia Stormwater Management Manual." Consideration shall be given to the flow capacity of downstream drainage structures from the property line up to and including the 10% point of analysis. If the downstream system is inadequate, the developer is required to either improve the downstream drainage structure or provide additional storage in the detention facility.
- (e) In approved cases, damming a natural basin with minimal clearing may provide the detention. In such cases:
  - (1) The required discharge structure opening must be large enough to prevent stoppage from leaves and other debris naturally occurring. Also, the volume should be adequate to account for natural growth of vegetation.
  - (2) Documentation shall be provided for the natural drainage way that it is not jurisdictional state waters or for an approved Georgia EPD Buffer Variance Application.
  - (3) Documentation shall also be provided showing compliance with the Clean Water Act Section 404, permitting requirements.
  - (4) Fencing of natural ponds shall be considered by the Public Works Director on a case-by-case basis.

#### **1014.03 Stormwater Detention Facility Location Criteria.**

For purposes of these regulations, a detention facility shall be deemed to consist of the area within the maximum design ponding limits, the dam (if one) including all embankment slopes

and wall footings (if applicable), primary and emergency outlet works, any drainage and access easements, and any energy dissipation devices.

- (a) In residential subdivisions, any required retention and/or detention areas shall be incorporated into the common areas of the residential development or incorporated into an individually platted parcel, which the homeowners association shall be responsible for its maintenance and continuing operation.
- (b) In nonresidential subdivisions, the detention facility may be located on a separate lot and owned by a property owners' association, which shall be responsible for its maintenance and continuing operation; or located on each lot within the subdivision and constructed when the lot is developed.
- (c) In multi-family and nonresidential development projects, separate detention facilities shall be provided for each development. The owner of the property shall be responsible for maintenance and continuing operation of the facility.
- (d) The county may approve stormwater detention facilities serving 2 or more developments, provided that private ownership of the facilities and provisions for their perpetual maintenance and continuing operation are clearly established in a manner acceptable to the county attorney.
- (e) No portion of any detention facility shall disturb any required (as opposed to voluntary) buffer not otherwise authorized without first obtaining the required approvals.

**1014.04 Stormwater Detention Facility Easement Requirements.**

- (a) An easement at least 25 feet in width shall be required to provide access to all detention facilities from a public street. This easement shall be cleared, grubbed and/or graded so that it can be utilized by rubber-tired construction vehicles. The easement shall include a 15-foot access drive graded to maximum 15% grade. Its location shall be such as to minimize the amount of grading required.
- (b) Every normally dry detention basin or detention facility shall be completely enclosed within a drainage easement. The drainage easement shall extend at least 10 feet beyond the limits of the detention facility and related facilities including fencing.

**1014.05 Stormwater Detention Facility Design Considerations.**

Permanent detention facilities, when required, shall be designed so that the following standards shall apply:

- (a) The location and size of all proposed stormwater improvements shall be designed in accordance with and meet all standards relating to stormwater management of this Development Code and the current edition of the "Georgia Stormwater Management Manual."
- (b) Stormwater detention facilities providing for the storage and controlled release of runoff shall be required for any development activity that will increase the peak rate of discharge by 1 cubic foot per second or more for the 10-year frequency storm at any point of discharge from the property. All stormwater detention facilities shall be designed to control the runoff volumes associated with storms having 2-year, 5-year, 10-year and 25-year frequencies and safe overflow for 100-year storm.
- (c) The structure shall be constructed such that trash and pollutants are prevented from exiting the pond.



- (d) The reservoir routing method or an equivalent method shall be used in sizing detention ponds. (The bowstring method is not acceptable.)
- (e) An emergency overflow device (which does not include the throttling device) for a detention pond shall be designed to pass the 100-year peak developed inflow without overtopping the dam.
- (f) Pond discharge locations shall be in defined drainage ditches. The developer's engineer shall include in the hydrology study a discussion of existing conditions downstream of the detention pond and an explanation of how downstream property owners will not be adversely affected by the "concentrated" runoff from the project boundary up to and including the ten percent point of analysis.
- (g) The steepest fill slopes shall be 3:1. Cut slopes shall be no steeper than 2:1.
- (h) The top of the berm shall be a minimum of ten feet wide when 3:1 slopes are used.
- (i) Slopes shall be stable under all conditions including maintenance.
- (j) Full and living coverage of an approved permanent grass or ground cover devoid of noxious weeds shall be provided.
- (k) The bottom of the pond shall be firm enough to be maintained by mechanical means.
- (l) Fences are required around the perimeter of a detention facility except as provided by paragraph (c) of this subsection.
  - (1) The fence shall be commercial gauge chain link fence of 6 feet in height with a 12-foot wide two-section gate aligned with the access easement. A 10-foot wide clear area shall be provided outside of the fenced area.
  - (2) The fence shall be constructed within the drainage easement for a detention pond and enclose the outlet piping.
  - (3) The Public Works Director may waive the fencing requirement if the slope of the interior side slopes of the detention facility is no more than 3:1, and the 100-year ponding depth is less than 4 feet.
  - (4) The Community Development Department may waive the fencing requirement in commercial developments when the detention facility is located more than 500 feet from a residential district, or in instances of unusual topography.

**1014.06 Alternate Structural Stormwater Controls.**

- (a) All structural stormwater management facilities shall be selected and designed using the appropriate criteria from the current edition of the "Georgia Stormwater Management Manual." All structural stormwater controls must be designed appropriately to meet their intended function. For other structural stormwater controls not included in the current edition of the "Georgia Stormwater Management Manual," or for which pollutant removal rates have not been provided, the effectiveness and pollutant removal of the structural control must be documented through prior studies, literature reviews, or other means and receive approval from the county before being included in the design of a stormwater management system. In addition, if hydrologic or topographic conditions, or land use activities warrant greater control than that provided by the minimum control requirements, the county may impose additional requirements deemed necessary to protect upstream and downstream properties and aquatic resources from damage due

to increased volume, frequency, and rate of stormwater runoff or increased nonpoint source pollution loads created on the site in question.

- (b) Applicants shall consult the current edition of the "Georgia Stormwater Management Manual" for guidance on the factors that determine site design feasibility when selecting and locating a structural stormwater control.

#### **1014.07 Modifications for Off-Site Facilities**

- (a) The stormwater management plan for each land development project shall provide for stormwater management measures located on the site of the project, unless provisions are made to manage stormwater by an off-site or regional facility. The off-site or regional facility must be located on property legally dedicated for the purpose, must be designed and adequately sized to provide a level of stormwater quantity and quality control that is equal to or greater than that which would be afforded by on-site practices and there must be a legally-obligated entity responsible for long-term operation and maintenance of the off-site or regional stormwater facility. In addition, on-site measures shall be implemented, where necessary, to protect upstream and downstream properties and drainage channels from the site to the off-site facility.
- (b) A stormwater management plan must be submitted to the Community Development Department that shows the adequacy of the off-site or regional facility. To be eligible for a modification, the applicant must demonstrate to the satisfaction of the public works department that the use of an off-site or regional facility will not result in the following impacts to upstream or downstream areas:
  - (1) Increased threat of flood damage to public health, life, and property;
  - (2) Deterioration of existing culverts, bridges, dams, and other structures;
  - (3) Accelerated streambank or streambed erosion or siltation;
  - (4) Degradation of in-stream biological functions or habitat; or
  - (5) Water quality impairment in violation of state water quality standards, and/or violation of any state or federal regulations.

### **Sec. 1015. Maintenance and Inspection of Stormwater Facilities and Practices.**

Stormwater management facilities and practices must undergo ongoing inspections to document maintenance and repair needs and ensure compliance with the documents approved as part of the permitting process pertaining to those facilities/practices. If no such documents were required to be approved when the facility/practice was installed, the facility/practice must be maintained in good working condition.

#### **1015.01 Responsibility for Maintenance.**

A stormwater management facility or practice shall be inspected on a periodic basis by the owner and/or operator of the subject property or other responsible person named in the applicable stormwater management facility maintenance agreement or plan. Those facilities which are subject to an approved maintenance agreement shall be inspected in accordance with that agreement. In the event that the stormwater management facility has not been maintained and/or becomes a danger to public safety or public health, the Community Development Department may notify the person responsible for carrying out the maintenance, or the property owner on which the facility exists, by registered or certified mail. The notice shall specify the need to comply with the agreement, the plan or, in the absence of an agreement or approved

plan, standard maintenance practices and shall specify the time within which such measures shall be completed. If the responsible person fails or refuses to meet the requirements of the maintenance agreement or notice as provided herein, the stormwater department may correct the violation as provided in subsection (e) of this section.

**1015.02 Local Jurisdiction Inspection Authority.**

Inspection programs by the Community Development Department may be established on any reasonable basis, including but not limited to: routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; and joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include, but are not limited to, reviewing maintenance and repair records; sampling discharges, surface water, groundwater, and material or water in stormwater management facilities; and evaluating the condition of stormwater management facilities and practices.

**1015.03 Maintenance Records Requirements.**

Parties responsible for the operation and maintenance of a stormwater management facility shall provide records of all maintenance and repairs to the stormwater department when requested.

**1015.04 Failure to Maintain.**

If a responsible person fails or refuses to meet the requirements of the maintenance agreement or the standards contained herein, the Community Development Department, after 10 days' written notice (except that, in the event the violation constitutes an immediate danger to public health or public safety, immediate action may be taken), may correct a violation of the design standards or maintenance requirements by performing the necessary work to place the facility or practice in proper working condition. The Community Development Department may assess the owner of the facility for the cost of repair work which shall be a lien on the property, and may be placed on the ad valorem tax bill for such property and collected in the ordinary manner for such taxes.

**1015.05 Stormwater management facility maintenance agreement**

- (a) Prior to the issuance of any permit for a land development activity requiring a stormwater management facility or practice hereunder and for which the County requires ongoing maintenance, the applicant or owner of the site must, unless an on-site stormwater management facility or practice is dedicated to and accepted by the County, execute an inspection and maintenance agreement, and/or a conservation easement, if applicable, that shall be binding in perpetuity on all subsequent owners of the site.
- (b) The inspection and maintenance agreement, if applicable, must be approved by the County prior to plan approval, and recorded in the deed records upon final plat approval.
- (c) The inspection and maintenance agreement shall identify by name or official title the person(s) responsible for carrying out the inspection and maintenance. Responsibility for the operation and maintenance of the stormwater management facility or practice, unless assumed by a governmental agency, shall remain with the property owner and shall pass to any successor owner. If portions of the land are sold or otherwise transferred, legally binding arrangements shall be made to pass the inspection and maintenance responsibility to the appropriate successors in title. These arrangements shall designate for each portion of the site, the entity to be responsible in perpetuity for its inspection and maintenance.

- (d) The terms of the maintenance agreement shall provide for the County to enter the property at reasonable times and in a reasonable manner for the purpose of inspection. This includes the right to enter a property when it has a reasonable basis to believe that a violation of this article is occurring or has occurred and to enter when necessary for abatement of a public nuisance or correction of a violation of this article.

### **DIVISION 3. DAMS**

#### **Sec. 1016. Dams.**

Any land disturbing activity that involves a property which is proposed to contain a dam shall comply with the provisions of this Division.

##### **1016.01 Existing Dams.**

Existing dams that are located on a project site and will remain after construction is completed shall comply with the provisions of this article and all referenced articles as if they were new dams.

##### **1016.02 Existing Category I Dams.**

Existing Category I Dams shall meet applicable state requirements and shall comply with the Georgia Safe Dams Act.

##### **1016.03 Existing Category II Dams.**

When an existing Category II dam may be reclassified to a Category I dam because of a proposed development downstream of the dam, the following shall be provided by the developer for review by the Georgia Safe Dams Program.

- (a) Location of the Category II dam and the proposed development; and
- (b) A surveyed cross-section of the stream valley at the location of the proposed development including finished floor elevations; and
- (c) A dam breach analysis using the Dambreak computer model to establish the height of the flood wave in the downstream floodplain. The Dambreak modeling shall be completed in accordance with the Safe Dams Program Quality Assurance Program by a qualified registered engineer.

##### **1016.04 New Dams Which Become Subject to the Requirements of the Georgia Safe Dams Act and Rules for Dam Safety.**

Dams proposed to be 25 feet or more in height or proposed to have an impounding capacity of 100 acre-feet or more at maximum water storage elevation shall be subject to the following:

- (a) The developer of any new dam in which development exists within the proposed breach zone shall be subject to the requirements of the Georgia Safe Dams Act and Rules for Dam Safety adopted by the Georgia Department of Natural Resources. The developer shall obtain necessary approvals and permits from the Environmental Protection Division of the Georgia Department of Natural Resources for the project and the dam prior to securing a Land Disturbance Permit from the Community Development Department. The developer of any new dam as to which development does not exist within the proposed breach zone shall submit construction plans to Harris County for review of the project and the dam prior to securing a Development Permit from the Department.

- (b) If the developer elects to construct the new dam in accordance with the design standards for new dams as contained in the Rules for Dam Safety, then new development shall be permitted within the dam breach zone. However, the dam shall meet the design standards for new dams as contained in the Rules for Dam Safety if development currently exists or is proposed in the dam breach zone.
- (c) If the developer elects not to construct the new dam to the design standards for new dams as contained in the Rules for Dam Safety, then a dam breach analysis for the dam shall be submitted along with the construction plans for review prior to securing a Land Disturbance Permit from the Community Development Department. The design engineer shall utilize the computer model entitled "DAMBRK" for the dam breach analysis.
- (d) Should the new dam not meet the design standards for new dams as contained in the Rules for Dam Safety, then only the following uses and structures shall be permitted within the dam breach easement:
  - (1) Agriculture which requires no structures for human habitation within the dam breach zone including forestry, livestock raising, and agricultural and forestry access roads.
  - (2) Fences.
  - (3) Signs in accordance with Article 7 of this Development Code.
  - (4) Roads, driveways and parking areas.
  - (5) Utility poles, towers, pipelines, water treatment outfalls and facilities, or other similar facilities and structures.
- (e) For any new dam that is proposed not to meet the design for new dams as contained in the Rules for Dam Safety, the developer shall obtain a dam breach easement, recorded with the Clerk of Superior Court, from any offsite property owner where it is proposed for the dam breach zone to extend off the property where the dam is being constructed. The developer shall also cause a dam breach easement to be recorded upon the property being developed.
- (f) Prior to recording of a Final Plat or issuance of a Certificate of Occupancy, as appropriate, an as-built certification from a registered professional engineer shall be submitted to the Community Development Department. The certification shall state that the dam is constructed in accordance with the provisions of these regulations as well as the authorized construction plans. If the project is for the development of a subdivision, the developer shall also establish a legal entity, acceptable to Harris County, such as a mandatory Property Owner's Association, at time of recording of the Final Plat, responsible for the maintenance of the dam and its impoundment.
- (g) In addition to State requirements, a new dam shall be on a single of land so that it is owned and maintained by a single owner or entity.

**1016.05 New Dams Subject to Regulation by Harris County.**

Dams proposed to be 9 feet or more in height, but less than 25 feet in height, in combination with an impounding capacity proposed to be 20 acre-feet or more at maximum water storage elevation, but less than 100 acre-feet, shall be subject to the following:

- (a) If the developer elects not to construct the new dam to the design standards for new dams as contained in the Rules for Dam Safety, then a dam breach analysis for the dam shall be submitted with the construction plans for review and authorization prior to

securing a permit from the Community Development Department. The design engineer shall utilize the computer model entitled "DAMBRK" for the dam breach analysis.

- (b) Should the new dam not meet the design standards for new dams as contained in the Rules for Dam Safety, then only the following uses and structures shall be permitted within the dam breach zone:
  - (1) Agriculture which requires no structures for human habitation within the dam breach zone including forestry, livestock raising, and agricultural and forestry access roads.
  - (2) Fences.
  - (3) Signs in accordance with Article 6 of this Development Code.
  - (4) Roads, driveways and parking areas.
  - (5) Utility poles, towers, pipelines, water treatment outfalls and facilities, or similar facilities and structures.
- (c) If the developer elects to construct the new dam in accordance with the design standards for new dams as contained in the Rules for Dam Safety, then new development shall be permitted within the dam breach zone. However, the dam shall meet the design standards for new dams as contained in the Rules for Dam Safety if development currently exists or is proposed in the dam breach zone.
- (d) Construction plans for new dams defined herein shall be submitted to the Community Development Department for review for the project and the dam prior to securing a permit from the Department.
- (e) For any dam that is proposed not to meet the design standards for new dams as contained in the Rules for Dam Safety, the developer shall obtain a dam breach easement, recorded with the Clerk of Superior Court, from any offsite property owner where it is proposed for the dam breach zone to extend off the property where the dam is being constructed. The developer shall also cause a dam breach easement to be recorded upon the property being developed.
- (f) Prior to recording of a Final Plat or issuance of a Certificate of Occupancy, as appropriate, an as-built certification from a registered professional engineer shall be submitted to the Community Development Department. The certification shall state that the dam is constructed in accordance with the provisions of these regulations as well as the authorized construction plans. If the project is for the development of a subdivision, the developer shall also establish a legal entity, acceptable to Harris County, such as a mandatory Homeowners Owner's Association, at time of recording of the Final Plat, responsible for the maintenance of the dam and its impoundment.
- (g) In addition to State requirements, a new dam shall be on a single parcel of land so that it is owned and maintained by a single owner or entity.