

Urban Storm Water Management in Georgia

What is Storm Water?

Storm water is the runoff from land and impervious areas such as paved streets, parking lots, and building rooftops during rainfall events. It often contains pollutants such as nutrients, bacteria, sediment, and metals that could adversely affect water quality.

What is being done about storm water runoff?

Federal, state, and local governments are implementing programs throughout the United States that they hope will reduce the adverse effects of storm water on water quality. Through these efforts they hope to improve the general health of water bodies.



The Federal Program

Phases of the National Pollutant Discharge Elimination System Storm Water Program

The U.S. EPA developed amendments to the Clean Water Act in 1987 to address storm water. These changes were implemented in two phases.

Phase I: Began in 1990. Phase I applies to sources of storm water with the greatest potential for negative impact. These include medium and large municipal storm sewer systems and construction sites disturbing five or more acres. Industrial activities are also included in this phase.

Phase II: Began in 1999. Phase II applies to small municipal separate storm sewer systems and construction sites disturbing one to five acres.

What Types of Activities Require Storm Water Permits?

Storm water regulation and management is broken into several categories all of which require National Pollution Discharge Elimination System (NPDES) permits.

Construction Activities: Construction sites disturbing one acre or more must obtain permission to discharge storm water under an NPDES construction storm water permit. These activities are also covered in Georgia's Erosion and Sedimentation Control Act.

Municipal Separate Storm Sewer Systems (MS4's): When land is developed, most communities install a series of storm drains, ditches, and pipes to collect rainfall and runoff and transport it to streams or rivers. These are called municipal separate storm sewer systems. Medium and large (100,000 people or more) MS4 city or county governments are required to submit comprehensive permit applications and are issued individual permits. Regulated small MS4 operators are covered by a general permit or by individual permits.

Industrial Activities: Operators of industrial facilities that discharge storm water to a municipal separate storm sewer system (MS4) or directly to waters of the United States require authorization under a NPDES industrial storm water permit.

Georgia's Storm Water Program

Phase I: Industrial and construction storm water permits continue to be issued on a case by case basis. Permits for medium MS4's were issued in April and May 1995 (Augusta, Savannah, Columbus) and permits for large MS4's (Atlanta and surrounding large suburbs) were issued in June 1994 and reissued in June 1999.

Phase II: Construction storm water permits continue to be issued on a case by case basis. The Phase II permitting process for small MS4's began in May 2003.

These permits outline specific requirements that must be met for various activities. A list of these requirements can be found on the EPD's website (see page 4).

Does the Phase II Storm Water Program apply to your community? (As of Summer, 2003)

Albany	Alленhurst	Athens	Auburn	Bogart	Brunswick	Byron
Canton	Carl	Centerville	Chickamauga	Conyers	Cordele	Covington
Cumming	Dallas	Douglasville	Dalton	Emerson	Fayetteville	Flemington
Flowery Br.	Ft Oglethorpe	Gainesville	Griffin	Grovetown	Hampton	Hephzibah
Hinesville	Hiram	Holly Springs	Leesburg	Loganville	Lookout Mtn.	McDonough
Mtn. Park	Newnan	Oakwood	Oxford	Payne City	P-tree City	Porterdale
Remerton	Ringgold	Rome	Rossville	Stockbridge	Tunnel Hill	Tyrone
Valdosta	Varnell	Vernonburg	Walthourville	Warner Robbins		
Watkinsville	Winterville	Woodstock				

What are the Steps to Obtaining a Phase II Permit?

The city or county government of an applicable MS4 must submit a storm water management plan to the Georgia EPD as an application for their permit. The plan must include:

- ☒ Goals for the development of public education, outreach, and public involvement programs
- ☒ Maps, BMP's, educational tools, and goals for detecting and eliminating illicit discharges
- ☒ Erosion and sedimentation control measures, site inspection and enforcement procedures, information sharing, BMP's and goals for controlling construction site runoff
- ☒ Implementation strategies for BMP's, operation and maintenance, ordinances, and goals for post-construction runoff control
- ☒ Pollution prevention attributes such as operation and maintenance controls to reduce runoff to storm sewers, employee training, and BMP's

Storm Water Management Plans Must:

- ☒ Reduce pollutants discharged in storm water to the Maximum Extent Possible (MEP)
- ☒ Protect water quality
- ☒ Reduce volume of storm water
- ☒ Satisfy water quality requirements of the Clean Water Act

Evaluating and Reporting Efforts

Efforts to manage storm water through State mandated storm water permitting must be reported to the Georgia Environmental Protection Division. These reports should be generated annually for the first permit term (usually 5 years) and in years 2 and 4 for subsequent permit terms, unless otherwise indicated by the Georgia EPD. The reports should include the status of compliance with permit conditions (goals), results of any monitoring, a summary of planned storm water activities, and changes in BMP's or goals. The report should also indicate if the MS4 relies on another governmental entity to satisfy permit obligations.

The Phase II Storm Water Program should be completely implemented by the end of the permit term, which is usually 5 years.

Local Storm Water Programs

What can you do to help prevent storm water pollution?

Follow local guidelines for:

- ☒ fertilizer and pesticide application
- ☒ clipping and leaf disposal
- ☒ household hazardous waste management (paint, solvents, cleaners)
- ☒ automotive care and used motor oil disposal
- ☒ pet waste
- ☒ septic tank maintenance

Get involved in:

- ☒ local stream monitoring
- ☒ stream clean-ups
- ☒ adopt-a-stream programs
- ☒ tree planting days
- ☒ storm drain stenciling

How are Local Storm Water Programs Funded?

- ☒ Local funding
- ☒ Storm water utilities (utilities that charge a monthly fee based on the amount of impervious surface on commercial, industrial and residential properties)
- ☒ 319 Grants (federal funding for nonpoint source management programs)

Rural Area Storm Water Management Plans

There are some small, rural towns in Georgia who do not fall under either phase of Georgia's storm water permitting program. These towns, however, do have to follow NPDES permits for their municipal wastewater treatment systems. In accordance with their NPDES permit, all towns operating a municipal wastewater treatment system must conduct watershed assessments, which predict effects of development on water quality, and they must recommend management options to alleviate those effects. Although the majority of small towns have little impervious area, storm water management plans are highly recommended as a component of watershed management. Not only will they help communities manage storm water, but the development of storm water management plans also gives small towns a jump on inevitable storm water regulations. The pictures below show structural storm water controls that can be utilized by large and small cities alike.

Structural Controls for Storm Water Management



Dry Detention Basin

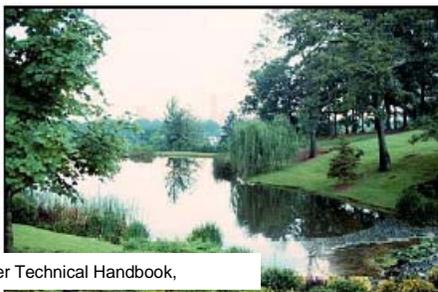
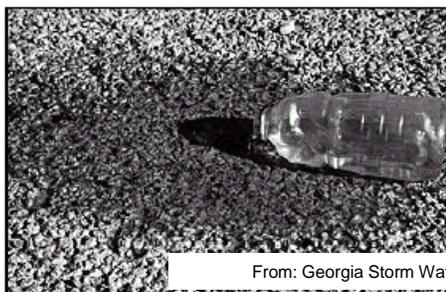


Grass Channel



Bioretention Cell

Porous Pavement



Storm Water Pond



From: Georgia Storm Water Technical Handbook,

Contacts and More Information

ARC Storm Water Manual

<http://www.atlantaregional.com/water/stormwatertaskforce.html>

Your County Extension Agent

<http://extension.caes.uga.edu>

Georgia EPD
(404) 675-6232

Your local Regional Development Center

Atlanta Regional Commission - www.atlreg.com
Coastal Georgia RDC - www.coastalgeorgiardc.org
Central Savannah River Area RDC - www.csrardc.org
Coosa Valley RDC - www.cvrdc.org
Georgia Mountain RDC - www.gamtrdc.org
Middle Georgia RDC - www.mgrdc.org
Heart of Georgia Altamaha RDC - www.hogardc.org
North Georgia RDC - www.ngrdc.org
Northeast Georgia RDC - www.negrdc.org
South Georgia RDC - www.sgrdc.com
Chattahoochee-Flint RDC - www.cfrdc.org
McIntosh Trail RDC - www.mtrdc.org
Lower Chattahoochee RDC - www.lowerchattahoocheerd.org
Middle Flint RDC - www.middleflintrdc.org
Southeast Georgia RDC - www.segardc.org
Southwest Georgia RDC - www.swgrdc.org

Federal Program

<http://www.epa.gov/npdes/stormwater>
<http://cfpub.epa.gov/npdes/stormwatermonth.cfm>

Georgia State Program

http://www.dnr.state.ga.us/dnr/environ/reg_commfiles/regcomm.htm#wpb
http://www.dnr.state.ga.us/dnr/environ/techguide_files/techguide.htm#wpb
<http://www.gasma.org>

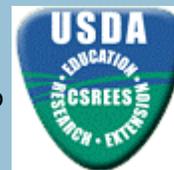
Local Programs

<http://www.georgiastormwater.com>
http://www.gasma.org/web%20pages/stormwater_utilities.htm

Education and Research

<http://www.uga.edu> (search storm water)

The Southern Region Water Quality Regional Coordination Project promotes regional collaboration, enhances delivery of successful programs and encourages multi-state efforts to protect and restore water resources. Effective approaches for watershed management, pollution prevention, and youth education are identified and shared among states. Ultimately, the project improves public access to the research, extension, and education resources available through the Land Grant University System in the Southern Region and nationwide. The project is funded by the USDA Cooperative State Research, Education, and Extension Service.



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The University of Georgia and Fort Valley State University, the U.S. Department of Agriculture and counties of the state cooperating. The Cooperative Extension Service, The University of Georgia, College of Agricultural and Environmental Sciences offers educational programs, assistance and materials to all people without regard to race, color, national origin, age, sex or disability. An Equal Opportunity Employer/Affirmative Action Organization Committed to a Diverse Work Force. Issued in furtherance of Cooperative Extension Work, Acts of May 8 and June 30, 1914, The University of Georgia College of Agricultural and Environmental Sciences and the U.S. Department of Agriculture cooperating. Gale A. Buchanan, Dean and Director.

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