

# GEORGIA STORMWATER MANAGEMENT MANUAL

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**Abstract.** The Georgia Stormwater Management Manual is a comprehensive document designed to provide guidance on the management of urban stormwater runoff quantity and quality for the entire state of Georgia. Published in three volumes, the Manual provides guidance on local stormwater policy and programs, covers stormwater site planning, drainage system design and the selection and design of structural stormwater controls, and includes a suite of pollution prevention management practices.

## BACKGROUND

Over the past several years, local governments in Georgia have been required to take a closer look at the issues of stormwater management and nonpoint source pollution within their communities. Though Georgia communities have traditionally addressed the issues of stormwater collection and conveyance, new development and aging infrastructures have created problems with downstream erosion and flooding. In addition, concerns about the impact of stormwater runoff quality to surface and groundwater supplies, recreational rivers and lakes, aquatic habitats and ecosystems, as well as municipal NPDES stormwater permit rules, are making it necessary for local governments to address both stormwater quantity and quality for areas of new development or redevelopment. With increasing development, pending Phase II NPDES requirements and the establishment of water quality TMDL's on the horizon, communities throughout Georgia require comprehensive guidance in stormwater management and the planning, construction, and maintenance of their stormwater infrastructures.

The Atlanta Region Stormwater Management Task Force, which is made up of representatives of local governments and other professionals in the area of stormwater management, originally proposed the development of an urban stormwater best management practices manual for the Atlanta region. The Atlanta Regional Commission (ARC) agreed to undertake the

project and over a period of time the proposed scope of the effort grew to include stormwater policy and local programs, drainage design, and pollution prevention—as well as a statewide focus. Through the cost share contributions of local governments from across Georgia and EPA funding, the efforts to create a statewide stormwater management manual were brought to fruition. Developed over the course of two years, the Manual was put together by a interactive process between ARC and the consultant team, 35 local governments, the State EPD and numerous stakeholders.

## OVERVIEW AND ORGANIZATION OF THE MANUAL

The Georgia Management Stormwater Manual is a comprehensive document to guide government agencies and the community on the control and management of stormwater quality and quantity.

The Manual is organized as a three volume set, each volume being published as a separate document:

**Volume One:** *Stormwater Policy Guidebook*

**Volume Two:** *Technical Handbook*

**Volume Three:** *Polution Prevention Guidebook*

Volume One of the Manual, the Stormwater Policy Guidebook, is designed to provide guidance for local jurisdictions on the basic principles of effective urban stormwater management. Volume One covers the problem of urban stormwater runoff and the need for local communities to address urban stormwater quantity and quality, stormwater management minimum standards, and guidance on local stormwater programs. It also provides an overview of integrated stormwater management, site and watershed level stormwater management, floodplain management, and technology and tools for implementing stormwater management programs.

Volume Two of the Manual, the Technical Handbook, provides guidance on the techniques and measures that can be implemented to meet a set of stormwater management minimum standards for new development and redevelopment. Volume Two is designed to provide the site designer or engineer, as well as the local plan reviewer or inspector, with all of the information required to effectively address and control both water quality and quantity on a development site. This includes guidance on better site design practices, hydrologic techniques, criteria for the selection and design of structural stormwater controls, drainage system design, and construction and maintenance information.

Volume Three, the Pollution Prevention Guidebook, is a compendium of pollution prevention practices for stormwater quality for use by local jurisdictions, businesses and industry, and local citizens.

### FEATURES OF THE MANUAL

Some of the innovative aspects of the Georgia Stormwater Management Manual include:

- An integrated approach to address both the water quality and quantity problems associated with stormwater runoff due to urban development
- Minimum stormwater management standards for areas of new development and significant redevelopment
- A set of *unified stormwater sizing criteria* for the sizing and design of stormwater management facilities to handle water quality, downstream channel protection, and protection from overbank and extreme flood events
- The use of better site design, nonstructural and structural control measures to mitigate stormwater runoff
- A suite of general and limited application structural stormwater controls, including selection and design guidance, to meet stormwater quality and quantity objectives
- Maintenance guidance for the continued operation of stormwater management facilities as designed and constructed

- Guidance for local governments on the use of stormwater master planning and comprehensive watershed planning and management

### USE OF THE MANUAL

The aim was to create a practical set of guidance documents oriented to implementation in everyday practice.

Volume One will be used primarily by local governments and as a general information source for the public at large. Volumes Two and Three of the Manual are designed such that they may be partially or fully adopted by local jurisdictions as part of their development guidelines or municipal code, respectively. Local governments may use Volume Two to review stormwater site plans and provide technical advise.

Parties involved with site development will utilize Volume Two for technical guidance and information on the preparation of stormwater site plans, the use of better site design techniques, hydrologic techniques, selection and design of appropriate structural stormwater controls, and drainage (hydraulic) design.

Volume Three will be used by government agencies, other institutions, business and industry, and private citizens to assist in preventing the sources of stormwater and nonpoint source pollution.

### CONCLUSION

The Georgia Stormwater Management Manual is a comprehensive tool to address the problems of stormwater runoff associated with urban development. It is hoped that the Manual will become a standard for the entire state to begin to improve the quality of Georgia's waters.

The most current version of Manual is available for download in Adobe Acrobat format at [www.atlantaregional.com/gsmm](http://www.atlantaregional.com/gsmm)