

## Model Ordinance and Adoption Guidance Document

### Overview: Model Ordinance for Post-Construction Stormwater Management for New Development and Redevelopment

This document provides the 2019 Model Ordinance for Post-Construction Stormwater Management for New Development and Redevelopment (Model Ordinance) and supplementary materials to support adoption by local jurisdictions. This material can be found in the appendices and includes mandatory edits, local enhancements, and changes from the 2002 model ordinance.

The Georgia Environmental Protection Division (EPD) requires local jurisdictions with Municipal Separate Storm Sewer System (MS4) permits to adopt ordinances, or update existing ordinances when necessary, for compliance with their MS4 permit, in order to address development and redevelopment, and enforce post-construction controls. Recent updates to the MS4 permit now require the stormwater management system to be designed to retain the first 1.0 inch of rainfall on the site, to the maximum extent practicable, and has prompted an update to existing ordinances.

The Model Ordinance was drafted for use by local jurisdictions in the Metropolitan North Georgia Water Planning District (District) and was adopted by the District Board on December 4, 2019. The Model Ordinance was developed to match the substance and language of the current MS4 permit and the Georgia Stormwater Management Manual (GSMM). The Model Ordinance is provided in *Appendix A*.

Jurisdictions within the District also have requirements to adopt ordinances that “provide for effective storm-water management [and]... shall also include minimum design and development standards for local development as it may affect stormwater runoff quality and stormwater conveyance” as outlined in the District’s enabling legislation. In the District [Water Resource Management Plan](#) (Plan), action items are identified for integrated water resource planning and management. These action items are implemented by local jurisdictions, and implementation is periodically audited by the EPD. Within the Plan, the Watershed-1 action item states, “... that each local government shall adopt the Model Ordinance or an equivalent ordinance at least as effective based on the guidance in the latest GSMM and MS4 permit as applicable.”

The Model Ordinance was developed to be readily usable by most local jurisdictions, but mandatory edits, which are set forth in *Appendix B*, are necessary as part of the local adoption process. Based on local conditions and policy goals, local jurisdictions should also consider making enhancements, which are also set forth in *Appendix C*. Most of the enhancements are optional, with the exception of Enhancement 3: Trout Streams, which is required for local jurisdictions that have designated trout streams as defined by Georgia Water Use Classifications and Water Quality Standards [Rule 391-3-6-.03 (15)].

Local jurisdictions may want to consider procedural changes to match local permitting and enforcement processes and preferences. Some local jurisdictions may also desire to make further substantive changes to the Model Ordinance, or otherwise customize their ordinance for post-construction stormwater management. These further changes and customizations are allowable so long as their substance meets the requirements of a local jurisdiction’s MS4 permit and they are “at least as effective” as the Model Ordinance. However, given that the Model Ordinance was developed to meet

the MS4 permit requirements and establish an effective baseline for the District, care should be used in making further substantive changes and customizations. EPD is responsible for determining MS4 permit and District Plan compliance, which includes determining whether changes and customizations are “at least as effective.”

### **Mandatory Edits**

When preparing the model ordinance for local adoption, the local jurisdiction must make some edits. It is strongly recommended to use the Model Ordinance as the starting point for local customization to take full advantage of improvements in the document related clarity for implementation and use of terms. Mandatory edits are highlighted within the Model Ordinance by mandatory edit prompts shown as bold text with brackets (e.g. **[local jurisdiction]**). If your jurisdiction uses equivalent manuals or standards, please note that there are no prompts for edits to this language. For example, if you use an equivalent manual to the GSMM, then you should use find/replace to include the name of your jurisdiction’s manual. A summary of the mandatory edits, locations within the Model Ordinance, and additional comments can be found in *Appendix B*.

### **Enhancements**

Enhancements are being offered to facilitate customization of the Model Ordinance by local governments to match local policy goals and environment. As stated earlier, most of the enhancements are optional with the exception of Trout Streams, which is required for communities that have designated trout streams as defined by Georgia Water Use Classifications and Water Quality Standards [Rule 391-3-6-.03 (15)].

*Appendix C* contains the following Model Ordinance enhancements:

1. Construction Sequencing
2. Pre-Development Hydrology
3. Trout Streams
4. Linear Transportation Feasibility Program

Each enhancement will include:

- A purpose statement;
- Specific language that could be added to the Model Ordinance; and
- Edits showing how to modify the Model Ordinance to include the enhancement.

### **Model Ordinance Supplemental Materials**

The District has prepared supplemental materials to support the adoption of the Model Ordinance and outline the differences between the 2002 Model Ordinance and the 2019 Model Ordinance. The Model Ordinance Crosswalk provides an overview of the relationship between the 2002 and 2019 model ordinances. It can be found in *Appendix D*. The Model Ordinance Redline identifies the specific, extensive edits made to the 2002 Model Ordinance during the update. This document can be found in *Appendix E*.

**Appendices**

Appendix A: 2019 Model Ordinance for Post-Construction Stormwater Management for New Development and Redevelopment

Appendix B: Mandatory Edits

Appendix C: Enhancements

Appendix D: Model Ordinance Crosswalk

Appendix E: Model Ordinance Redline

## **Appendix A:**

2019 Model Ordinance for Post-Construction  
Stormwater Management for New  
Development and Redevelopment

Model Ordinance for Post-Construction Stormwater Management for New Development and Redevelopment

Article [X]. Post-Construction Stormwater Management for New Development and Redevelopment.

Section [Y]-1. Purpose and Intent. The purpose of this article is to protect, maintain and enhance the public health, safety, environment and general welfare by establishing minimum requirements and procedures to control the adverse effects of increased post-construction stormwater runoff and nonpoint source pollution associated with new development and redevelopment. Proper management of post- construction stormwater runoff will minimize damage to public and private property and infrastructure, safeguard the public health, safety, environment and general welfare of the public, and protect water and aquatic resources. Additionally, the **[local jurisdiction]** is required to comply with several State and Federal laws, regulations and permits and the requirements of the Metropolitan North Georgia Water Planning District’s regional water plan related to managing the water quantity, velocity, and quality of post- construction stormwater runoff.

Section [Y]-2. Definitions. For this Article, the terms below shall have the following meanings:

“administrator” means the person appointed to administer and implement this Article on Post-Construction Stormwater Management for New Development and Redevelopment in accordance with Section [Y]-4.

“applicant” means a person submitting a land development application for approval.

“BMP” or “best management practice” means both structural devices to store or treat stormwater runoff and non-structural programs or practices which are designed to prevent or reduce the pollution of the waters of the State of Georgia.

“BMP landscaping plan” means a design for vegetation and landscaping that is critical to the performance and function of the BMP including how the BMP will be stabilized and established with vegetation. It shall include a layout of plants and plant names (local and scientific).

“channel” means a natural or artificial watercourse with a definite bed and banks that conveys continuously or periodically flowing water.

“detention” means the temporary storage of stormwater runoff in a stormwater detention facility for the purpose of controlling the peak discharge.

“detention facility” means a structure designed for the storage and gradual release of stormwater runoff at controlled rates.

“development” means new development or redevelopment.

“extended detention” means the storage of stormwater runoff for an extended period of time.

“extreme flood protection” means measures taken to prevent adverse impacts from large low-frequency storm events with a return frequency of 100 years or more.

“flooding” means a volume of surface water that exceeds the banks or walls of a BMP, or channel; and overflows onto adjacent lands.

“GSMM” means the latest edition of the Georgia Stormwater Management Manual, Volume 2: Technical Handbook, and its Appendices.

“hotspot” means a land use or activity on a site that has the potential to produce higher than normally found levels of pollutants in stormwater runoff. As defined by the administrator, hotspot land use may include gasoline stations, vehicle service and maintenance areas, industrial facilities (both permitted under the Industrial Stormwater General Permit and others), material storage sites, garbage transfer facilities, and commercial parking lots with high-intensity use.

“impervious surface” means a surface composed of any material that significantly impedes or prevents the natural infiltration of water into the soil.

“Industrial Stormwater General Permit” means the National Pollutant Discharge Elimination System (NPDES) permit issued by Georgia Environmental Protection Division to an industry for stormwater discharges associated with industrial activity. The permit regulates pollutant levels associated with industrial stormwater discharges or specifies on-site pollution control strategies based on Standard Industrial Classification (SIC) Code.

“infiltration” means the process of percolating stormwater runoff into the subsoil.

“inspection and maintenance agreement” means a written agreement providing for the long-term inspection, operation, and maintenance of the stormwater management system and its components on a site.

“land development application” means the application for a land development permit on a form provided by **[local jurisdiction]** along with the supporting documentation required in Section [Y]-10(a).

“land development permit” means the authorization necessary to begin construction-related, land-disturbing activity

“land disturbing activity” means any activity which may result in soil erosion from water or wind and the movement of sediments into state water or onto lands within the state, including but not limited to clearing, dredging, grading, excavating, and filling of land. Land disturbing activity does not include agricultural practices as described O.C.G.A. 12-7-17(5) or silvicultural land management activities as described O.C.G.A. 12-7-17(6) within areas zoned for these activities.

“linear feasibility program” means a feasibility program developed by **[local jurisdiction]** and submitted to the Georgia Environmental Protection Division, which sets reasonable criteria for determining when implementation of stormwater management standards for linear transportation projects being constructed by **[local jurisdiction]** is infeasible.

“linear transportation projects” means construction projects on traveled ways including but not limited to roads, sidewalks, multi-use paths and trails, and airport runways and taxiways.

“MS4 Permit” means the NPDES permit issued by Georgia Environmental Protection Division for discharges from the **[local jurisdiction’s]** municipal separate storm sewer system.

“new development” means land disturbing activities, structural development (construction, installation or expansion of a building or other structure), and/or creation of impervious surfaces on a previously undeveloped site.

“nonpoint source pollution” means a form of water pollution that does not originate from a discrete point such as a wastewater treatment facility or industrial discharge, but involves the transport of pollutants such as sediment, fertilizers, pesticides, heavy metals, oil, grease, bacteria, organic materials and other contaminants from land to surface water or groundwater via mechanisms such as precipitation, stormwater runoff, and leaching. Nonpoint source pollution is a by-product of land use practices such as agricultural, silvicultural, mining, construction, subsurface disposal and urban runoff sources.

“overbank flood protection” means measures taken to prevent an increase in the frequency and magnitude of out-of-bank flooding (i.e. flow events that exceed the capacity of the channel and enter the floodplain).

“owner” means the legal or beneficial owner of a site, including but not limited to, a mortgagee or vendee in possession, receiver, executor, trustee, lessee or other person, firm or corporation in control of the site.

“person” means any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, city, county or other political subdivision of the State, any interstate body or any other legal entity.

“post-construction stormwater management” means stormwater best management practices that are used on a permanent basis to control and treat runoff once construction has been completed in accordance with a stormwater management plan.

“post-development” means the conditions anticipated to exist on site immediately after completion of the proposed development.

“practicability policy” means the latest edition of the Metropolitan North Georgia Water Planning District’s Policy on Practicability Analysis for Runoff Reduction.

“pre-development” means the conditions that exist on a site immediately before the implementation of the proposed development. Where phased development or plan approval occurs (preliminary grading, roads and utilities, etc.), the existing conditions at the time before the first item being approved or permitted shall establish pre-development conditions.

“pre-development hydrology” means (a) for new development, the runoff curve number determined using natural conditions hydrologic analysis based on the natural, undisturbed condition of the site immediately before implementation of the proposed development; and (b) for redevelopment, the existing conditions hydrograph may take into account the existing development when defining the runoff curve number and calculating existing runoff, unless the existing development causes a negative impact on downstream property.

“previously developed site” means a site that has been altered by paving, construction, and/or land disturbing activity.

“redevelopment” means structural development (construction, installation, or expansion of a building or other structure), creation or addition of impervious surfaces, replacement of impervious surfaces not as part of routine maintenance, and land disturbing activities associated with structural or impervious development on a previously developed site. Redevelopment does not include such activities as exterior remodeling.

“routine maintenance” means activities to keep an impervious surface as near as possible to its constructed condition. This includes ordinary maintenance activities, resurfacing paved areas, and exterior building changes or improvements which do not materially increase or concentrate stormwater runoff, or cause additional nonpoint source pollution.

“runoff” means stormwater runoff.

“site” means an area of land where development is planned, which may include all or portions of one or more parcels of land. For subdivisions and other common plans of development, the site includes all areas of land covered under an applicable land development permit.

“stormwater concept plan” means an initial plan for post-construction stormwater management at the site that provides the groundwork for the stormwater management plan including the natural resources inventory, site layout concept, initial runoff characterization, and first round stormwater management system design.

“stormwater management plan” means a plan for post-construction stormwater management at the site that meets the requirements of Section [Y]-8(d) and is included as part of the land development application.

“stormwater management standards” means those standards set forth in Section [Y]-7.

“stormwater management system” means the entire set of non-structural site design features and structural BMPs for collection, conveyance, storage, infiltration, treatment, and



disposal of stormwater runoff in a manner designed 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.

“stormwater runoff” means flow on the surface of the ground, resulting from precipitation.

“subdivision” means the division of a tract or parcel of land resulting in one or more new lots or building sites for the purpose, whether immediately or in the future, of sale, other transfer of ownership or land development, and includes divisions of land resulting from or made in connection with the layout or development of a new street or roadway or a change in an existing street or roadway.

Other terms used but not defined in this Article shall be interpreted based on how such terms are defined and used in the GSMM and the **[local jurisdiction’s]** MS4 permit.

Section [Y]-3. Adoption and Implementation of the GSMM; Conflicts and Inconsistencies.

(a) In implementing this Article, the **[local jurisdiction]** shall use and require compliance with all relevant design standards, calculations, formulas, methods, and other guidance from the GSMM as well as all related appendices.

(b) This Article is not intended to modify or repeal any other Article, ordinance, rule, regulation or other provision of law, including but not limited to any applicable stream buffers under state and local laws, and the Georgia Safe Dams Act and Rules for Dam Safety. In the event of any conflict or inconsistency between any provision in the **[local jurisdiction’s]** MS4 permit and this Article, the provision from the MS4 permit shall control. In the event of any conflict or inconsistency between any provision of this Article and the GSMM, the provision from this Article shall control. In the event of any other conflict or inconsistency between any provision of this Article and any other ordinance, rule, regulation or other provision of law, the provision that is more restrictive or imposes higher protective standards for human health or the environment shall control.

(c) If any provision of this Article is invalidated by a court of competent jurisdiction, such judgment shall not affect or invalidate the remainder of this Article.

Section [Y]-4. Designation of Administrator. The **[INSERT AS APPROPRIATE - county administrator / county chief executive officer / mayor / city manager]** may from time to time appoint someone to administer and implement this Article.

Section [Y]-5. Applicability Criteria for Stormwater Management Standards. This Article applies to the following activities:

(a) New development that creates or adds 5,000 square feet or greater of new impervious surface area or that involves land disturbing activity of 1 acre of land or greater;

- (b) Redevelopment (excluding routine maintenance and exterior remodeling) that creates, adds, or replaces 5,000 square feet or greater of new impervious surface area or that involves land disturbing activity of 1 acre or more;
- (c) New development and redevelopment if
  - (i) such new development or redevelopment is part of a subdivision or other common plan of development, and
  - (ii) the sum of all associated impervious surface area or land disturbing activities that are being developed as part of such subdivision or other common plan of development meets or exceeds the threshold in (a) and (b) above;
- (d) Any commercial or industrial new development or redevelopment, regardless of size, that is a hotspot land use as defined in this Article; and
- (e) Linear transportation projects that exceed the threshold in (a) or (b) above.

Section [Y]-6. Exemptions from Stormwater Management Standards. This Article does not apply to the following activities:

- (a) Land disturbing activity conducted by local, state, authority, or federal agencies, solely to respond to an emergency need to protect life, limb, or property or conduct emergency repairs;
- (b) Land disturbing activity that consists solely of cutting a trench for utility work and related pavement replacement;
- (c) Land disturbing activity conducted by local, state, authority, or federal agencies, whose sole purpose is to implement stormwater management or environmental restoration;
- (d) Repairs to any stormwater management system deemed necessary by the administrator;
- (e) Agricultural practices as described O.C.G.A. 12-7-17(5) within areas zoned for these activities with the exception of buildings or permanent structures that exceed the threshold in [Y]-5 (a) or (b);
- (f) Silvicultural land management activities as described O.C.G.A. 12-7-17(6) within areas zoned for these activities with the exception of buildings or permanent structures that exceed the threshold in [Y]-5 (a) or (b);
- (g) Installations or modifications to existing structures solely to implement Americans with Disabilities Act (ADA) requirements, including but not limited to elevator shafts, handicapped access ramps and parking, and enlarged entrances or exits; and

(h) Linear transportation projects being constructed by **[local jurisdiction]** to the extent the administrator determines that the stormwater management standards may be infeasible to apply, all or in part, for any portion of the linear transportation project. For this exemption to apply, an infeasibility report that is compliant with the **[local jurisdiction]** linear feasibility program shall first be submitted to the administrator that contains adequate documentation to support the evaluation for the applicable portion(s) and any resulting infeasibility determination, if any, by the administrator.

Section [Y]-7. Stormwater Management Standards. Subject to the applicability criteria in Section [Y]-5 and exemptions in Section [Y]-6, the following stormwater management standards apply. Additional details for each standard can be found in the GSMM Section 2.2.2.2:

(a) Design of Stormwater Management System: The design of the stormwater management system shall be in accordance with the applicable sections of the GSMM as directed by the administrator. Any design which proposes a dam shall comply with the Georgia Safe Dams Act and Rules for Dam Safety as applicable.

(b) Natural Resources Inventory: Site reconnaissance and surveying techniques shall be used to complete a thorough assessment of existing natural resources, both terrestrial and aquatic, found on the site. Resources to be identified, mapped, and shown on the Stormwater Management Plan, shall include, at a minimum (as applicable):

- (i) Topography (minimum of 2-foot contours) and Steep Slopes (i.e., Areas with Slopes Greater Than 15%),
- (ii) Natural Drainage Divides and Patterns,
- (iii) Natural Drainage Features (e.g., swales, basins, depressional areas),
- (iv) Natural feature protection and conservation areas such as wetlands, lakes, ponds, floodplains, stream buffers, drinking water wellhead protection areas and river corridors,
- (v) Predominant soils (including erodible soils and karst areas), and
- (vi) Existing predominant vegetation including trees, high quality habitat and other existing vegetation.

(c) Better Site Design Practices for Stormwater Management: Stormwater management plans shall preserve the natural drainage and natural treatment systems and reduce the generation of additional stormwater runoff and pollutants to the maximum extent practicable. Additional details can be found in the GSMM Section 2.3.

(d) Stormwater Runoff Quality/Reduction: Stormwater Runoff Quality/Reduction shall be provided by using the following:

- (i) For development with a stormwater management plan submitted before **[insert applicable date]**, the applicant may choose either (A) Runoff Reduction or (B) Water Quality.
- (ii) For development with a stormwater management plan submitted on or after **[insert applicable date]**, the applicant shall choose (A) Runoff Reduction and

additional water quality shall not be required. To the extent (A) Runoff Reduction has been determined to be infeasible for all or a portion of the site using the Practicability Policy, then (B) Water Quality shall apply for the remaining runoff from a 1.2 inch rainfall event and must be treated to remove at least 80% of the calculated average annual post-development total suspended solids (TSS) load or equivalent as defined in the GSMM.

(A) Runoff Reduction - The stormwater management system shall be designed to retain the first 1.0 inch of rainfall on the site using runoff reduction methods, to the maximum extent practicable.

(B) Water Quality – The stormwater management system shall be designed to remove at least 80% of the calculated average annual post-development total suspended solids (TSS) load or equivalent as defined in the GSMM for runoff from a 1.2 inch rainfall event.

(iii) If a site is determined to be a hotspot as detailed in Section [Y]-5, the **[local jurisdiction]** may require the use of specific or additional components for the stormwater management system to address pollutants of concern generated by that site.

(e) Stream Channel Protection: Stream channel protection shall be provided by using all of the following three approaches:

(i) 24-hour extended detention storage of the 1-year, 24-hour return frequency storm event;

(ii) Erosion prevention measures, such as energy dissipation and velocity control; and

(iii) Preservation of any applicable stream buffer.

(f) Overbank Flood Protection: Downstream overbank flood protection shall be provided by controlling the post-development peak discharge rate to the pre-development rate for the 25-year, 24-hour storm event.

(g) Extreme Flood Protection: Extreme flood protection shall be provided by controlling the 100-year, 24-hour storm event such that flooding is not exacerbated.

(h) Downstream Analysis: Due to peak flow timing and runoff volume effects, some structural components of the stormwater management system fail to reduce discharge peaks to pre-development levels downstream from the site. A downstream peak flow analysis shall be provided to the point in the watershed downstream of the site or the stormwater management system where the area of the site comprises 10% of the total drainage area in accordance with Section 3.1.9 of the GSMM. This is to help ensure that there are minimal

downstream impacts from development on the site. The downstream analysis may result in the need to resize structural components of the stormwater management system.

(i) Stormwater Management System Inspection and Maintenance: The components of the stormwater management system that will not be dedicated to and accepted by the **[local jurisdiction]**, including all drainage facilities, best management practices, credited conservation spaces, and conveyance systems, shall have an inspection and maintenance agreement to ensure that they continue to function as designed. All new development and redevelopment sites are to prepare a comprehensive inspection and maintenance agreement for the on-site stormwater management system. This plan shall be written in accordance with the requirements in Section [Y]-16.

Section [Y]-8. Pre-Submittal Meeting, Stormwater Concept Plan, and Stormwater Management Plan Requirements.

(a) Before a land development permit application is submitted, an applicant may request a pre-submittal meeting with the **[local jurisdiction]**. The pre-submittal meeting should take place based on an early step in the development process such as before site analysis and inventory (GSMM Section 2.4.2.4) or the stormwater concept plan (GSMM Section 2.4.2.5). The purpose of the pre-submittal meeting is to discuss opportunities, constraints, and ideas for the stormwater management system before formal site design engineering. To the extent applicable, local and regional watershed plans, greenspace plans, trails and greenway plans, and other resource protection plans should be consulted in the pre-submittal meeting. Applicants must request a pre-submittal meeting with the **[local jurisdiction]** when applying for a Determination of Infeasibility through the Practicability Policy.

(b) The stormwater concept plan shall be prepared using the minimum following steps:

(i) Develop the site layout using better site design techniques, as applicable (GSMM Section 2.3).

(ii) Calculate preliminary estimates of the unified stormwater sizing criteria requirements for stormwater runoff quality/reduction, channel protection, overbank flooding protection and extreme flood protection (GSMM Section 2.2).

(iii) Perform screening and preliminary selection of appropriate best management practices and identification of potential siting locations (GSMM Section 4.1).

(c) The stormwater concept plan shall contain:

(i) Common address and legal description of the site,

(ii) Vicinity map, and

(iii) Existing conditions and proposed site layout mapping and plans (recommended scale of 1" = 50'), which illustrate at a minimum:

(A) Existing and proposed topography (minimum of 2-foot contours),

(B) Perennial and intermittent streams,

(C) Mapping of predominant soils from USDA soil surveys,

(D) Boundaries of existing predominant vegetation and proposed limits of clearing and grading,

(E) Location and boundaries of other natural feature protection and conservation areas such as wetlands, lakes, ponds, floodplains, stream buffers and other setbacks (e.g., drinking water well setbacks, septic setbacks, etc.),

(F) Location of existing and proposed roads, buildings, parking areas and other impervious surfaces,

(G) Existing and proposed utilities (e.g., water, sewer, gas, electric) and easements,

(H) Preliminary estimates of unified stormwater sizing criteria requirements,

(I) Preliminary selection and location, size, and limits of disturbance of proposed BMPs,

(J) Location of existing and proposed conveyance systems such as grass channels, swales, and storm drains,

(K) Flow paths,

(L) Location of the boundaries of the base flood floodplain, future-conditions floodplain, and the floodway (as applicable) and relationship of site to upstream and downstream properties and drainage, and

(M) Preliminary location and dimensions of proposed channel modifications, such as bridge or culvert crossings.

(d) The stormwater management plan shall contain the items listed in this part and be prepared under the direct supervisory control of either a registered Professional Engineer or a registered Landscape Architect licensed in the state of Georgia. Items (iii), (iv), (v), and (vi) shall be sealed and signed by a registered Professional Engineer licensed in the

state of Georgia. The overall site plan must be stamped by a design professional licensed in the State of Georgia for such purpose. (GSMM Section 2.4.2.7)

- (i) Natural Resources Inventory
- (ii) Stormwater Concept Plan
- (iii) Existing Conditions Hydrologic Analysis
- (iv) Post-Development Hydrologic Analysis
- (v) Stormwater Management System
- (vi) Downstream Analysis
- (vii) Erosion and Sedimentation Control Plan
- (viii) BMP Landscaping Plan
- (ix) Inspection and Maintenance Agreement
- (x) Evidence of Acquisition of Applicable Local and Non-Local Permits
- (xi) Determination of Infeasibility (if applicable)

(e) For redevelopment and to the extent existing stormwater management structures are being used to meet stormwater management standards the following must also be included in the stormwater management plan for existing stormwater management structures

- (i) As-built Drawings
- (ii) Hydrology Reports
- (iii) Current inspection of existing stormwater management structures with deficiencies noted
- (iv) BMP Landscaping Plans

Section [Y]-9. Application Fee. The fee for review of any land development application shall be based on the fee structure established by the **[local jurisdiction]**, and payment shall be made before the issuance of any land disturbance permit or building permit for the development.

Section [Y]-10. Application Procedures. Land development applications are handled as part of the process to obtain the land disturbance permit pursuant to **[insert local ordinance reference]** or building permit **[insert local ordinance reference]**, as applicable. Before any person begins development on a site, the owner of the site shall first obtain approval in accordance with the following procedure:

- (a) File a land development application with the **[local jurisdiction]** on the **[local jurisdiction's]** form of application with the following supporting materials:

- (i) the stormwater management plan prepared in accordance with Section [Y]-8
- (d),
- (ii) a certification that the development will be performed in accordance with the stormwater management plan once approved,
- (iii) a **[Preliminary Determination of Infeasibility, as applicable, prepared in accordance with the practicability policy]**, and
- (iv) an acknowledgement that applicant has reviewed the **[local jurisdiction's]** form of inspection and maintenance agreement and that applicant agrees to sign and record such inspection and maintenance agreement before the final inspection.

(b) The administrator shall inform the applicant whether the application and supporting materials are approved or disapproved.

(c) If the application or supporting materials are disapproved, the administrator shall notify the applicant of such fact in writing. The applicant may then revise any item not meeting the requirements hereof and resubmit the same for the administrator to again consider and either approve or disapprove.

(d) If the application and supporting materials are approved, the **[local jurisdiction]** may issue the associated land disturbance permit or building permit, provided all other legal requirements for the issuance of such permits have been met. The stormwater management plan included in such applications becomes the approved stormwater management plan.

Section [Y]-11. Compliance with the Approved Stormwater Management Plan. All development shall be:

- (a) consistent with the approved stormwater management plan and all applicable land disturbance and building permits, and
- (b) conducted only within the area specified in the approved stormwater management plan.

No changes may be made to an approved stormwater management plan without review and advanced written approval by the administrator.

Section [Y]-12. Inspections to Ensure Plan Compliance During Construction. Periodic inspections of the stormwater management system during construction shall be conducted by the staff of the **[local jurisdiction]** or conducted and certified by a professional engineer who has been approved by the **[local jurisdiction]**. Inspections shall use the approved stormwater management plan for



establishing compliance. All inspections shall be documented with written reports that contain the following information:

- (a) The date and location of the inspection;
- (b) Whether the stormwater management system is in compliance with the approved stormwater management plan;
- (c) Variations from the approved stormwater management plan; and
- (d) Any other variations or violations of the conditions of the approved stormwater management plan.

Section [Y]-13. Final Inspection; As-Built Drawings; Delivery of Inspection and Maintenance Agreement. Upon completion of the development, the applicant is responsible for:

- (a) Certifying that the stormwater management system is functioning properly and was constructed in conformance with the approved stormwater management plan and associated hydrologic analysis,
- (b) Submitting as-built drawings showing the final design specifications for all components of the stormwater management system as certified by a professional engineer,
- (c) Certifying that the landscaping is established and installed in conformance with the BMP landscaping plan, and
- (d) Delivering to **[local jurisdiction]** a signed inspection and maintenance agreement that has been recorded by the owner in the property record for all parcel(s) that make up the site.

The required certification under part (a) shall include a certification of volume, or other performance test applicable to the type of stormwater management system component, to ensure each component is functioning as designed and built according to the design specifications in the approved stormwater management plan. This certification and the required performance tests shall be performed by a qualified person and submitted to the **[local jurisdiction]** with the request for a final inspection. The **[local jurisdiction]** shall perform a final inspection with applicant to confirm applicant has fulfilled these responsibilities.

Section [Y]-14. Violations and Enforcement. Any violation of the approved stormwater management plan during construction, failure to submit as-built drawings, failure to submit a final BMP landscaping plan, or failure of the final inspection shall constitute and be addressed as violations of, or failures to comply with, the underlying land disturbance permit pursuant to **[insert local ordinance reference]** or the underlying building permit pursuant to **[insert local ordinance reference]**. To address a violation of this Article, the **[local jurisdiction]** shall have all the powers and remedies that are available to it for other violations of building and land disturbance permits,

including without limitation the right to issue notices and orders to ensure compliance, stop work orders, and penalties as set forth in the applicable ordinances for such permits.

Section [Y]-15. Maintenance by Owner of Stormwater Management Systems Predating Current GSMM. For any stormwater management systems approved and built based on requirements predating the current GSMM and that is not otherwise subject to an inspection and maintenance agreement, such stormwater management systems shall be maintained by the owner so that the stormwater management systems perform as they were originally designed.

Section [Y]-16. Inspection and Maintenance Agreements.

- (a) The owner shall execute an inspection and maintenance agreement with the **[local jurisdiction]** obligating the owner to inspect, clean, maintain, and repair the stormwater management system; including vegetation in the final BMP landscaping plan. The form of the inspection and maintenance agreement shall be the form provided by the **[local jurisdiction]**. After the inspection and maintenance agreement has been signed by the owner and the **[local jurisdiction]**, the owner shall promptly record such agreement at the owner's cost in the property record for all parcel(s) that make up the site.
- (b) The inspection and maintenance agreement shall identify by name or official title the person(s) serving as the point of contact for carrying out the owner's obligations under the inspection and maintenance agreement. The owner shall update the point of contact from time to time as needed and upon request by the **[local jurisdiction]**. Upon any sale or transfer of the site, the new owner shall notify the **[local jurisdiction]** in writing within 30 days of the name or official title of new person(s) serving as the point of contact for the new owner. Any failure of an owner to keep the point of contact up to date shall, following 30 days' notice, constitute a failure to maintain the stormwater management system.
- (c) The inspection and maintenance agreement shall run with the land and bind all future successors-in-title of the site. If there is a future sale or transfer of only a portion of the site, then:
  - (i) The parties to such sale or transfer may enter into and record an assignment agreement designating the owner responsible for each portion of the site and associated obligations under the inspection and maintenance agreement. The parties shall record and provide written notice and a copy of such assignment agreement to the **[local jurisdiction]**.
  - (ii) In the absence of a recorded assignment agreement, all owners of the site shall be jointly and severally liable for all obligations under the inspection and maintenance agreement regardless of what portion of the site they own.

Section [Y]-17. Right of Entry for Maintenance Inspections. The terms of the inspection and maintenance agreement shall provide for the **[local jurisdiction's]** right of entry for maintenance inspections and other specified purposes. If a site was developed before the requirement to have

an inspection and maintenance agreement or an inspection and maintenance agreement was for any reason not entered into, recorded, or has otherwise been invalidated or deemed insufficient, then the **[local jurisdiction]** shall have the right to enter and make inspections pursuant to the **[local jurisdiction's]** general provisions for property maintenance inspections pursuant to **[insert reference to existing local ordinance providing for right of entry and inspections for general property maintenance obligations, whether under the local administration procedures for the Georgia Statewide Minimum Construction Codes or other local property maintenance ordinance]**.

Section [Y]-18. Owner's Failure to Maintain the Stormwater Management System. The terms of the inspection and maintenance agreement shall provide for what constitutes a failure to maintain a stormwater management system and the enforcement options available to **[local jurisdiction]**. If a site was developed before the requirement to have an inspection and maintenance agreement or an inspection and maintenance agreement was for any reason not entered into, recorded, or has otherwise been invalidated or deemed insufficient, then:

- (a) An owner's failure to maintain the stormwater management system so that it performs as it was originally designed shall constitute and be addressed as a violation of, or failure to comply with, owner's property maintenance obligations pursuant to **[insert reference to existing local ordinance on violations of general property maintenance obligations, whether under the local administration procedures for the Georgia Statewide Minimum Construction Codes or other local property maintenance ordinance]** and
- (b) To address such a failure to maintain the stormwater management system, the **[local jurisdiction]** shall have all the powers and remedies that are available to it for other violations of an owner's property maintenance obligations, including without limitation prosecution, penalties, abatement, and emergency measures.

## **Appendix B:**

### Mandatory Edits

## Overview of Mandatory Edits

MANDATORY EDIT PROMPT	LANGUAGE	LOCATION IN MODEL ORDINANCE	NOTES
Local jurisdiction	The name of your jurisdiction	<i>36 Instances</i> Section [Y]-1 has one; Section [Y]-2 has five; Section [Y]-3 has two; Section [Y]-6 has two; Section [Y]-7 has two; Section [Y]-8 has two; Section [Y]-9 has one; Section [Y]-10 has four; Section [Y]-12 has two; Section [Y]-13 has three; Section [Y]-14 has one; Section [Y]-16 has six; Section [Y]-17 has three; Section [Y]-18 has two.	
INSERT AS APPROPRIATE - county administrator / county chief executive officer / mayor / city manager	The title of the person appointed to administer and implement this Article on Post-Construction Stormwater Management for New Development and Redevelopment in accordance with Section [Y]-4	<i>One Instance</i> Section [Y]-4	This person could also be a departmental director with similar decision-making authority.
Insert local ordinance reference	No recommended language	<i>Four Instances</i> Section [Y]-10 has two; Section [Y]-14 has two.	The local jurisdiction must reference the code section (land disturbance permit and building permit) for each applicable prompt.

MANDATORY EDIT PROMPT	LANGUAGE	LOCATION IN MODEL ORDINANCE	NOTES
Insert applicable date	Choose a date based on description: December 6, 2020 – for Phase II MS4 Permittees December 10, 2020 - for Phase I MS4 Permittees and local jurisdictions without an MS4 Permit	<i>Two Instances</i> Section [Y]-7(d)(i) and (ii)	This prompt supports the Municipal Separate Storm Sewer System (MS4) Permit requirement for adoption of the Stormwater Management Standard for Stormwater Runoff Quality/Reduction.
Preliminary Determination of Infeasibility, as applicable, prepared in accordance with the practicability policy	Insert the name of the documentation that an owner should submit to show that it is infeasible to apply the stormwater runoff quality/ reduction standard. In 2020, the District will publish a Policy on Practicability Analysis for Runoff Reduction that may be used by the local jurisdiction for this prompt. If a jurisdiction chooses to adopt the District Guide, no update to this language is needed.	<i>One Instance</i> Section [Y]-10(a)(iii)	Language from the Municipal Separate Storm Sewer Permit requiring this documentation, “The determination by the <b>[local jurisdiction]</b> that it is infeasible to apply the stormwater runoff quality/reduction standard, on part or all of a project, must be documented with the site plan review documents.”
Insert reference to existing local ordinance providing for right of entry and inspections for general property maintenance obligations, whether under the local administration procedures for the Georgia Statewide Minimum Construction Codes or other local property maintenance ordinance	No recommended language	<i>One Instance</i> Section [Y]-17	The local jurisdiction must reference their code regarding right of entry and inspections. Incorporating by reference existing administrative procedures of the local jurisdiction is intended to simplify implementation and enforcement.

MANDATORY EDIT PROMPT	LANGUAGE	LOCATION IN MODEL ORDINANCE	NOTES
<p>Insert reference to existing local ordinance on violations of general property maintenance obligations, whether under the local administration procedures for the Georgia Statewide Minimum Construction Codes or other local property maintenance ordinance</p>	<p>No recommended language</p>	<p><i>One Instance</i>  Section [Y]-18(a)</p>	<p>The local jurisdiction must reference their code regarding existing local ordinance on violations of general property maintenance obligations. Incorporating by reference existing administrative procedures of the local jurisdiction is intended to simplify implementation and enforcement</p>

# **Appendix C:** Enhancements



## Enhancement 1: Construction Sequencing

### Purpose

Stormwater best management practices (BMPs) in the Georgia Stormwater Management Manual must be installed correctly to be effective. For example, sites for infiltration practices must be protected from compaction and sedimentation. A construction sequencing plan provides the local jurisdiction an opportunity to emphasize the different needs for these BMPs during construction and enforce proper construction practices.

### Language

#### *Definition*

“construction sequencing plan” means a document noting the sequence of construction and identification of infiltration zones for protection during staged installation of permanent post-construction BMPs to ensure suitable site conditions such as avoiding soil compaction by heavy equipment in areas designated for infiltration BMPs.

### Edits to Model Ordinance to include this enhancement

- Add the construction sequencing plan definition (provided in *Language* above) to Section [Y]-2. Definitions. Definitions are listed in alphabetical order.
- Require the construction sequencing plan to be part of the Stormwater Management Plan by adding it to the list in Section [Y]-8 (d) as a new (xii).
- Incorporate the construction sequencing plan into construction inspections by adding this bolded and italicized language to Section [Y]-12 as follows, “Inspections shall use the approved stormwater management plan and the ***construction sequencing plan*** for establishing compliance.”

## Enhancement 2: Pre-Development Hydrology

### Purpose

Local jurisdictions that would like to require stormwater management design to be based on original pre-developed conditions, regardless of project type (redevelopment or new development), can make the following edits to the Model Ordinance.

### Language

#### *Definition*

“pre-development hydrology” means ~~(a) for new development,~~ the runoff curve number determined using natural conditions hydrologic analysis based on the natural, undisturbed condition of the site ~~immediately prior to the implementation of the proposed development; and~~ ~~(b) for redevelopment, the existing conditions hydrograph may take into account the existing development when defining the runoff curve number and calculating existing runoff, unless the existing development causes a negative impact on downstream property.~~

### Edits to Model Ordinance to include this enhancement

- Edit the pre-development hydrology definition as shown in *Language* above in Section [Y]-2. Definitions.

## Enhancement 3: Trout Streams

### Purpose

This enhancement supports the MS4 Permit requirement for trout stream protection. The Permit states, “For receiving waters with a trout stream designation, which contain outfalls from the permittee’s MS4, the permittee’s Stormwater Management Program (SWMP) must address the protection of trout waters from impacts from the MS4 outfalls due to elevated temperature.”

As of December 2019 (the date of publication for this document), this enhancement would apply to the following counties: **Bartow, Cherokee, Cobb, Forsyth, Fulton, Gwinnett, and Paulding.**

### Language

#### *Definition*

“trout stream” means waters designated by the Wildlife Resources Division of the Georgia Department of Natural Resources as Primary Trout Waters or Secondary Trout Streams. Primary Trout Waters are waters supporting a self-sustaining population of Rainbow, Brown or Brook Trout. Secondary Trout Streams are those with no evidence of natural trout reproduction but are capable of supporting trout throughout the year.

#### *Stormwater Management Standard*

Trout Stream Protection: Trout stream protection shall be provided by controlling temperature for receiving waters with trout stream designation. In streams designated as primary trout waters by the Wildlife Resources Division, there shall be no elevation of natural stream temperatures. In streams designated as secondary trout waters, there shall be no elevation exceeding 2°F of natural stream temperatures.

### Edits to Model Ordinance to include this enhancement

- Add the trout stream definition (provided in *Language* above) to Section [Y]-2. Definitions. Definitions are listed in alphabetical order.
- Add the *Stormwater Management Standard* above as (h) in Section [Y]-7. Stormwater Management Standards. Edit remaining letters in the section so that “j” is the last letter.

## Enhancement 4: Linear Transportation Feasibility Program

### Purpose

A Linear Transportation Feasibility Program is a feasibility program that identifies the criteria and administrative process for determining when implementation of stormwater management standards are infeasible for linear transportation projects being constructed by the local jurisdiction. The Linear Transportation Feasibility Program is not required, and the Metropolitan North Georgia Water Planning District has not developed a template for local jurisdictions to adopt for implementation of this program.

The Model Ordinance is written for local jurisdictions that will have a Linear Transportation Feasibility Program, which will require program development and submittal to the Georgia Environmental Protection Division. Local jurisdictions that are not going to have a Linear Transportation Feasibility Program must make the following edits to the Model Ordinance.

### Language

#### Section [Y]-2. Definitions

~~“linear feasibility program” means a feasibility program developed by [local jurisdiction] and submitted to the Georgia Environmental Protection Division, which sets reasonable criteria for determining when implementation of stormwater management standards for linear transportation projects being constructed by [local jurisdiction] is infeasible.~~

#### Section [Y]-6. Exemptions

~~(h) — Linear transportation projects being constructed by [local jurisdiction] to the extent the administrator determines that the stormwater management standards may be infeasible to apply, all or in part, for any portion of the linear transportation project. For this exemption to apply, an infeasibility report that is compliant with the [local jurisdiction] linear feasibility program shall first be submitted to the administrator that contains adequate documentation to support the evaluation for the applicable portion(s) and any resulting infeasibility determination, if any, by the administrator.~~

### Edits to Model Ordinance to remove this program

- Delete the “linear feasibility program” definition in Section [Y]-2. Definitions as shown in *Language* above.
- Delete Section [Y]-6.h as shown in *Language* above.

**Appendix D:**  
Model Ordinance Crosswalk

## Crosswalk for 2002 and 2019 Model Ordinance for Post-Construction Stormwater Management for New Development and Redevelopment

2002 MODEL ORDINANCE	2019 MODEL ORDINANCE	DISCUSSION
Description	N/A	Introductory language is typically not codified, and the 2019 Draft was formatted for adoption and submittal to MuniCode. Introductory information can be found in the Draft Model User Guide and Memo
Table of Contents	N/A	
Introduction	N/A	
<b>Section 1. General Provisions</b>		
1.1. Purpose and intent	[Y]-1 Purpose and Intent	None
1.2. Applicability	[Y]-5. Applicability Criteria for Stormwater Management Standards  [Y]-6. Exemptions from Stormwater Management Standards	Certain exemptions were deleted from the ordinance to match the MS4 permit exemptions
1.3. Designation of Ordinance Administrator	[Y]-4. Designation of Administrator	None
1.4. Compatibility with Other Regulations	[Y]-3. Adoption and Implementation of the GSMM; Conflicts and Inconsistencies	None
1.5. Severability		
1.6. Stormwater Design Manual		
<b>Section 2. Definitions</b>		
<b>Section 3. Permit Procedures and Requirements</b>		
3.1 Permit Application Requirements	[Y]-10. Application Procedures.	None
3.2 Stormwater Concept Plan and Consultation Meeting	[Y]-8. Pre-Consultation Meeting, Stormwater Concept Plan, and Stormwater Management Plan Requirements.	None
3.3 Stormwater Management Plan Requirements		
3.4 Stormwater Management Inspection and Maintenance Agreements	[Y]-13 (c) Delivering to [local jurisdiction] a signed inspection and maintenance agreement.	None

3.5 Performance and Maintenance Bonds	N/A	Performance and maintenance bonds may be added and customized for communities that use them but is not applied in enough of the District to be included in the Model
3.6 Application Procedure	[Y]-10. Application Procedures	None
3.7 Application Review Fees	[Y]-9. Application Fee	None
3.8 Modification for Off-Site Facilities	N/A	Off-Site Facilities may be added and customized for communities that use them but is not applied in enough of the District to be included in the Model.
<b>Section 4 Post-Development Stormwater Management Performance Criteria</b>	Section [Y]-7. Stormwater Management Standards.	
4.1 Water Quality	[Y]-7 (d) Stormwater Runoff Quality/Reduction	Runoff reduction has been added to this standard in the 2019 Draft
4.2 Stream Channel Protection	[Y]-7 (e) Stream Channel Protection	2019 Draft matches MS4 Permit
4.3 Overbank Flooding Protection	[Y]-7 (f) Overbank Flood Protection	2019 Draft matches MS4 Permit
4.4 Extreme Flooding Protection	[Y]-7 (g) Extreme Flood Protection	2019 Draft matches MS4 Permit
4.5. Structural Stormwater Controls	[Y]-7 (a) Design of Stormwater Management System	None
4.6 Stormwater Credits for Nonstructural Measures	[Y]-7 (c) Better Site Design Practices for Stormwater Management	This is not a 1:1 conversion, but the better site design element remains in the 2019 Draft; replacing the term “may” for “shall.” The methodology for providing credits related to conservation easements was unclear and was removed.
4.7 Drainage System Guidelines	[Y]-7 (a) Design of Stormwater Management System OR Refer to Georgia Stormwater Management Manual	Compressed or moved to GSMM reference to reduce redundancy

4.8 Dam Design Guidelines	[Y]-3. Adoption and Implementation of the GSMM; Conflicts and Inconsistencies	2019 Draft points to Georgia Safe Dams Act and Rules for Dam Safety
<b>Section 5. Construction Inspections of Post-Development Stormwater Management System</b>		
5.1 Inspections to Ensure Plan Compliance During Construction	[Y]-12. Inspections to Ensure Plan Compliance During Construction	None
5.2 Final Inspection and As Built Plans	[Y]-13. Final Inspection; As-Built Drawings; Delivery of Inspection and Maintenance Agreement	None
<b>Section 6. Ongoing Inspection and Maintenance of Stormwater Facilities and Practices</b>		
6.1 Long-Term Maintenance Inspection of Stormwater Facilities and Practices	[Y]-15. Maintenance by Owner of Stormwater Management Systems Predating Current GSMM  [Y]-16. Inspection and Maintenance Agreements	None
6.2 Right-of-Entry for Inspection	[Y]-17. Right of Entry for Maintenance Inspections	Right of Entry grants the local jurisdiction access for inspection, which is generally sufficient for privately owned BMPs. A BMP that has been dedicated to the local government should have an easement that grants an ownership interest, not just a license for temporary access. Dedication is not addressed in this model ordinance given the range of local practices.
6.3 Records of Maintenance Activities	N/A	Should be part of the local jurisdiction's maintenance agreement template.
6.4 Failure to Maintain	[Y]-18. Owner's Failure to Maintain the Stormwater Management System	None



<b>Section 7. Violations, Enforcement and Penalties</b>		
7.1 Notice of Violation	[Y]-14. Violations and Enforcement	None
7.2 Penalties		

**Appendix E:**  
Model Ordinance Redline

## Document Comparison for 2002 and 2019 Model Ordinance for Post-Construction Stormwater Management for New Development and Redevelopment

DOCUMENT COMPARISON KEY	
Text Sample	Text that is the same for both documents
<del>Text Sample</del>	Text that was deleted from the Current Model Ordinance
Text Sample	Text that was added in the 2019 Draft Model Ordinance

# ~~APPENDIX A1 – MODEL ORDINANCE FOR POST-DEVELOPMENT STORMWATER MANAGEMENT ORDINANCE FOR NEW DEVELOPMENT AND REDEVELOPMENT~~

## ~~DESCRIPTION~~

~~This model ordinance addresses post-development stormwater management requirements for new development and redevelopment in a community. The ordinance defines requirements for a post-development stormwater management plan, which is required in order to undertake land development activities. This plan contains the details of how the development will address post-development stormwater runoff quality and quantity impacts resulting from the permanent alteration of the character and hydrology of the land surface as well as the nonpoint source pollution from land use activities. The ordinance also outlines the water quantity and quality performance criteria for managing this runoff and specifies local requirements for the use of structural stormwater controls and nonstructural practices, in order to protect public health and safety, protection of public and private property and infrastructure, and environmental protection. Ongoing long-term inspection and maintenance provisions are provided. The majority of technical criteria and standards are adopted by reference through the use of a local stormwater management design manual.~~

## ~~TABLE OF CONTENTS~~

~~Introduction~~

~~Section 1. General Provisions Section~~

~~2. Definitions~~


~~Section 3. Permit Procedures and Requirements~~

~~Section 4. Post-Development Stormwater Management Performance Criteria~~

~~Section 5. Construction Inspections of Post-Development Stormwater Management System~~

~~Section 6. Ongoing Inspection and Maintenance of Stormwater Facilities and Practices Section~~

~~7. Violations, Enforcement and Penalties~~

*Note: Italicized text with this symbol  should be interpreted as comments, instructions, or information to assist the local government in tailoring the ordinance. This text would not appear in a final adopted ordinance.*

## INTRODUCTION

It is hereby determined that:

~~Land development projects and other land use conversions, and their associated changes to land cover, permanently alter the hydrologic response of local watersheds and increase stormwater runoff rates and volumes, which in turn increase flooding, stream channel erosion, and sediment transport and deposition;~~

~~Land development projects and other land use conversions also contribute to increased nonpoint source pollution and degradation of receiving waters; The impacts of post-development stormwater runoff quantity and quality can adversely affect public safety, public and private property, drinking water supplies, recreation, fish and other aquatic life, property values and other uses of lands and waters;~~

~~These adverse impacts can be controlled and minimized through the regulation of stormwater runoff quantity and quality from new development and redevelopment, by the use of both structural facilities as well as nonstructural measures, such as the conservation of open space and greenspace areas. The preservation and protection of natural area and greenspace for stormwater management benefits is encouraged through the use of incentives or "credits." The Georgia Greenspace Program provides a mechanism for the preservation and coordination of those greenspace areas which provide stormwater management quality and quantity benefits;~~

~~Localities in the State of Georgia are required to comply with a number of both State and Federal laws, regulations and permits which require a locality to address the impacts of post-development stormwater runoff quality and nonpoint source pollution;~~

~~Therefore, **(local jurisdiction)** has established this set of stormwater management policies to provide reasonable guidance for the regulation of post-development stormwater runoff for the purpose of protecting local water resources from degradation. It has determined that it is in the public interest to regulate post-development stormwater runoff discharges in order to control and minimize increases in stormwater runoff rates and volumes, post-construction soil erosion and sedimentation, stream channel erosion, and nonpoint source pollution associated with post-development stormwater runoff.~~

## SECTION 1. GENERAL PROVISIONS

Model Ordinance for Post-Construction Stormwater Management for New Development and Redevelopment

[Article \[X\]. Post-Construction Stormwater Management for New Development and Redevelopment.](#)

### ~~1.1.~~ [Section \[Y\]-1. Purpose and Intent](#)

. The purpose of this ~~ordinance~~ **article** is to protect, maintain and enhance the public health, safety, environment and general welfare by establishing minimum requirements and procedures to control the adverse effects of increased post-~~development~~ **construction** stormwater runoff and nonpoint source pollution associated with new development and redevelopment. ~~It has been determined that proper~~ **Proper** management of post-~~development~~ **construction** stormwater runoff will minimize damage to public and private property and infrastructure, safeguard the public health, safety, environment and general welfare of the public, and protect water and aquatic resources. ~~This ordinance seeks to meet that purpose through the following objectives:~~ **Additionally, the [local jurisdiction]** is required to comply with several State and Federal laws, regulations and permits and the requirements of the Metropolitan North Georgia Water Planning District's regional water plan related to managing the water quantity, velocity, and quality of post- construction stormwater runoff.

- ~~(1) — Establish decision-making processes surrounding land development activities that protect~~ **Section [Y]-2. Definitions. For this Article, the integrity of the watershed and preserve the health of water resources;**
- ~~(2) — Require that new development and redevelopment maintain the pre-development hydrologic response in their post-development state as nearly as practicable in order to reduce flooding, streambank erosion, nonpoint source pollution and increases in stream temperature, and maintain the integrity of stream channels and aquatic habitats;~~
- ~~(3) — Establish minimum post-development stormwater management standards and design criteria for the regulation and control of stormwater runoff quantity and quality;~~
- ~~(4) — Establish design and application criteria for the construction and use of structural stormwater control facilities that can be used to meet the minimum post-development stormwater management standards;~~
- ~~(5) — Encourage the use of nonstructural stormwater management and stormwater better site design practices, such as the preservation of greenspace and other conservation areas, to the maximum extent practicable. Coordinate site design plans, which include greenspace, with the county's greenspace protection plan;~~
- ~~(6) — Establish provisions for the long-term responsibility for and maintenance of structural stormwater control facilities and nonstructural stormwater management practices to ensure that they continue to function as designed, are maintained, and pose no threat to public safety; and,~~
- ~~(7) — Establish administrative procedures for the submission, review, approval and disapproval of stormwater management plans, and for the inspection of approved active projects, and long-term follow up.~~

~~☞ The above list is a general set of objectives to reduce the impacts of post-development stormwater runoff quantity and quality from land development activities. The local stormwater authority may wish to set more specific objectives based upon a watershed management plan, impervious surface targets, the findings of a watershed assessment or study, or in order to address a local water quality problem or TMDL.~~

## ~~1.2. —~~ **Applicability**

~~A.~~ **This ordinance** ~~terms below~~ shall be applicable to all land development, including, but not limited to, site plan applications, subdivision applications, and grading applications, unless exempt

~~pursuant to Subsection 2 below. These standards apply to any new development or redevelopment site that meets one or more of~~ **have** the following criteria: **meanings:**

- ~~a. New development that involves the creation of 5,000 square feet or more of impervious cover, or that involves other land development activities of 1 acre or more;~~
  - ~~b. Redevelopment that includes the creation, addition or replacement of 5,000 square feet or more of impervious cover, or that involves other land development activity of one (1) acre or more;~~
  - ~~c. Any new development or redevelopment, regardless of size, that is defined by the~~  
(~~“administrator” to be a hotspot land use; or,~~
  - ~~d. Land development activities that are smaller than the minimum applicability criteria set forth in items A and B above if such activities are part of a larger common plan of development, even though multiple, separate and distinct land development activities may take place at different times on different schedules.~~
- (2) ~~The following activities are exempt from this ordinance:~~
- ~~a. Individual single-family or duplex residential lots that are not part of a subdivision or phased development project;~~
  - ~~b. Additions or modifications to existing single-family or duplex residential structures;~~
  - ~~c. Agricultural or silvicultural land management activities within areas zoned for these activities; and,~~
  - ~~d. Repairs to any stormwater management facility or practice deemed necessary by the~~  
(~~administrator~~).

### ~~1.3. Designation of Ordinance Administrator~~

~~The~~ **(title of administrator) or (designee)** ~~is hereby”~~ **means the person** appointed to administer and implement ~~the provisions of this ordinance~~ **Article on Post-Construction Stormwater Management for New Development and Redevelopment in accordance with Section [Y]-4.**

### ~~1.4. Compatibility with Other Regulations~~

~~This ordinance is not intended to modify or repeal any other ordinance, rule, regulation or other provision of law. The requirements of this ordinance are in addition to the requirements of any other ordinance, rule, regulation or other provision of law, and where any provision of this ordinance imposes restrictions different from those imposed by any other ordinance, rule, regulation or other provision of law, whichever provision is more restrictive or imposes higher protective standards for human health or the environment shall control.~~

### ~~1.5. Severability~~

~~If the provisions of any section, subsection, paragraph, subdivision or clause of this ordinance shall be adjudged invalid by a court of competent jurisdiction, such judgment shall not affect or invalidate the remainder of any section, subsection, paragraph, subdivision or clause of this ordinance.~~

## ~~1.6. Stormwater Design Manual~~

The ~~(local permitting authority)~~ will utilize the policy, criteria and information including technical specifications and standards in the latest edition of the Georgia Stormwater Management Manual and any relevant local addenda ~~(~~☞~~ or equivalent local stormwater management design manual)~~, for the proper implementation of the requirements of this ordinance. The manual may be updated and expanded periodically, based on improvements in science, engineering, monitoring and local maintenance experience.

~~☞ All references to the Georgia Stormwater Management Manual (GSMM) are presumed to be the "latest edition" as defined on the GSMM website at [www.georgiastormwater.com](http://www.georgiastormwater.com). Updates, errata and revisions will be provided on the website. Local authorities may wish to develop a local manual or addendum that complements the GSMM. Further, the local permitting authority may wish to use its own equivalent stormwater management design manual provided that it includes an approach and standards at least as stringent as the Georgia Stormwater Management Manual.~~

## ~~SECTION 2. DEFINITIONS~~

### ~~"Applicant~~

~~"applicant"~~ means a person submitting a ~~post-land~~ development ~~stormwater management~~ application ~~and plan~~ for approval.

### ~~"Channel~~

~~"BMP" or "best management practice"~~ means both structural devices to store or treat stormwater runoff and non-structural programs or practices which are designed to prevent or reduce the pollution of the waters of the State of Georgia.

~~"BMP landscaping plan"~~ means a design for vegetation and landscaping that is critical to the performance and function of the BMP including how the BMP will be stabilized and established with vegetation. It shall include a layout of plants and plant names (local and scientific).

~~"channel"~~ means a natural or artificial watercourse with a definite bed and banks that ~~conducts~~conveys continuously or periodically flowing water.

~~"Conservation Easement"~~ means an agreement between a land owner and the ~~(local jurisdiction)~~ or other government agency or land trust that permanently protects open space or greenspace on the owner's land by limiting the amount and type of development that can take place, but continues to leave the remainder of the fee interest in private ownership.

### ~~"Detention"~~ means

~~"detention"~~ means the temporary storage of stormwater runoff in a stormwater ~~management~~detention facility for the purpose of controlling the peak discharge.

### ~~"Detention Facility~~

~~"detention facility"~~ means a ~~detention basin or~~ structure designed for the ~~detention of~~ stormwater runoffstorage and gradual release of ~~stored water~~stormwater runoff at controlled rates.

### ~~"Developer"~~ means a person who undertakes land

~~"development activities."~~~~"Development"~~ means a ~~land~~new development or ~~land development~~ project.redevelopment.

~~“Drainage Easement” means an easement appurtenant or attached to a tract or parcel of land allowing the owner of adjacent tracts or other persons to discharge stormwater runoff onto the tract or parcel of land subject to the drainage easement.~~

~~“Erosion and Sedimentation Control Plan~~

~~“extended detention” means a plan that is designed to minimize the accelerated erosion and sediment runoff at a site during land disturbance activities.~~

~~“Extended Detention” means the detention the storage of stormwater runoff for an extended period, typically 24 hours or greater of time.~~

~~“Extreme Flood Protection~~

~~“extreme flood protection” means measures taken to prevent adverse impacts from large low-frequency storm events with a return frequency of 100 years or more.~~

~~“Flooding~~

~~“flooding” means a volume of surface water that is too great to be confined within exceeds the banks or walls of a conveyance BMP, or stream channel; and that overflows onto adjacent lands.~~

~~“Greenspace” or “Open Space” means permanently protected areas of the site that are preserved in a natural state.~~

~~“Hotspot” means an area where the use of the land has the potential to generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater. “Hydrologic Soil Group (HSG)” means a Natural Resource Conservation Service 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.~~

~~“Impervious Cover~~

~~“GSMM” means the latest edition of the Georgia Stormwater Management Manual, Volume 2: Technical Handbook, and its Appendices.~~

~~“hotspot” means a land use or activity on a site that has the potential to produce higher than normally found levels of pollutants in stormwater runoff. As defined by the administrator, hotspot land use may include gasoline stations, vehicle service and maintenance areas, industrial facilities (both permitted under the Industrial Stormwater General Permit and others), material storage sites, garbage transfer facilities, and commercial parking lots with high-intensity use.~~

~~“impervious surface” means a surface composed of any material that significantly impedes or prevents the natural infiltration of water into soil. Impervious surfaces include, but are not limited to, rooftops, buildings, streets and roads, and any concrete or asphalt surface. the soil.~~

~~“Industrial Stormwater General Permit” means at the National Pollutant Discharge Elimination System (NPDES) permit issued by Georgia Environmental Protection Division to an industry or group of industries which for stormwater discharges associated with industrial activity. The permit regulates the pollutant levels associated with industrial stormwater discharges or specifies on-site pollution control strategies. “Infiltration” means the process of percolating stormwater runoff into the subsoil. “Jurisdictional Wetland” means an area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted~~



~~for life in saturated soil conditions, commonly known as hydrophytic vegetation~~ based on Standard Industrial Classification (SIC) Code.

~~“Land Development” means any land change, including, but not limited to, clearing, digging, grubbing, stripping, removal of vegetation, dredging, grading, excavating, transporting and filling of land, construction, paving, and any other installation of impervious cover.~~

~~“Land Development Activities” means those actions or activities which comprise, facilitate or result in land development.~~

~~“Land Development Project” means a discrete land development undertaking.~~

~~“Inspection and Maintenance Agreement” means a~~

~~“infiltration” means the process of percolating stormwater runoff into the subsoil.~~

~~“inspection and maintenance agreement” means a written agreement providing for the long-term inspection, operation, and maintenance of the stormwater management facilities system and practices its components on a site or.~~

~~“land development application” means the application for a land development permit on a form provided by [local jurisdiction] along with respect to a the supporting documentation required in Section [Y]-10(a).~~

~~“land development project permit” means the authorization necessary to begin construction-related, land-disturbing activity~~

~~“land disturbing activity” means any activity which may result in soil erosion from water or wind and the movement of sediments into state water or onto lands within the state, including but not limited to clearing, dredging, grading, excavating, and filling of land. Land disturbing activity does not include agricultural practices as described O.C.G.A. 12-7-17(5) or silvicultural land management activities as described O.C.G.A. 12-7-17(6) within areas zoned for these activities.~~

~~“linear feasibility program” means a feasibility program developed by [local jurisdiction] and submitted to the Georgia Environmental Protection Division, which sets reasonable criteria for determining when properly recorded in the deed records constitutes a restriction on the title to a site or other land involved in a land implementation of stormwater management standards for linear transportation projects being constructed by [local jurisdiction] is infeasible.~~

~~“linear transportation projects” means construction projects on traveled ways including but not limited to roads, sidewalks, multi-use paths and trails, and airport runways and taxiways.~~

~~“MS4 Permit” means the NPDES permit issued by Georgia Environmental Protection Division for discharges from the [local jurisdiction’s] municipal separate storm sewer system.~~

~~“new development project.~~

~~“New Development” means a land disturbing activities, structural development activity (construction, installation or expansion of a building or other structure), and/or creation of impervious surfaces on a previously undeveloped site. “Nonpoint Source Pollution~~

“nonpoint source pollution” means a form of water pollution that does not originate from a discrete point such as a ~~sewage wastewater~~ treatment ~~plant~~ facility or industrial discharge, but involves the transport of pollutants such as sediment, fertilizers, pesticides, heavy metals, oil, grease, bacteria, organic materials and other contaminants from land to surface water ~~and/or~~ groundwater via mechanisms such as precipitation, stormwater runoff, and leaching. Nonpoint source pollution is a by-product of land use practices such as agricultural, silvicultural, mining, construction, subsurface disposal and urban runoff sources.

~~“Nonstructural Stormwater Management Practice” or “Nonstructural Practice” means any natural or planted vegetation or other nonstructural component of the stormwater management plan that provides for or enhances stormwater quantity and/or quality control or other stormwater management benefits, and includes, but is not limited to, riparian buffers, open and greenspace areas, overland flow filtration areas, natural depressions, and vegetated channels.~~

~~“Off Site Facility” means a stormwater management facility located outside the boundaries of the site.~~

~~“On-Site Facility” means a stormwater management facility located within the boundaries of the site.~~

~~“Overbank Flood Protection~~

“overbank flood protection” means measures taken to prevent an increase in the frequency and magnitude of out-of-bank flooding (i.e. flow events that exceed the capacity of the channel and enter the floodplain), ~~and that are intended to protect downstream properties from flooding for the 2-year through 25-year frequency storm events.~~

~~“Owner~~

“owner” means the legal or beneficial owner of a site, including but not limited to, a mortgagee or vendee in possession, receiver, executor, trustee, lessee or other person, firm or corporation in control of the site.

~~“Permit” means the permit issued by the (local permitting authority) to the applicant which is required for undertaking any land development activity.~~

~~“Person” means, except to the extent exempted from this ordinance,~~

“person” means any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, city, county or other political subdivision of the State, any interstate body or any other legal entity.

~~“Post~~

“post-construction stormwater management” means stormwater best management practices that are used on a permanent basis to control and treat runoff once construction has been completed in accordance with a stormwater management plan.

~~“post-development” refers to the time period, or means the conditions that may reasonably be expected or anticipated to exist, on site immediately after completion of the land proposed development activity on a site as.~~

“practicability policy” means the latest edition of the ~~context may require~~ Metropolitan North Georgia Water Planning District’s Policy on Practicability Analysis for Runoff Reduction.

~~“Pre~~

“pre-development” ~~refers to the the time period, or means~~ the conditions that exist, on a site ~~prior to~~ immediately before the ~~commencement~~ implementation of a ~~land~~ the proposed development project and at the time that plans for the land development of a site are approved by the plan approving

~~authority.~~ Where phased development or plan approval occurs (preliminary grading, roads and utilities, etc.), the existing conditions at the time ~~prior to~~before the first item being approved or permitted shall establish pre-development conditions.

~~“Project” means a land development project.~~

~~“Redevelopment” means a land development project on a~~

~~“pre-development hydrology” means (a) for new development, the runoff curve number determined using natural conditions hydrologic analysis based on the natural, undisturbed condition of the site immediately before implementation of the proposed development; and (b) for redevelopment, the existing conditions hydrograph may take into account the existing development when defining the runoff curve number and calculating existing runoff, unless the existing development causes a negative impact on downstream property.~~

~~“previously developed site, but excludes” means a site that has been altered by paving, construction, and/or land disturbing activity.~~

~~“redevelopment” means structural development (construction, installation, or expansion of a building or other structure), creation or addition of impervious surfaces, replacement of impervious surfaces not as part of routine maintenance, and land disturbing activities associated with structural or impervious development on a previously developed site. Redevelopment does not include such activities as exterior remodeling.~~

~~“routine maintenance” means activities to keep an impervious surface as near as possible to its constructed condition. This includes ordinary maintenance activities, remodeling of existing buildings, resurfacing of paved areas, and exterior building changes or improvements which do not materially increase or concentrate stormwater runoff, or cause additional nonpoint source pollution.~~

~~“Regional Stormwater Management Facility” or “Regional Facility” means stormwater management facilities designed to control stormwater runoff from multiple properties, where the owners or developers of the individual properties may assist in the financing of the facility, and the requirement for on-site controls is either eliminated or reduced.~~

~~“Runoff” means stormwater runoff.~~

~~“Site” means the parcel of land being developed, or the portion thereof on which the land development project is located.~~

~~“Stormwater Better Site Design” means nonstructural site design approaches and techniques that can reduce a site’s impact on the watershed and can provide for nonstructural~~

~~“runoff” means stormwater runoff.~~

~~“site” means an area of land where development is planned, which may include all or portions of one or more parcels of land. For subdivisions and other common plans of development, the site includes all areas of land covered under an applicable land development permit.~~

~~“stormwater concept plan” means an initial plan for post-construction stormwater management at the site that provides the groundwork for the stormwater management. Stormwater better site design includes conserving and protecting plan including the natural areas and greenspace, reducing impervious cover and using natural features for resources inventory, site layout concept, initial~~

runoff characterization, and first round stormwater management. ~~“Stormwater Management system design.~~

“stormwater management plan” means a plan for post-construction stormwater management at the site that meets the requirements of Section [Y]-8(d) and is included as part of the land development application.

“stormwater management standards” means ~~the~~ those standards set forth in Section [Y]-7.

“stormwater management system” means the entire set of non-structural site design features and structural BMPs for collection, conveyance, storage, infiltration, treatment, and disposal of stormwater runoff in a manner ~~intended~~ designed 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.

~~“Stormwater Management Facility” means any infrastructure that controls or conveys “stormwater runoff.~~

~~“Stormwater Management Measure” means any stormwater management facility or nonstructural stormwater practice.~~

~~“Stormwater Management Plan” means a document describing how existing runoff characteristics will be affected by a land development project and containing measures for complying with”~~ means flow on the provisions of this ordinance.

~~“Stormwater Management System” means the entire set of structural and nonstructural stormwater management facilities and practices that are used to capture, convey and control the quantity and quality of the stormwater runoff from a site.~~

~~“Stormwater Retrofit” means a stormwater management practice designed for a currently developed site that previously had either no stormwater management practice in place or a practice inadequate to meet the stormwater management requirements of the site.~~

~~“Stormwater Runoff” means the flow of surface water~~ of the ground, resulting from precipitation.

~~“Structural Stormwater Control” means a structural stormwater management facility or device that controls stormwater runoff and changes the characteristics of that runoff including, but not limited to, the quantity and quality, the period of release or the velocity of flow of such runoff.~~

~~“Subdivision~~

“subdivision” means the division of a tract or parcel of land resulting in one or more new lots or building sites for the purpose, whether immediately or in the future, of sale, other transfer of ownership or land development, and includes divisions of land resulting from or made in connection with the layout or development of a new street or roadway or a change in an existing street or roadway.

## ~~SECTION 3. PERMIT PROCEDURES AND REQUIREMENTS~~

### ~~3.1. Permit Application Requirements~~

~~No owner or developer shall perform any land development activities without first meeting the requirements of this ordinance prior to commencing the proposed activity.~~

~~Unless specifically exempted by this ordinance, any owner or developer proposing a land development activity shall submit to the **(local permitting authority)** a permit application on a form provided by the **(local permitting authority)** for that purpose.~~

~~Unless otherwise exempted by this ordinance, a permit application shall be accompanied by the following items in order to be considered:~~

- ~~(1) Stormwater concept plan and consultation meeting certification in accordance with Section 3.2;~~
- ~~(2) Stormwater management plan in accordance with Section 3.3;~~
- ~~(3) Inspection and maintenance agreement in accordance with Section 3.4, if applicable;~~
- ~~(4) Performance bond in accordance with Section 3.5, if applicable; and,~~
- ~~(5) Permit application and plan review fees in accordance with Section 3.6.~~

~~ The following stormwater concept plan and consultation meeting is an optional step. At the local government's discretion, the concept plan stage could be made a requirement, particularly for large development projects or those with substantial impact, or for developers and engineers who are unfamiliar with the local government's requirements.~~

### ~~3.2. Stormwater Concept Plan and Consultation Meeting~~

~~Before any stormwater management permit application is submitted, it is recommended that the land owner or developer [shall] meet with the **(local permitting authority)** for a consultation meeting on a concept plan for the post-development stormwater management system to be utilized in the proposed land development project. This consultation meeting should [shall] take place at the time of the preliminary plan of subdivision or other early step in the development process. The purpose of this meeting is to discuss the post-development stormwater management measures necessary for the proposed project, as well as to discuss and assess constraints, opportunities and potential ideas for stormwater management designs before the formal site design engineering is commenced.~~

~~To accomplish this goal the following information should [shall] be included in the concept plan which should [shall] be submitted in advance of the meeting:~~

#### ~~B. Existing Conditions / Proposed Site Plans~~

~~Other terms used but not defined in this Article shall be interpreted based on how such terms are defined and used in the GSMM and the **[local jurisdiction's]** MS4 permit.~~

Section [Y]-3. Adoption and Implementation of the GSMM; Conflicts and Inconsistencies.

- (a) In implementing this Article, the **[local jurisdiction]** shall use and require compliance with all relevant design standards, calculations, formulas, methods, and other guidance from the GSMM as well as all related appendices.
- (b) This Article is not intended to modify or repeal any other Article, ordinance, rule, regulation or other provision of law, including but not limited to any applicable stream buffers under state and local laws, and the Georgia Safe Dams Act and Rules for Dam Safety. In the event of any conflict or inconsistency between any provision in the **[local jurisdiction's]** MS4 permit and this Article, the provision from the MS4 permit shall control. In the event of any conflict or inconsistency between any provision of this Article and the GSMM, the provision from this Article shall control. In the event of any other conflict or inconsistency between any provision of this Article and any other ordinance, rule, regulation or other provision of law, the provision that is more restrictive or imposes higher protective standards for human health or the environment shall control.
- (c) If any provision of this Article is invalidated by a court of competent jurisdiction, such judgment shall not affect or invalidate the remainder of this Article.

Section [Y]-4. Designation of Administrator. The **[INSERT AS APPROPRIATE - county administrator / county chief executive officer / mayor / city manager]** may from time to time appoint someone to administer and implement this Article.

Section [Y]-5. Applicability Criteria for Stormwater Management Standards. This Article applies to the following activities:

- (a) New development that creates or adds 5,000 square feet or greater of new impervious surface area or that involves land disturbing activity of 1 acre of land or greater;
- (b) Redevelopment (excluding routine maintenance and exterior remodeling) that creates, adds, or replaces 5,000 square feet or greater of new impervious surface area or that involves land disturbing activity of 1 acre or more;
- (c) New development and redevelopment if
  - (i) such new development or redevelopment is part of a subdivision or other common plan of development, and
  - (ii) the sum of all associated impervious surface area or land disturbing activities that are being developed as part of such subdivision or other common plan of development meets or exceeds the threshold in (a) and (b) above;
- (d) Any commercial or industrial new development or redevelopment, regardless of size, that is a hotspot land use as defined in this Article; and

- (e) Linear transportation projects that exceed the threshold in (a) or (b) above.

Section [Y]-6. Exemptions from Stormwater Management Standards. This Article does not apply to the following activities:

- (a) Land disturbing activity conducted by local, state, authority, or federal agencies, solely to respond to an emergency need to protect life, limb, or property or conduct emergency repairs;
- (b) Land disturbing activity that consists solely of cutting a trench for utility work and related pavement replacement;
- (c) Land disturbing activity conducted by local, state, authority, or federal agencies, whose sole purpose is to implement stormwater management or environmental restoration;
- (d) Repairs to any stormwater management system deemed necessary by the administrator;
- (e) Agricultural practices as described O.C.G.A. 12-7-17(5) within areas zoned for these activities with the exception of buildings or permanent structures that exceed the threshold in [Y]-5 (a) or (b);
- (f) Silvicultural land management activities as described O.C.G.A. 12-7-17(6) within areas zoned for these activities with the exception of buildings or permanent structures that exceed the threshold in [Y]-5 (a) or (b);
- (g) Installations or modifications to existing structures solely to implement Americans with Disabilities Act (ADA) requirements, including but not limited to elevator shafts, handicapped access ramps and parking, and enlarged entrances or exits; and
- (h) Linear transportation projects being constructed by **[local jurisdiction]** to the extent the administrator determines that the stormwater management standards may be infeasible to apply, all or in part, for any portion of the linear transportation project. For this exemption to apply, an infeasibility report that is compliant with the **[local jurisdiction]** linear feasibility program shall first be submitted to the administrator that contains adequate documentation to support the evaluation for the applicable portion(s) and any resulting infeasibility determination, if any, by the administrator.

Section [Y]-7. Stormwater Management Standards. Subject to the applicability criteria in Section [Y]-5 and exemptions in Section [Y]-6, the following stormwater management standards apply. Additional details for each standard can be found in the GSMM Section 2.2.2.2:

- (a) Design of Stormwater Management System: The design of the stormwater management system shall be in accordance with the applicable sections of the GSMM as directed by the administrator. Any design which proposes a dam shall comply with the Georgia Safe Dams Act and Rules for Dam Safety as applicable.

(b) Natural Resources Inventory: Site reconnaissance and surveying techniques shall be used to complete a thorough assessment of existing natural resources, both terrestrial and aquatic, found on the site. Resources to be identified, mapped, and shown on the Stormwater Management Plan, shall include, at a minimum (as applicable):

- (vii) Topography (minimum of 2-foot contours) and Steep Slopes (i.e., Areas with Slopes Greater Than 15%),
- (viii) Natural Drainage Divides and Patterns,
- (ix) Natural Drainage Features (e.g., swales, basins, depressional areas),
- (x) Natural feature protection and conservation areas such as wetlands, lakes, ponds, floodplains, stream buffers, drinking water wellhead protection areas and river corridors,
- (xi) Predominant soils (including erodible soils and karst areas), and
- (xii) Existing predominant vegetation including trees, high quality habitat and other existing vegetation.

(c) Better Site Design Practices for Stormwater Management: Stormwater management plans shall preserve the natural drainage and natural treatment systems and reduce the generation of additional stormwater runoff and pollutants to the maximum extent practicable. Additional details can be found in the GSMM Section 2.3.

(d) Stormwater Runoff Quality/Reduction: Stormwater Runoff Quality/Reduction shall be provided by using the following:

(i) For development with a stormwater management plan submitted before **[insert applicable date]**, the applicant may choose either (A) Runoff Reduction or (B) Water Quality.

(ii) For development with a stormwater management plan submitted on or after **[insert applicable date]**, the applicant shall choose (A) Runoff Reduction and additional water quality shall not be required. To the extent (A) Runoff Reduction has been determined to be infeasible for all or a portion of the site using the Practicability Policy, then (B) Water Quality shall apply for the remaining runoff from a 1.2 inch rainfall event and must be treated to remove at least 80% of the calculated average annual post-development total suspended solids (TSS) load or equivalent as defined in the GSMM.

(A) Runoff Reduction - The stormwater management system shall be designed to retain the first 1.0 inch of rainfall on the site using runoff reduction methods, to the maximum extent practicable.

(B) Water Quality – The stormwater management system shall be designed to remove at least 80% of the calculated average annual post-development total suspended solids (TSS) load or equivalent as defined in the GSMM for runoff from a 1.2 inch rainfall event.

(iii) If a site is determined to be a hotspot as detailed in Section [Y]-5, the **[local jurisdiction]** may require the use of specific or additional components for the



stormwater management system to address pollutants of concern generated by that site.

(e) Stream Channel Protection: Stream channel protection shall be provided by using all of the following three approaches:

(i) 24-hour extended detention storage of the 1-year, 24-hour return frequency storm event;

(ii) Erosion prevention measures, such as energy dissipation and velocity control; and

(iii) Preservation of any applicable stream buffer.

(f) Overbank Flood Protection: Downstream overbank flood protection shall be provided by controlling the post-development peak discharge rate to the pre-development rate for the 25-year, 24-hour storm event.

(g) Extreme Flood Protection: Extreme flood protection shall be provided by controlling the 100-year, 24-hour storm event such that flooding is not exacerbated.

(h) Downstream Analysis: Due to peak flow timing and runoff volume effects, some structural components of the stormwater management system fail to reduce discharge peaks to pre-development levels downstream from the site. A downstream peak flow analysis shall be provided to the point in the watershed downstream of the site or the stormwater management system where the area of the site comprises 10% of the total drainage area in accordance with Section 3.1.9 of the GSMM. This is to help ensure that there are minimal downstream impacts from development on the site. The downstream analysis may result in the need to resize structural components of the stormwater management system.

(i) Stormwater Management System Inspection and Maintenance: The components of the stormwater management system that will not be dedicated to and accepted by the **[local jurisdiction]**, including all drainage facilities, best management practices, credited conservation spaces, and conveyance systems, shall have an inspection and maintenance agreement to ensure that they continue to function as designed. All new development and redevelopment sites are to prepare a comprehensive inspection and maintenance agreement for the on-site stormwater management system. This plan shall be written in accordance with the requirements in Section [Y]-16.

#### Section [Y]-8. Pre-Submittal Meeting, Stormwater Concept Plan, and Stormwater Management Plan Requirements.

(a) Before a land development permit application is submitted, an applicant may request a pre-submittal meeting with the **[local jurisdiction]**. The pre-submittal meeting should take place based on an early step in the development process such as before site analysis and inventory (GSMM Section 2.4.2.4) or the stormwater concept plan (GSMM Section 2.4.2.5). The purpose of the pre-submittal meeting is to discuss opportunities, constraints, and ideas

for the stormwater management system before formal site design engineering. To the extent applicable, local and regional watershed plans, greenspace plans, trails and greenway plans, and other resource protection plans should be consulted in the pre-submittal meeting. Applicants must request a pre-submittal meeting with the **[local jurisdiction]** when applying for a Determination of Infeasibility through the Practicability Policy.

(b) The stormwater concept plan shall be prepared using the minimum following steps:

(i) Develop the site layout using better site design techniques, as applicable (GSMM Section 2.3).

(ii) Calculate preliminary estimates of the unified stormwater sizing criteria requirements for stormwater runoff quality/reduction, channel protection, overbank flooding protection and extreme flood protection (GSMM Section 2.2).

(iii) Perform screening and preliminary selection of appropriate best management practices and identification of potential siting locations (GSMM Section 4.1).

(c) The stormwater concept plan shall contain:

(i) Common address and legal description of the site,

(ii) Vicinity map, and

(iii) Existing conditions and proposed site layout ~~sketch plans, mapping and plans~~ (recommended scale of 1" = 50'), which illustrate at a minimum: ~~existing~~

(A) Existing and proposed topography; ~~perennial~~ (minimum of 2-foot contours),

(B) Perennial and intermittent streams; ~~mapping,~~

(C) Mapping of predominant soils from USDA soil surveys ~~(when available); boundaries,~~

(D) Boundaries of existing predominant vegetation and proposed limits of clearing and grading; ~~and location of existing and proposed roads, buildings, parking areas and other impervious surfaces.,~~

~~C. Natural Resources Inventory~~

~~A written or graphic inventory of the natural resources at the site and surrounding area as it exists prior to the commencement of the project. This description should include a discussion of soil conditions, forest cover, topography, wetlands, and other native vegetative areas on the site, as well as the location~~

(E) Location and boundaries of other natural feature protection and conservation areas such as wetlands, lakes, ponds, floodplains, stream buffers and other setbacks (e.g., drinking water well setbacks, septic setbacks, etc.);

~~Particular attention should be paid to environmentally sensitive features that provide particular opportunities or constraints for development..),~~

D. Stormwater Management System Concept Plan

~~A written or graphic concept plan of the proposed post-development~~

(F) Location of existing and proposed roads, buildings, parking areas and other impervious surfaces,

(G) Existing and proposed utilities (e.g., water, sewer, gas, electric) and easements,

(H) Preliminary estimates of unified stormwater ~~management system including: preliminary~~ sizing criteria requirements,

(I) Preliminary selection and location, size, and limits of disturbance of proposed ~~structural stormwater controls; location~~ BMPs,

(J) Location of existing and proposed conveyance systems such as grass channels, swales, and storm drains; ~~flow,~~

(K) Flow paths; ~~location of,~~

(L) Location of the boundaries of the base flood floodplain, ~~future-conditions floodplain, and the floodway limits; (as applicable) and~~ relationship of site to upstream and downstream properties and ~~drainages; drainage, and preliminary~~

(M) Preliminary location and dimensions of proposed ~~stream~~ channel modifications, such as bridge or culvert crossings.

~~Local watershed plans, the (county) greenspace projection plan (if applicable), and any relevant resource protection plans will be consulted in the discussion of the concept plan.~~

### ~~3.3. Stormwater Management Plan Requirements~~

(d) 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~~ contain the items listed in this ordinance, ~~including the performance criteria set forth in Section 4 below.~~

~~This plan shall be in accordance with the criteria established in this section~~ part and be prepared under the direct supervisory control of either a registered Professional Engineer or a registered Landscape Architect licensed in the state of Georgia. ~~Section C, D, E~~ Items (iii), (iv), (v), and (vi) shall be sealed and signed by a registered Professional Engineer licensed in the state of Georgia. The overall site plan must be stamped by a design professional licensed in the State of Georgia for such purpose. (GSMM Section 2.4.2.7)

~~and F shall be prepared under the direct supervisory control of a registered Professional Engineer, who shall seal and sign the work. Portions of the overall plan may be prepared and stamped by a registered Land Surveyor licensed in the state of Georgia as appropriate, such as boundary surveys, contour maps, erosion and sedimentation control plans.~~

~~The stormwater management plan must ensure that the requirements and criteria in this ordinance 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 stormwater design manual. This includes:~~

~~A. Common address and legal description of site~~

~~B. Vicinity Map~~

(i) Natural Resources Inventory

(ii) Stormwater Concept Plan

4 (iii) 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 basin boundaries indicated; acreage, soil types and land cover of areas for each subbasin affected by the project; all perennial and intermittent streams and other surface water features; all existing stormwater conveyances and structural control facilities; direction of flow 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 for the portion of the site undergoing land development activities.~~

~~☞ The local government will need to establish guidelines for how the predevelopment conditions will be modeled for redevelopment sites.~~

5 (iv) 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 basin boundaries indicated; total area of post-development impervious surfaces and other land cover areas for each subbasin affected by the project; calculations for determining the runoff volumes that need to be addressed for each subbasin for the development project to meet the post-development stormwater management performance criteria in Section 4; location and boundaries of proposed natural feature protection and conservation areas; documentation and calculations for any applicable site design credits that are being utilized; methodologies, assumptions, site parameters and supporting design calculations used in analyzing the existing conditions site hydrology. If~~

~~the land development activity on a redevelopment site constitutes more than 50 percent of the site area for the entire site, then the performance criteria in Section 4 must be met for the stormwater runoff from the entire site.~~

~~☞ The Metropolitan North Georgia Water Planning District is developing a spreadsheet-based computer modeling tool that will assist site developers in performing the post-development hydrologic water quality analysis.~~

## 6 (v) 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 4; 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 protection plan.~~

## 7 Post-Development (vi) Downstream Analysis

~~A downstream peak flow analysis which includes the assumptions, results and supporting calculations to show safe passage of post-development design flows downstream. The analysis of downstream conditions in the report shall address each and every point or area along the project site's boundaries at which runoff will exit the property. 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 basin where the project area is 10 percent of the total basin area. In calculating runoff volumes and discharge rates, consideration may need to be given to any planned future upstream land use changes. The analysis shall be in accordance with the stormwater design manual.~~

## 8 Construction Phase (vii) Erosion and Sedimentation Control Plan

~~An erosion and sedimentation control plan in accordance with the Georgia Erosion and Sedimentation Control Act (or reference to the local Erosion and Sedimentation Control Ordinance) or NPDES Permit for Construction Activities. The plan shall also include information~~

~~on the sequence/phasing of construction and temporary stabilization measures and temporary structures that will be converted into permanent stormwater controls.~~

9 (viii) ~~BMP 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.~~

~~C. 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.~~

~~D. 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.~~

~~☞ The local government will establish which stormwater facilities and practices will require regular maintenance.~~

10 (ix) ~~Inspection and Maintenance Agreements~~ Agreement

~~Unless an on-site stormwater management facility or practice is dedicated to and accepted by the **(local permitting authority)** as provided in Section 3.4 below, 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 3.4.~~

11 (x) ~~Evidence of Acquisition of Applicable Local and Non-local~~ Local Permits

~~The applicant shall certify~~ (xi) ~~Determination of Infeasibility (if applicable)~~

(e) For redevelopment and ~~provide documentation to the (local permitting authority) that all other applicable environmental permits have been acquired for the site prior~~ existing stormwater management structures are being used to ~~approval of the meet~~ stormwater management standards the following must also be included in the stormwater management plan for existing stormwater management structures

### ~~3.4. Stormwater Management Inspection and Maintenance Agreements~~

~~Prior to the issuance of any permit for a land development activity requiring a stormwater management facility or practice hereunder and for which the (local permitting authority) requires ongoing maintenance, the applicant~~

- (i) As-built Drawings
- (ii) Hydrology Reports
- (iii) Current inspection of existing stormwater management structures with deficiencies noted
- (iv) BMP Landscaping Plans

Section [Y]-9. Application Fee. The fee for review of any land development application shall be based on the fee structure established by the **[local jurisdiction]**, and payment shall be made before the issuance of any land disturbance permit or building permit for the development.

Section [Y]-10. Application Procedures. Land development applications are handled as part of the process to obtain the land disturbance permit pursuant to **[insert local ordinance reference]** or building permit **[insert local ordinance reference]**, as applicable. Before any person begins development on a site, the owner of the site ~~must, unless an on-site~~ shall first obtain approval in accordance with the following procedure:

- (a) File a land development application with the **[local jurisdiction]** on the **[local jurisdiction's]** form of application along the following supporting materials:
  - (i) the stormwater management ~~facility or practice is dedicated to and accepted by the (local permitting authority), execute an~~ plan prepared in accordance with Section [Y]-8 (d),
  - (ii) a certification that the development will be performed in accordance with the stormwater management plan once approved,
  - (iii) a **[Preliminary Determination of Infeasibility, as applicable, prepared in accordance with the practicability policy]**, and
- (iv) an acknowledgement that applicant has reviewed the **[local jurisdiction's]** form of inspection and maintenance agreement, and that applicant agrees to sign and ~~/or a conservation easement, if applicable, that shall be binding on all subsequent owners of the site.~~

~~☞ The local government will establish which stormwater facilities and practices will require formal inspection and maintenance agreements.~~

The record such inspection and maintenance agreement, if applicable, must be approved by the **(local permitting authority)** prior to plan approval, and recorded in the deed records upon before the final plat approval.

~~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 person to be permanently responsible for its inspection and maintenance.~~

~~As part of the inspection and maintenance agreement, a schedule shall be developed for when and how often routine inspection and maintenance will occur to ensure proper function of the stormwater management facility or practice. The agreement shall also include plans for annual inspections to ensure proper performance of the facility between scheduled maintenance and shall also include remedies for the default thereof.~~

~~In addition to enforcing the terms of the inspection and maintenance agreement, the **(local permitting authority)** may also enforce all of the provisions for ongoing inspection and maintenance in Section 6 of this ordinance.~~

~~The **(local permitting authority)**, in lieu of an inspection and maintenance agreement, may accept dedication of any existing or future stormwater management facility for maintenance, provided such facility meets all the requirements of this ordinance and includes adequate and perpetual access and sufficient area, by easement or otherwise, for inspection and regular maintenance.~~

### ~~3.5.—Performance and Maintenance Bonds~~

~~☞ The local permitting authority may insert provisions under this section requiring the posting of bonds or other security to guarantee performance of construction and/or maintenance obligations hereunder.~~

### ~~3.6.—Application Procedure~~

- ~~(1) — Applications for land development permits shall be filed with the **(local permitting authority)**.~~
- ~~(2) — Permit applications shall include the items set forth in Section 3.1 above (two copies of the stormwater management plan and the inspection maintenance agreement, if applicable, shall be included).~~



~~(1) The (local permitting authority)~~(b) The administrator shall inform the applicant whether the application, ~~stormwater management plan and inspection and maintenance agreement and supporting materials~~ are approved or disapproved.

~~(2) (c) If either the permit application, stormwater management plan or inspection and maintenance agreement~~ supporting materials are disapproved, the ~~(local permitting authority)~~ administrator shall notify the applicant of such fact in writing. The applicant may then revise any item not meeting the requirements hereof and resubmit the same, ~~in which event subparagraph 3 above and this subparagraph shall apply to such resubmittal.~~ for the administrator to again consider and either approve or disapprove.

Upon a finding by

~~(3) (d) If the (local permitting authority) that the permit application, stormwater management plan and inspection and maintenance agreement, if applicable, meet the requirements of this ordinance, the (local permitting authority)~~ supporting materials are approved, the [local jurisdiction] may issue a permit for the associated land development project disturbance permit or building permit, provided all other legal requirements for the issuance of such permit permits have been met.

~~(4) Notwithstanding the issuance of the permit, in conducting the land development project, the applicant or other responsible person shall be subject to the following requirements:~~

- ~~• The applicant shall comply with all applicable requirements of the approved plan and this ordinance and shall certify that all land clearing, construction, land development and drainage will be done according to the approved plan;~~ stormwater management plan included in such applications becomes the approved stormwater management plan.

~~The land~~

Section [Y]-11. Compliance with the Approved Stormwater Management Plan. All development project shall be:

(a) consistent with the approved stormwater management plan and all applicable land disturbance and building permits, and

- ~~• (b) conducted only within the area specified in the approved stormwater management plan;~~

~~(a) The (local permitting authority) shall be allowed to conduct periodic inspections of the project;~~

- ~~• No changes may be made to an approved stormwater management plan without review and advanced written approval by the (local permitting authority); and, administrator.~~

~~(b) Upon completion of the project, the applicant or other responsible person shall submit the engineer's report and certificate and as-built plans required by Section 5.2.~~

~~☞ Jurisdictions may modify the above local review process to accommodate their current subdivision or development approval process. In addition, local officials will need to decide the appropriate time frames for review based on the number of stormwater management plans, maintenance agreements, etc. submitted, while keeping in mind the time frames for the review of initial and resubmitted applications, as well as the need for timely review turnaround for the~~

~~applicant. This will often be determined by the staff available for permit review and inspection of sites undergoing construction.~~

### ~~3.7.—Application Review Fees~~

~~The fee for review of any stormwater management application shall be based on the fee structure established by the **(local permitting authority)** and shall be made prior to the issuance of any building permit for the development.~~

~~☞ It is recommended that all of the monetary contributions be credited to a local budgetary category to support local plan review, inspection and program administration.~~

### ~~3.8.—Modifications for Off Site Facilities~~

~~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.~~

~~A stormwater management plan must be submitted to the **(local permitting authority)** which 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 **(local permitting authority)** 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.~~

## ~~SECTION 4. POST-DEVELOPMENT STORMWATER MANAGEMENT PERFORMANCE CRITERIA~~

~~The following performance criteria shall be applicable to all stormwater management plans, unless otherwise provided for in this ordinance:~~

### ~~11.1. Water Quality~~

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:

- ~~(3) — It is sized to treat the prescribed water quality treatment volume from the site, as defined in the Georgia Stormwater Management Manual;~~
- ~~(4) — 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; and,~~
- ~~(5) — Runoff from hotspot land uses and activities identified by the **(local permitting authority)** are adequately treated and addressed through the use of appropriate structural stormwater controls, nonstructural practices and pollution prevention practices.~~

### ~~11.2. Stream Channel Protection~~

Protection of stream channels from bank and bed erosion and degradation shall be provided by using all of the following three approaches:

- ~~(1) — Preservation, restoration and/or reforestation (with native vegetation) of the applicable stream buffer;~~
- ~~(2) — 24-hour extended detention storage of the 1-year, 24-hour return frequency storm event;  
*☞ This requirement may be adjusted or waived by the (local permitting authority) for sites that discharge directly into larger streams, rivers, wetlands, or lakes, or to a man-made channel or conveyance system where the reduction in these flows will not have an impact on upstream or downstream streambank or channel integrity.*~~
- ~~(3) — Erosion prevention measures such as energy dissipation and velocity control.~~

### ~~11.3. Overbank Flooding Protection~~

Downstream overbank flood and property protection shall be provided by controlling (attenuating) the post-development peak discharge rate to the pre-development rate for the 25-year, 24-hour return frequency storm event. If control of the 1-year, 24-hour storm under

Section 4.2 is exempted, then peak discharge rate attenuation of the 2-year through the 25-year return frequency storm event must be provided.

*☞ This requirement may be adjusted or waived by the (local permitting authority) for sites where the post-development downstream analysis shows that uncontrolled post-development conditions will not increase downstream peak flows, or that meeting the requirement will cause greater peak flow downstream impacts than the uncontrolled post-development conditions.*

### ~~11.4. Extreme Flooding Protection~~

Extreme flood and public safety protection shall be provided by controlling and safely conveying the 100-year, 24-hour return frequency storm event such that flooding is not exacerbated.

~~☞ This requirement may be adjusted or waived by the (local permitting authority) for sites where the post-development downstream analysis shows that uncontrolled post-development conditions will not increase downstream peak flows, or that meeting the requirement will cause greater peak flow downstream impacts than the uncontrolled post-development conditions.~~

### ~~11.5. Structural Stormwater Controls~~

~~All structural stormwater management facilities shall be selected and designed using the appropriate criteria from 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 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 (local permitting authority) 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 (local stormwater permitting authority) 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.~~

~~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.~~

### ~~11.6. 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 4.1. The applicant may, if approved by the (local permitting authority), take credit for the use of stormwater better site design practices and reduce the water quality volume requirement. For each potential credit, there is a minimum set of criteria and requirements which identify the conditions or circumstances under which the credit may be applied. The site design practices that qualify for this credit and the criteria and procedures for applying and calculating the credits are included in the Georgia Stormwater Management Manual.~~

### ~~11.7. 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 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:~~

- ~~(1) — Methods to calculate stormwater flows shall be in accordance with the stormwater design manual;~~
- ~~(2) — 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,~~
- ~~(3) — Design and construction of stormwater conveyance facilities shall be in accordance with the criteria and specifications found in the stormwater design manual.~~

## ~~11.8. Dam Design Guidelines~~

~~Any land disturbing activity that involves a site which proposes a dam shall comply with the Georgia Safe Dams Act and Rules for Dam Safety as applicable.~~

## ~~SECTION 5. CONSTRUCTION INSPECTIONS OF POST-DEVELOPMENT STORMWATER MANAGEMENT SYSTEM~~

### ~~5.1. — [Y]-12. Inspections to Ensure Plan Compliance During Construction~~

~~Periodic inspections of the stormwater management system during construction shall be conducted by the staff of the ([local permitting authority]jurisdiction) or conducted and certified by a professional engineer who has been approved by the ([local permitting authority). Construction inspectionsjurisdiction]. Inspections shall utilizeuse the approved stormwater management plan for establishing compliance.~~

All inspections shall be documented with written reports that contain the following information:

- ~~(1)~~ (a) The date and location of the inspection;
- ~~(2)~~ (b) Whether ~~construction~~the stormwater management system is in compliance with the approved stormwater management plan;
- ~~(3)~~ (c) Variations from the approved ~~construction—specifications~~stormwater management plan; and,
- ~~(4)~~ (d) Any other variations or violations of the conditions of the approved stormwater management plan.

~~If any violations are found, the applicant shall be notified in writing of the nature of the violation and the required corrective actions.~~

### ~~5.2. — Section [Y]-13. Final Inspection and As-Built Plans~~

; As-Built Drawings; Delivery of Inspection and Maintenance Agreement. Upon completion of a project, ~~and before a certificate of occupancy shall be granted~~ the development, the applicant is responsible for ~~certifying~~:

- (a) Certifying that the ~~completed project is in accordance~~ stormwater management system is functioning properly and was constructed in conformance with the approved stormwater management plan. ~~All applicants are required to submit actual~~ and associated hydrologic analysis,
- (b) Submitting ~~as-built~~ plans for any stormwater management facilities or practices after final construction is completed. The plan must show drawings showing the final design specifications for all components of the stormwater management ~~facilities and practices and must be~~ system as certified by a ~~Professional Engineer.~~ A professional engineer,
- (c) Certifying that the landscaping is established and installed in conformance with the BMP landscaping plan, and
- (d) Delivering to **[local jurisdiction]** a signed inspection and maintenance agreement that has been recorded by the owner in the property record for all parcel(s) that make up the site.

The required certification under part (a) shall include a certification of volume, or other performance test applicable to the type of stormwater management system component, to ensure each component is functioning as designed and built according to the design specifications in the approved stormwater management plan. This certification and the required performance tests shall be performed by a qualified person and submitted to the **[local jurisdiction]** with the request for a final inspection. The **[local jurisdiction]** shall perform a final inspection ~~by the (local permitting authority) is required before the release of any performance securities can occur.~~ with applicant to confirm applicant has fulfilled these responsibilities.

## ~~SECTION 6. ONGOING INSPECTION AND MAINTENANCE OF STORMWATER FACILITIES AND PRACTICES~~

~~Long-Term~~Section [Y]-14. Violations and Enforcement. Any violation of the approved stormwater management plan during construction, failure to submit as-built drawings, failure to submit a final BMP landscaping plan, or failure of the final inspection shall constitute and be addressed as violations of, or failures to comply with, the underlying land disturbance permit pursuant to **[insert local ordinance reference]** or the underlying building permit pursuant to **[insert local ordinance reference]**. To address a violation of this Article, the **[local jurisdiction]** shall have all the powers and remedies that are available to it for other violations of building and land disturbance permits, including without limitation the right to issue notices and orders to ensure compliance, stop work orders, and penalties as set forth in the applicable ordinances for such permits.

### ~~6.1. —~~Section [Y]-15. Maintenance ~~Inspection by Owner~~ of Stormwater ~~Facilities and Practices~~

~~Stormwater management facilities and practices included in a stormwater management plan which are~~Management Systems Predating Current GSMM. For any stormwater management systems approved and built based on requirements predating the current GSMM and that is not otherwise subject to an inspection and maintenance agreement ~~must undergo ongoing inspections to document maintenance and repair needs and ensure compliance with the requirements of the agreement, the plan and this ordinance,~~ such stormwater management systems shall be maintained by the owner so that the stormwater management systems perform as they were originally designed.

~~A stormwater management facility or practice shall be inspected on a periodic basis by the responsible person in accordance with the approved inspection and maintenance 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 (local permitting authority) shall notify the person responsible for carrying out the maintenance plan by registered or certified mail to the person specified in the inspection and maintenance agreement. The notice shall specify the measures needed to comply with the agreement and the plan 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 inspection and maintenance agreement, the (local permitting authority), may correct the violation as provided in Subsection 6.4 hereof.~~

~~Inspection programs by the (local permitting authority) 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.~~

#### Section [Y]-16. Inspection and Maintenance Agreements.

(a) The owner shall execute an inspection and maintenance agreement with the **[local jurisdiction]** obligating the owner to inspect, clean, maintain, and repair the stormwater management system; including vegetation in the final BMP landscaping plan. The form of the inspection and maintenance agreement shall be the form provided by the **[local jurisdiction]**. After the inspection and maintenance agreement has been signed by the owner and the **[local jurisdiction]**, the owner shall promptly record such agreement at the owner's cost in the property record for all parcel(s) that make up the site.

(b) The inspection and maintenance agreement shall identify by name or official title the person(s) serving as the point of contact for carrying out the owner's obligations under the inspection and maintenance agreement. The owner shall update the point of contact from time to time as needed and upon request by the **[local jurisdiction]**. Upon any sale or transfer of the site, the new owner shall notify the **[local jurisdiction]** in writing within 30 days of the name or official title of new person(s) serving as the point of contact for the new owner. Any failure of an owner to keep the point of contact up to date shall, following 30 days' notice, constitute a failure to maintain the stormwater management system.

(c) The inspection and maintenance agreement shall run with the land and bind all future successors-in-title of the site. If there is a future sale or transfer of only a portion of the site, then:

(i) The parties to such sale or transfer may enter into and record an assignment agreement designating the owner responsible for each portion of the site and associated obligations under the inspection and maintenance agreement. The parties shall record and provide written notice and a copy of such assignment agreement to the [local jurisdiction].

(ii) In the absence of a recorded assignment agreement, all owners of the site shall be jointly and severally liable for all obligations under the inspection and maintenance agreement regardless of what portion of the site they own.

## ~~6.2.—Section [Y]-17. Right- of- Entry for Inspection~~

Maintenance Inspections. The terms of the inspection and maintenance agreement shall provide for the ~~(local permitting authority) 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 ordinance is occurring or has occurred and to enter when necessary for abatement of a public nuisance or correction of a violation of this ordinance.~~

## ~~6.3.—Records of Maintenance Activities~~

~~Parties responsible for the operation and [local jurisdiction's] right of entry for maintenance of a stormwater management facility shall provide records of all inspections and other specified purposes. If a site was developed before the requirement to have an inspection and maintenance and repairs to the (local permitting authority).~~

## ~~6.4.—Failure to Maintain~~

~~If a responsible person fails or refuses to meet the requirements of the agreement or an inspection and maintenance agreement, the (local permitting authority), after thirty (30) days written notice (except, that in the event the violation constitutes an immediate danger to public health or public safety, 24 hours notice shall be sufficient), 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 (local permitting authority) may assess the owner(s) 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.~~



## ~~SECTION 7. VIOLATIONS, ENFORCEMENT AND PENALTIES~~

~~Any action or inaction which violates the provisions of this ordinance or the requirements of an approved stormwater management plan or permit, may be subject to the enforcement actions outlined in this Section. Any such action or inaction which is continuous with respect to time is deemed to be a public nuisance and may be abated by injunctive or other equitable relief. The imposition of any of the penalties described below shall not prevent such equitable relief. The imposition of any of the penalties described below shall not prevent such equitable relief.~~

### ~~7.1. Notice of Violation~~

~~If the **(local permitting authority)** determines that an applicant or other responsible person has failed to comply with the terms and conditions of a permit, an approved stormwater management plan or the provisions of this ordinance, it shall issue a written notice of violation to such applicant or other responsible person. Where a person is engaged in activity covered by this ordinance without having first secured a permit therefor, the notice of violation shall be served on the owner or the responsible person in charge of the activity being conducted on the site.~~

~~The notice of violation shall contain:~~

- ~~(5) — The name and address of the owner or the applicant or the responsible person;~~
- ~~(6) — The address or other description of the site upon which the violation is occurring;~~
- ~~(7) — A statement specifying the nature of the violation;~~
- ~~(8) — A description of the remedial measures necessary to bring the action or inaction **was for any reason not entered** into compliance with the permit, the stormwater management plan or this ordinance and the date for the completion of such remedial action;~~
- ~~(9) — A statement of the penalty or penalties that may be assessed against the person to whom the notice of violation is directed; and,~~
- ~~(10) — A statement that the determination of violation may be appealed to the **(local permitting authority)** by filing a written notice of appeal within thirty (30) days after the notice of violation (except, that in the event the violation constitutes an immediate danger to public health or public safety, 24 hours notice shall be sufficient).~~

### ~~7.2. Penalties~~

~~In the event the remedial measures described in the notice of violation have not been completed by the date set forth for such completion in the notice of violation, any one or more of the following actions or penalties may be taken or assessed against the person to whom the notice of violation was directed. Before taking any of the following actions or imposing any of the following penalties, the **(local permitting authority)** shall first notify the applicant or other responsible person in writing of its intended action, and shall provide a reasonable opportunity, of not less than ten days (except, that in the event the violation constitutes an immediate danger to public health or public safety, 24 hours notice shall be sufficient) to cure such violation. In the event the applicant or other responsible person fails to cure such violation after such notice and cure period, the **(local permitting authority)** may take any one or more of the following actions or impose any one or more of the following penalties.~~

(vii) ~~Stop Work Order~~—The ~~(local permitting authority)~~ may issue a stop work order which shall be served on the applicant or other responsible person. The stop work order shall remain in effect until the applicant or other responsible person has taken the remedial measures set forth in the notice of violation, recorded, or has otherwise cured the violation or violations described therein, provided the stop work order may be withdrawn or modified to enable the applicant or other responsible person to take the necessary remedial measures to cure such violation or violations. ~~been~~ invalidated or deemed insufficient, then the **[local jurisdiction]** shall have the right to enter and make inspections pursuant to the **[local jurisdiction's]** general provisions for property maintenance inspections pursuant to **[insert reference to existing local ordinance providing for right of entry and inspections for general property maintenance obligations, whether under the local administration procedures for the Georgia Statewide Minimum Construction Codes or other local property maintenance ordinance]**.

- (1) ~~Withhold Certificate of Occupancy~~—The ~~(local permitting authority)~~ may refuse to issue a certificate of occupancy for the building or other improvements constructed or being constructed on the site until the applicant or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise cured the violations described therein.
- (2) ~~Suspension, Revocation or Modification of Permit~~—The ~~(local permitting authority)~~ may suspend, revoke or modify the permit authorizing the land development project. A suspended, revoked or modified permit may be reinstated after the applicant or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise cured the violations described therein, provided such permit may be reinstated ~~[upon such conditions as the (local permitting authority) may deem necessary]~~ to enable the applicant or other responsible person to take the necessary remedial measures to cure such violations.
- (3) ~~Civil Penalties~~—In the event the applicant or other responsible person fails to take the remedial measures set forth in the notice of violation or otherwise fails to cure the violations described therein within ten days, or such greater period as the ~~(local permitting authority)~~ shall deem appropriate (except, that in the event the violation constitutes an immediate danger to public health or public safety, 24 hours notice shall be sufficient) after the ~~(local permitting authority)~~ has taken one or more of the actions described above, the ~~(local permitting authority)~~ may impose a penalty not to exceed \$1,000 (depending on the severity of the violation) for each day the violation remains unremedied after receipt of the notice of violation.
- (4) ~~Criminal Penalties~~—For intentional and flagrant violations of this ordinance, the ~~(local permitting authority)~~ may issue a citation to the applicant or other responsible person, requiring such person to appear in ~~(appropriate municipal, magistrate or recorder's)~~ court to answer charges for such violation. Upon conviction, such person shall be punished by a fine not to exceed \$1,000 or imprisonment for 60 days or both. Each act of violation and each day upon which any violation shall occur shall constitute a separate offense.

Section [Y]-18. Owner's Failure to Maintain the Stormwater Management System. The terms of the inspection and maintenance agreement shall provide for what constitutes a failure to maintain a stormwater management system and the enforcement options available to **[local jurisdiction]**. If a site was developed before the requirement to have an inspection and maintenance agreement or an inspection and maintenance agreement was for any reason not entered into, recorded, or has otherwise been invalidated or deemed insufficient, then:

- (a) An owner's failure to maintain the stormwater management system so that it performs as it was originally designed shall constitute and be addressed as a violation of, or failure to comply with, owner's property maintenance obligations pursuant to **[insert reference to existing local ordinance on violations of general property maintenance obligations, whether under the local administration procedures for the Georgia Statewide Minimum Construction Codes or other local property maintenance ordinance]** and
- (b) To address such a failure to maintain the stormwater management system, the **[local jurisdiction]** shall have all the powers and remedies that are available to it for other violations of an owner's property maintenance obligations, including without limitation prosecution, penalties, abatement, and emergency measures.