

AN ORDINANCE TO AMEND THE CODE OF ATHENS-CLARKE COUNTY, GEORGIA WITH RESPECT TO **STORMWATER MANAGEMENT**; AND FOR OTHER PURPOSES.

The Commission of Athens-Clarke County, Georgia hereby ordains as follows:

SECTION 1. Section 5-4-1 entitled “*Purpose and intent.*” of the Code of Athens-Clarke County, Georgia, subsection (6) is hereby amended by adding to said section the words “and the Transportation and Public Works Department Technical Standards” so that said subsection is:

“Sec. 5-4-1. – Purpose and intent.

(6) Encourage the advantages of urban and brownfield redevelopment and adaptive re-use to reduce the loss of natural areas and open space elsewhere and avoid the need for additional infrastructure to support new development. Follow guidance in the Georgia Stormwater Management Manual and the Transportation and Public Works Department Technical Standards to utilize legal mechanisms to allow more land to be left in a natural state by using incentives or regulatory measures to promote infill and redevelopment in areas already served by infrastructures;”

SECTION 2. Section 5-4-2 entitled “*Definitions*” of the Code of Athens-Clarke County, Georgia is hereby amended by deleting the words “Appendix B” from the definition for Hydrologic Soil group (HSG) so that said definition is:

“Sec. 5-4-2. – Definitions.

Hydrologic soil group (HSG) means the U.S. Natural Resource Conservation Service (NRCS) classification system in which soils are categorized into four runoff potential groups. The groups range from group A soils, with high permeability and little runoff produced, to group D soils, which have low permeability rates and produce much more runoff. NRCS HSG information may be found in the Georgia Stormwater Management Manual.”

SECTION 3. Section 5-4-2 entitled “*Definitions*” of the Code of Athens-Clarke County, Georgia is hereby amended by deleting the words “and disposal” and adding the words “infiltration, evaporation, re-use or,” to the definition for Stormwater management so that said definition is:

“Sec. 5-4-2. – Definitions.

Stormwater management means the collection, conveyance, storage, treatment, infiltration, evaporation, re-use or removal of stormwater runoff in a manner intended to prevent increased flood damage, streambank channel erosion, habitat degradation and water quality degradation, and to enhance and promote the public health, safety and general welfare.”

SECTION 4. Section 5-4-6 entitled “*Permit procedures and requirements*” of the Code of Athens-Clarke County, subsection (c), is hereby amended by adding the words “or as provided for in the Transportation and Public Works Department Technical Standards” so that said subsection is:

“Sec. 5-4-6. – Permit procedures and requirements.

(C) *Stormwater management plan requirements.* The stormwater management plan shall detail how post-development stormwater runoff will be controlled or managed and how the proposed project will meet the requirements of this article, including the performance criteria set forth in Section 5-4-7.

This plan shall be in accordance with the criteria established in this section and must be submitted with the stamp and signature of a professional engineer (PE) or landscape architect licensed in the state of Georgia, who must verify that the design of all stormwater management facilities and practices meet the submittal requirements outlined in the submittal checklist(s) found in the *Georgia Stormwater Management Manual* or as provided for in the Transportation and Public Works Department Technical Standards.

The stormwater management plan must ensure that the requirements and criteria in this article are being complied with and that opportunities are being taken to minimize adverse post-development stormwater runoff impacts from the development. The plan shall consist of maps, narrative, and supporting design calculations (hydrologic and hydraulic) for the proposed stormwater management system. The plan shall include all of the information required in the Stormwater Management Site Plan checklist found in the *Georgia Stormwater Management Manual* or as provided for in the Transportation and Public Works Department Technical Standards. This includes:

- (1) Common address and legal description of site.
- (2) Vicinity map.
- (3) Existing conditions hydrologic analysis. The existing condition hydrologic analysis for stormwater runoff rates, volumes, and velocities, which shall include: a topographic map of existing site conditions with the drainage area boundaries indicated; acreage, soil types and land cover of areas for each sub-drainage areas affected by the project; all perennial and intermittent streams and other surface water features as noted through field investigation; all existing stormwater conveyances and structural control facilities that impact design and/or construction of proposed development; direction of flow and inputs to and exits from the site; analysis of runoff provided by off-site areas upstream of the project site; and methodologies, assumptions, site parameters and supporting design calculations used in analyzing the existing conditions site hydrology. For redevelopment sites, predevelopment conditions shall be modeled using the established guidelines determined by the Department for the portion of the site undergoing land development activities.
- (4) Post-development hydrologic analysis. The post-development hydrologic analysis for stormwater runoff rates, volumes, and velocities, which shall include: a topographic map of developed site conditions with the post-development drainage area boundaries indicated; total area of post-development impervious surfaces and other land cover areas for each sub-drainage area affected by the project; calculations for determining the runoff volumes that need to be addressed for each sub drainage area for the development project to meet the post-

development stormwater management performance criteria in section 5-4-7; location and boundaries of proposed natural feature protection and conservation utilized; methodologies, assumptions, site parameters and supporting design calculations used in analyzing the existing conditions site hydrology.

(5) Stormwater management system. The description, scaled drawings and design calculations for the proposed post-development stormwater management system, which shall include: A map and/or drawing or sketch of the stormwater management facilities, including the location of nonstructural site design features and the placement of existing and proposed structural stormwater controls, including design water surface elevations, storage volumes available from zero to maximum head, location of inlet and outlets, location of bypass and discharge systems, and all orifice/restrictor sizes; a narrative describing how the selected structural stormwater controls will be appropriate and effective; cross-section and profile drawings and design details for each of the structural stormwater controls in the system, including supporting calculations to show that the facility is designed according to the applicable design criteria; a hydrologic and hydraulic analysis of the stormwater management system for all applicable design storms (including stage-storage or outlet rating curves, and inflow and outflow hydrographs); documentation and supporting calculations to show that the stormwater management system adequately meets the post-development stormwater management performance criteria in [section 5-4-7](#); drawings, design calculations, elevations and hydraulic grade lines for all existing and proposed stormwater conveyance elements including stormwater drains, pipes, culverts, catch basins, channels, swales and areas of overland flow; and where applicable, a narrative describing how the stormwater management system corresponds with any watershed protection plans and/or local greenspace program, greenway network plan, and park development.

(6) Post-development downstream flow analysis. A downstream flow analysis will be prepared by the applicant to provide an overview of potential impacts from post development run-off from the site. At a minimum the downstream flow analysis will include:

- a) A map of each and every point or area along the project site's boundaries at which runoff will exit the property.
- b) The analysis shall focus on the portion of the drainage channel or watercourse immediately downstream from the project. This area shall extend downstream from the project to a point in the drainage area where the project area is ten percent of the total downstream drainage area.
- c) Delineation of all downstream structures and property adjacent or within the flow path of the downstream flow analysis.
- d) Identification of known flooding problems from Athens-Clarke County Stormwater Master Plan or other sources.
- e) If determined through this preliminary review of the items above that the potential exists for downstream flooding resulting from post development conditions, the Director of the Department can require the applicant to conduct and submit a downstream hydrologic assessment in accordance with the criteria listed in the *Georgia Stormwater Management*

Manual criteria or as provided for in the Transportation and Public Works Department Technical Standards for post development downstream analysis.

- (7) Reserved.
- (8) Landscaping and open space plan. A detailed landscaping and vegetation plan describing the woody and herbaceous vegetation that will be used within and adjacent to stormwater management facilities and practices. The landscaping plan must also include: the arrangement of planted areas, natural and greenspace areas and other landscaped features on the site plan; information necessary to construct the landscaping elements shown on the plan drawings; descriptions and standards for the methods, materials and vegetation that are to be used in the construction; density of plantings; descriptions of the stabilization and management techniques used to establish vegetation; and a description of who will be responsible for ongoing maintenance of vegetation for the stormwater management facility and what practices will be employed to ensure that adequate vegetative cover is preserved.
- (9) Operations and maintenance plan. Detailed description of ongoing operations and maintenance procedures for stormwater management facilities and practices to ensure their continued function as designed and constructed or preserved. These plans will identify the parts or components of a stormwater management facility or practice that need to be regularly or periodically inspected and maintained, and the equipment and skills or training necessary. The plan shall include an inspection and maintenance schedule, maintenance tasks, responsible parties for maintenance, funding, access and safety issues. Provisions for the periodic review and evaluation of the effectiveness of the maintenance program and the need for revisions or additional maintenance procedures shall be included in the plan.
- (10) Maintenance access easements. The applicant must ensure access from public right-of-way to stormwater management facilities and practices requiring regular maintenance at the site for the purpose of inspection and repair by securing all the maintenance access easements needed on a permanent basis. Such access shall be sufficient for all necessary equipment for maintenance activities. Upon final inspection and approval, a plat or document indicating that such easements exist shall be recorded and shall remain in effect even with the transfer of title of the property.
- (11) Inspection and maintenance agreements. Unless an on-site stormwater management facility or practice is dedicated to and accepted by the Unified Government of Athens-Clarke County as provided in [section 5-4-6\(d\)](#), the applicant must execute an easement and an inspection and maintenance agreement binding on all subsequent owners of land served by an on-site stormwater management facility or practice in accordance section 5-4-6(d).
- (12) Evidence of acquisition of applicable local and non-local permits. The applicant shall certify and provide documentation to the Department that all other applicable

environmental permits have been acquired for the site prior to approval of the stormwater management plan.”

SECTION 5. Section 5-4-7 entitled “*Post-development stormwater management performance criteria*” of the Code of Athens-Clarke County, Georgia, subsection (a), is hereby deleted in its entirety and the following new subsection is inserted in lieu thereof:

“Sec. 5-4-7. – Post-development stormwater management performance criteria.

- (a) The following performance criteria shall be applicable to all stormwater management plans, unless otherwise provided for in this article:
 - (1) *Water quality and runoff reduction.* All stormwater runoff generated from a site shall be adequately treated before discharge. It will be presumed that a stormwater management system complies with this requirement if:
 - a. For projects with a stormwater concept meeting before December 6, 2020, the system is designed to treat the prescribed water quality treatment volume from the site, which is defined as the runoff volume resulting from the first 1.2 inches of rainfall from a site, or it retains the first 1.0 inch of rainfall onsite using approved runoff reduction methods;
 - b. For projects with a stormwater concept meeting on or after December 6, 2020, the stormwater management system shall be designed to retain the first 1.0 inch of rainfall on the site, to the maximum extent practicable. The determination by the MS4 that it is infeasible to apply the runoff reduction standard in part or in whole or that an alternate strategy will reduce pollutant loadings from the site to the maximum extent practicable must be documented with the site plan review documents. If the entire 1.0 inch of rainfall cannot be retained onsite using runoff reduction methods, the remaining runoff from a 1.2 inch rainfall event must be treated to remove at least 80% of the calculated average annual post-development total suspended solids (TSS) load or equivalent as designed in the Georgia Stormwater Management Manual or the Transportation and Public Works Department Technical Standards. Treatment of runoff from hotspots on the site such as fueling stations requires special attention to address the expected pollutants of concern.
 - c. Appropriate structural stormwater controls or nonstructural practices are selected, designed, constructed or preserved, and maintained according to the specific criteria in the *Georgia Stormwater Management Manual* or as provided for in the Transportation and Public Works Department Technical Standards; and
 - d. Runoff from hotspot land uses and activities identified by the Department are adequately treated and addressed through the use of appropriate

structural stormwater controls, nonstructural practices and pollution prevention practices.

- (2) *Stream channel and aquatic habitat protection.* Protection of stream channels from bank and bed erosion and degradation shall be provided by using all of the following three approaches:
 - a. Preservation, restoration and/or reforestation with native vegetation of the applicable stream buffer;
 - b. 24-hour extended detention storage of all stormwater runoff generated from a site by the one-year, 24-hour return frequency storm event; and
 - c. Post development erosion prevention measures such as energy dissipation and velocity control. These measures shall take into consideration location and size of outlet control structure.
- (3) *Overbank flood protection.* Downstream overbank flood protection and property protection shall be provided by controlling the site's post-development peak discharge rate to the pre-development rate for the 25-year, 24-hour return frequency storm event. If control of the one-year, 24-hour storm under section 5-4-7(3) is exempted, then peak discharge rate attenuation of the two-year through the 25-year return frequency storm event must be provided.
- (4) *Extreme flooding protection.* Extreme flood and public safety protection shall be provided by controlling and safely conveying the site's 100-year, 24-hour return frequency storm event such that flooding is not exacerbated.
- (5) *Structural stormwater controls.* All structural stormwater management facilities shall be selected and designed using the appropriate criteria from the *Georgia Stormwater Management Manual* and any local addenda. All structural stormwater controls must be designed appropriately to meet their intended function. For other structural stormwater controls not included in the *Georgia Stormwater Management Manual* or the Transportation and Public Works Department Technical Standards, 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 Department before being included in the design of a stormwater management system.

Applicants shall consult the *Georgia Stormwater Management Manual* for guidance on the factors that determine site design feasibility when selecting and locating a structural stormwater control.
- (6) *Stormwater credits for nonstructural measures.* The use of one or more site design measures by the applicant may allow for a reduction in the water quality treatment volume required under section 5-4-7(1). The applicant may, if approved

by the Department, take credit for the use of stormwater better site design practices and reduce the water quality volume requirement. Credits shall be made available pursuant to the provisions governing credits in the *Georgia Stormwater Management Manual* or as provided for in the Transportation and Public Works Department Technical Standards.

- (7) *Drainage system guidelines.* Stormwater conveyance facilities, which may include, but are not limited to, culverts, stormwater drainage pipes, catch basins, drop inlets, junction boxes, headwalls, gutter, swales, channels, ditches, and energy dissipaters shall be provided when necessary for the protection of public right-of-way, public properties, and private properties adjoining project sites and/or public right-of-ways. Stormwater conveyance facilities that are designed to carry runoff from more than one parcel, existing or proposed, shall meet the following requirements:
- a. Methods to calculate stormwater flows shall be in accordance with the stormwater design manual;
 - b. All culverts, pipe systems and open channel flow systems shall be sized in accordance with the stormwater management plan using the methods included in the stormwater design manual; and
 - c. Design and construction of stormwater conveyance facilities shall be in accordance with the criteria and specifications found in the stormwater design manual.
- (8) *Dam design guidelines.* Any land disturbing activity that involves a site which proposes a dam shall comply with the provisions of O.C.G.A. § 12-5-370 et seq. (the "Georgia Safe Dams Act") and the rules for dam safety promulgated thereunder, as applicable.”

SECTION 6. Section 5-4-7 entitled “*Post-development stormwater management performance criteria*” of the Code of Athens-Clarke County, Georgia, subsection (b), part (1), is hereby deleted in its entirety and the following new subsection is inserted in lieu thereof:

“Sec. 5-4-7. – Post-development stormwater management.

- (b) The Transportation and Public Works Director may determine that redevelopment on a developed site that includes all stormwater management measures necessary to satisfy all of the postdevelopment stormwater management performance criteria as provided in section 5-4-7(a) is fully or partially infeasible.
- (1) An applicant for such an infeasibility determination shall provide justification demonstrating how the redevelopment satisfies the Better Site Design and smart growth principles, as defined in the *Georgia Stormwater Management Manual* or as provided for in the Transportation and Public Works Department Technical Standards. The Transportation and Public Works Director shall consider the

application and existing site conditions to determine full or partial infeasibility on a site by site basis. At least one of the following criteria shall be satisfied:

- a. The redevelopment site is situated on parcel(s) with impervious cover in excess of 40 percent of the maximum allowable lot coverage for the applicable zoning category, as calculated considering only the adjusted tract acreage;
- b. The redevelopment site includes mitigating circumstances including shallow bedrock, contaminated soils, high groundwater, or presence of existing utilities; or
- c. Conformance with post-development stormwater management performance criteria on the redevelopment site would damage a community resource or impact threatened or endangered species habitat.”

SECTION 7. Section 5-4-7 entitled “*Post-development stormwater management performance criteria*” of the Code of Athens-Clarke County, Georgia, subsection (c), part (2), is hereby deleted in its entirety and the following new subsection is inserted in lieu thereof:

“Sec. 5-4-7. – Post-development stormwater management.

(c) Any site determined to be fully or partially infeasible for post-development performance criteria for post-development performance criteria according to section 5-4-7(b) shall be exempt from satisfying any criteria deemed infeasible by the Transportation and Public Works Director. In such case, and unless otherwise provided for in this article, the following post-development stormwater management performance criteria shall apply at a minimum:

(2) *Special standards for replaced impervious surface area.* All stormwater runoff generated from the replaced impervious surface shall be adequately treated before discharge. A stormwater management system will be presumed to comply with this standard if:

- a. it is designed to treat the REIS volume from the site in a way that minimizes this pollutant loading; and
- b. Appropriate structural stormwater controls or nonstructural practices are selected, designed, constructed or preserved, and maintained according to the specific criteria in the *Georgia Stormwater Management Manual* or as provided for in the Transportation and Public Works Department Technical Standards.
- c. The design shall utilize green infrastructure, low impact design, and runoff reduction to the maximum extent practicable. All stormwater runoff that is either infiltrated or evaporated may be counted as double in treating the REIS volume requirements.”

SECTION 8. Section 5-4-7 entitled “*Post-development stormwater management performance criteria*” of the Code of Athens-Clarke County, Georgia, subsection (c), part (4), is hereby deleted in its entirety and the following new subsection is inserted in lieu thereof:

“Sec. 5-4-7. – Post-development stormwater management.

(c) Any site determined to be fully or partially infeasible for post-development performance criteria for post-development performance criteria according to section 5-4-7(b) shall be exempt from satisfying any criteria deemed infeasible by the Transportation and Public Works Director. In such case, and unless otherwise provided for in this article, the following post-development stormwater management performance criteria shall apply at a minimum:

(4) *Additional impervious surface less than 5,000 square feet.* Many redevelopment projects involve not only the replacement of impervious surfaces but also the net creation of impervious surfaces. These new surfaces can impact streams and neighboring properties. All stormwater runoff generated from the new impervious surface shall be adequately treated before discharge. It will be presumed that a stormwater management system complies with this requirement if it is sized to provide treatment as defined in Section 5-4-7(a)(1) of this ordinance.”

SECTION 9. All ordinances or parts of ordinances in conflict herewith are hereby repealed.