



# Existing Management Programs and Watershed Planning Efforts

## Local Stormwater Management Efforts

The level of existing stormwater management efforts and programs varies greatly across the District, depending on the density of development, population and current regulatory requirements. Most communities in the District currently address drainage issues and have implemented stormwater design and detention requirements to prevent flooding.

Since 1993, the Phase I National Pollutant Discharge Elimination System (NPDES) municipal stormwater permit requirements have applied all local governments in Clayton, Cobb, DeKalb, Fulton and Gwinnett Counties, including the City of Atlanta. Under the Phase I municipal separate storm sewer system (MS4) program, Cities and Counties have undertaken a number of stormwater program activities including:

- Mapping of stormwater outfalls
- Implementation of best management practices to control stormwater pollution discharges to the maximum extent practical
- Procedures and ordinances to identify, remove and prevent illicit discharges and illegal connections to municipal storm sewer systems
- Municipal good housekeeping practices
- Water quality monitoring
- Outreach and public education efforts

Several Cities and Counties have implemented programs to address stormwater runoff quality and nonpoint source control, as discussed on the next page.

Most of the local governments in the remainder of the District were required to submit a Notice of Intent (NOI) for the Phase II NPDES MS4 program in March 2003 and are currently developing stormwater programs and plans to address the Phase II MS4 stormwater permit requirements.

## Local Watershed Planning Efforts

Most District Counties have assessed all or some of the watersheds within their boundaries. Eight have completed or are finishing local watershed plans or assessments. Five have partial plans covering one or more watersheds. Three have not yet developed plans. The status of planning efforts is shown in Table 4-1. Virtually all local watershed management programs share common elements, though distinct differences exist. The common elements typically include new development guidelines, proper enforcement of existing requirements, and recommended modifications to ordinances and zoning. The plans also include sediment and erosion control and stream protection measures.

**TABLE 4-1**

Watershed Planning Efforts by Local Governments  
*Metropolitan North Georgia Water Planning District Watershed Management Plan*

County	Plan Complete or in Progress	Partial Plan	No Plan
Bartow			X
Cherokee	X		
Clayton	X		
Cobb		X	
Coweta			X
DeKalb	X		
Douglas		X	
Fayette		X	
City of Gainesville	X		
Forsyth	X		
City of Cumming		X	
Fulton	X		
City of Atlanta	X		
City of Roswell		X	
City of Alpharetta		X	
Gwinnett	X		
Hall	X		
Henry		X	
Paulding			X
Rockdale	X		
Walton		X	
Peachtree City	X		

Differences among plans are related primarily to regional differences and the amount of detail. Plans for more urbanized areas tend to focus more on issues related to greater populations and increased amounts of impervious surface along with other stormwater issues, such as combined sewer overflows (CSOs). The plans for less urbanized areas tend to have a greater emphasis on management of new development.

## Nonpoint Source Control

All complete and partial plans include some type of recommendation for new development standards to address nonpoint source pollution. Table 4-2 summarizes the nonpoint source components included in the local watershed plans in the District. Some approaches are more performance-based with specific total suspended solids (TSS) limits (e.g., Clayton, Fayette, and Henry), and others are more regulatory or incentive-based with erosion control requirements (e.g., Cherokee, Douglas, DeKalb, Rockdale,

and Walton). Most local watershed management plans encourage conservation subdivision ordinances. Various stormwater and watershed protection ordinances have been passed in Forsyth, Cherokee, Gwinnett, DeKalb, and Cobb Counties and are under development in Fulton and Douglas Counties. Recommendations for septic tank studies and monitoring are common in Counties with areas of lower population density (e.g., Clayton, Douglas, Fayette, Forsyth, north Fulton, and Hall). Other common elements include stormwater planning; stream buffers; increased plan reviews, and better enforcement of stormwater, sediment, and erosion control requirements; greenspace and land acquisition; and public education and support of volunteer programs.

**TABLE 4-2**

Local Watershed Plan Components for Nonpoint Source Control  
Metropolitan North Georgia Water Planning District Watershed Management Plan

Jurisdiction	Sediment/Erosion Control or Stream Protection	Management and Planning	Zoning or Regulatory Modifications	Education	Stormwater Controls	Septic Tank Program
Bartow						
Cherokee	X	X	X	X		
Clayton	X	X	X	X		
Cobb	X		X		X	
Coweta						
DeKalb	X	X	X	X	X	
Douglas	X		X	X	X	X
Fayette	X		X	X		
City of Gainesville	X		X	X	X	X
Forsyth	X		X	X	X	X
City of Cumming	X	X	X			
Fulton	X	X	X	X	X	X
City of Atlanta	X		X	X	X	
City of Roswell	X	X	X			
City of Alpharetta	X	X	X			
Gwinnett		X	X	X	X	
Hall	X		X	X	X	X
Henry	X		X	X		
Paulding						
Rockdale	X		X	X	X	X
Walton	X	X	X	X		
Peachtree City	X			X	X	
Lake Allatoona	X	X	X	X		X

## Point Source Elements

Point source elements for dealing with discharges from wastewater treatment plants (WWTPs) in plans are primarily watershed-specific with little overlap. Many plans have provisions describing plant upgrades or infrastructure maintenance. Table 4-3 summarizes the point source components included in the local watershed plans in the District. Some programs (e.g., DeKalb County and Peachtree City) incorporate reuse/discharge alternatives. Expanding sewer service to new and existing developments appears in the plans of some less developed Counties (e.g., Douglas, Hall).

**TABLE 4-3**  
Local Watershed Plan Components for Point Source Elements  
*Metropolitan North Georgia Water Planning District Watershed Management Plan*

Jurisdiction	Planning, Monitoring or Studies	Plant Upgrades	Upgrade/Expand Infrastructure	Re-Use Program
Bartow				
Cherokee	X			
Clayton				
Cobb				
Coweta				
DeKalb	X	X		X
Douglas			X	
Fayette				
City of Gainesville			X	
Forsyth			X	
City of Cumming				
Fulton			X	
City of Atlanta			X	
City of Roswell				
City of Alpharetta				
Gwinnett				
Hall			X	
Henry				
Paulding				
Rockdale	X	X		
Walton				X
Peachtree City	X	X		X
Lake Allatoona				

## Restoration/Retrofit

Most plans identify restoration and retrofit efforts (Table 4-4). Maintaining and upgrading stormwater control retention and detention ponds and performing stream restoration appear in nearly all the plans that include restoration elements. The emphasis on restoration is greater in the more developed areas (e.g., DeKalb and Gwinnett Counties, and City of Atlanta).

## Long-Term Monitoring

All of the local plans evaluated include water quality monitoring (Table 4-5) as a recommendation. The number of stations, constituents, and frequency of sampling vary depending on the goals of the various plans. Biological monitoring also is a common element, although sampling frequency varies.

## Summary of Findings

Findings based on this review of existing programs, along with feedback from selected County staff, include:

- Existing ordinances are not protective enough. Too many variances and loopholes exist and should be reduced or eliminated.

**TABLE 4-4**

Local Watershed Plan Components for Restoration and Retrofit  
 Metropolitan North Georgia Water Planning District Watershed Management Plan

Jurisdiction	BMP Installation or Conversion	Stream Restoration	Planning or Other
Bartow			
Cherokee			
Clayton		X	
Cobb	X		
Coweta			
DeKalb	X	X	X
Douglas	X	X	
Fayette			
City of Gainesville	X	X	
Forsyth	X	X	
City of Cumming	X	X	X
Fulton	X	X	X
City of Atlanta	X	X	X
City of Roswell	X	X	X
City of Alpharetta	X	X	X
Gwinnett	X	X	X
Hall	X	X	
Henry			
Paulding			
Rockdale	X	X	
Walton	X	X	
Peachtree City			
Lake Allatoona			

**TABLE 4-5**

Local Watershed Plan Components for Long-term Monitoring  
 Metropolitan North Georgia Water Planning District Watershed Management Plan

Jurisdiction	Water Quality	Biological	Habitat/ Channel Morphology	Stream-Walks	Other Studies/ Monitoring or Modeling
Bartow					
Cherokee	X	X	X		X
Clayton	X				X
Cobb					
Coweta					
DeKalb	X	X		X	
Douglas	X	X		X	
Fayette	X				X
City of Gainesville	X	X		X	
Forsyth	X	X		X	
City of Cumming	X	X	X		
Fulton	X	X	X		X
City of Atlanta	X	X	X		
City of Roswell	X	X	X		
City of Alpharetta	X	X	X		
Gwinnett	X	X	X		
Hall	X	X		X	
Henry	X				X
Paulding					
Rockdale					X
Walton	X	X			X
Peachtree City	X	X	X		
Lake Allatoona	X				

- Local government staff is not adequate to enforce existing requirements. Dedicated staff should be added to implement and enforce the management plans.
- More information is needed on how to implement the recommendations in the plans.
- Implementation of many of the plan recommendations will require active public participation and general public acceptance. Therefore, effective public education activities should be emphasized.
- Lack of funding is a hindrance for nearly all local governments. External assistance with funding of plans will be necessary.

## Examples of Innovative Watershed Management/Stormwater Activities

A number of Counties and Cities have developed innovative programs to protect and improve water quality. A few of these programs are described below.

### City of Roswell Lakes and Ponds Program

The City of Roswell has a Lakes and Ponds Partnership Ordinance which provides for public-private partnerships to dredge and retrofit existing privately-owned ponds and lakes within the City for stormwater management purposes. The program allows citizens to reclaim lakes by paying a portion, up to 50 percent, of the cost for silt removal and the addition of inlet/outlet structures. It also enables the City to reduce sediment loads and better manage stormwater volume, allowing it to maintain the load limits in its stormwater discharge permit.

The program applies to lakes greater than 100 acres in size, those that have a design storage of at least 20 acre-feet of water, and those that are an essential part of the City's municipal stormwater management drainage system. In addition to the retrofit program, the City provides annual seminars to educate property owners on sources of siltation and how to reduce it.

### Clayton County Voluntary Activities

Clayton County's Code of Ordinances requires that all developments contribute less than 65 pounds of TSS/acre/year. A computer spreadsheet-based review tool known as the WISE model calculates the TSS runoff from development based on the amount of impervious surface and the amount of various types of pervious surface. The WISE model allows for flexibility in the modifications that may be necessary for a development to comply with the ordinance. The model provides incentives for some of the requirements, for example, wider stream buffers beyond the 25-foot requirement and greenspace protection.

## DeKalb County Conservation Subdivision Ordinance

DeKalb County's Conservation Subdivision Ordinance requires that new conservation subdivision developments have public sewer service, be greater than 10 acres, and set aside at least 20 percent of the land as greenspace. This approach is consistent with the County goal of setting aside 22 percent of the County as greenspace over the next 50 years. This is one of the first programs in the District to actively promote alternative subdivision designs that will minimize stormwater runoff. The County has integrated greenspace preservation with its stormwater management program.

## Gwinnett County Stormwater Monitoring Program

Gwinnett County has developed a Stormwater Management Program that includes a comprehensive water quality monitoring system. One component of the system is the establishment of long-term water quality monitoring stations.

The County has 12 long-term trend monitoring stations to monitor the effectiveness of the program in controlling nonpoint source pollution. Wet weather samples are collected along with continuous flow and rainfall data. Because the United States Geological Survey (USGS) assists with the operation of the program, the equipment is linked via satellite to the USGS web site, [ga.usgs.gov](http://ga.usgs.gov), and the data on the site are continuously updated.

## Cobb County Variable Stream Buffer

In 1999 Cobb County amended its Stream Buffer Ordinance to double the State-required 25-foot buffer to a minimum of 50 feet. The size of the stream buffer, where land-disturbing activities are prohibited, varies depending on the size of the watershed. It can increase in width to 50, 75, or 100 feet, depending on the size of the drainage area.

Large streams, such as portions of Nickajack Creek, have a 200-foot buffer. A restrictive covenant on the buffer is required to ensure permanent protection. This innovative stream buffer requirement provides greater water quality, stream, and floodplain protection than the minimum stream setback requirements of the State.

## Hall County Programs

Hall County implemented a detailed Watershed Protection Ordinance that encompasses a county-wide watershed protection program and a comprehensive soil erosion and sedimentation control program. In addition, the County combined the public works and development reviews for new projects to better coordinate water quality protection. These measures were implemented to develop a comprehensive stormwater management system in the County.