

# IMPLEMENTATION OF WATERSHED MANAGEMENT REQUIREMENTS AND MODEL ORDINANCES

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**Abstract.** The Metropolitan North Georgia Water Planning District adopted its Watershed Management Plan in late 2003 which includes a number of programmatic, policy, land-use and capital improvements requirements and recommendations for local governments in the areas of stormwater management and watershed protection. In the first year after adoption, District staff worked closely with its member cities and counties in 2004 to begin implementing the plan's recommendations by providing training, technical assistance and additional resources for the local governments.

This paper reports on those activities and the progress that local governments have made to implement the plan.

## BACKGROUND

The Metropolitan North Georgia Water Planning District is a planning entity dedicated to developing comprehensive regional plans to be implemented by local jurisdictions in the 16-county metropolitan area which includes Bartow, Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Hall, Henry, Paulding, Rockdale and Walton Counties.

In September of 2003, the District adopted three long-term water management plans. These three plans address water supply and conservation, wastewater management, and watershed management. The District-wide Watershed Management Plan provides strategies and recommendations for effective watershed management and the control of stormwater runoff. It also includes the specific tasks and milestones for implementing these recommendations, as well as guidance on funding watershed and stormwater management efforts at the local level.

## OVERVIEW OF THE WATERSHED MANAGEMENT PLAN

The District-wide Watershed Management Plan includes a number of strategies and recommendations for

effective watershed management and the control of stormwater runoff:

- **Local Stormwater Management Program Activities**—Programs at the local level to address watershed protection and stormwater management, e.g., implementing requirements for stormwater (quantity and quality) controls for new development and redevelopment, encourage stormwater pollution prevention, and implementing stormwater operations and maintenance (O&M) programs. A key component is local adoption of the District's six model stormwater management ordinances.
- **TMDL Strategies**—Additional watershed management activities based upon local TMDL implementation plan(s) developed to help impaired water bodies meet water quality standards.
- **Source Water Protection Strategies**—Additional watershed management activities for water supply watersheds designed to protect public water supplies.
- **Watershed Improvement Strategies**—Process for the development of watershed improvement plans identifying needed retrofits and restoration in substantially impacted watersheds.
- **Land Use Strategies**—Land use and zoning measures intended to help meet watershed management and protection goals, e.g. greenspace preservation, alternative development patterns, and other innovative land use practices.
- **Basin-Specific Strategies**—Specific management issues and recommendations for each major river basin in the District.

In addition to the watershed management strategies outlined above, the District-wide Watershed Management Plan also includes an Education and Public Awareness Plan, designed to increase public awareness of water resource protection issues, and a Water Quality Monitoring Plan, to provide for comprehensive, consistent watershed-based water quality monitoring across the District.

## PLAN IMPLEMENTATION COORDINATION

Implementation of the District-wide Water Management Plan's recommendations is a shared responsibility between local governments, the District, Georgia EPD and other state agencies. In 2004, the District's primary role was to provide technical assistance and training to the District local governments as they began to implement relevant Plan provisions. Below are Watershed Management Plan-related activities undertaken by District Staff in the first year of implementation.

### **Model Stormwater Ordinance Training**

Local ordinances are important implementation tools for meeting plan objectives in controlling stormwater and nonpoint source pollution. The District included a suite of model stormwater management ordinances as a part of the District-Wide Watershed Management Plan. The model ordinances include:

1. Model Ordinance for Post-Development Stormwater Management for New Development and Redevelopment
2. Model Floodplain Management / Flood Damage Prevention Ordinance
3. Model Conservation Subdivision / Open Space Development Ordinance
4. Model Illicit Discharge and Illegal Connection Ordinance
5. Model Litter Control Ordinance
6. Model Stream Buffer Protection Ordinance

Local governments within the District are required to implement these model ordinances or to adopt requirements or regulations that are at least as effective. To assist with local implementation of these ordinances, the District conducted eight full-day seminars in locations around the 16-county area to give local elected officials and government staff an overview of the model stormwater management ordinances, as well as the necessary information to begin adopting and implementing the ordinances in their jurisdictions.

### **Stormwater Management Manual Training**

The District, in cooperation with the Georgia Water and Pollution Control Association (GW&PCA) and ARC, co-hosted a series of eight two-day courses on the Georgia Stormwater Management Manual for local government staff. The manual is a comprehensive policy and engineering manual that covers the principles and design of permanent stormwater runoff controls for both the quantity and quality of runoff. The course covered topics such as better site design/low-impact development, design criteria for stormwater control best management practices,

use of the District site development review tool and improving local plan review and inspection procedures.

### **Water Quality Monitoring Coordination**

In 2004, District staff worked with the District's Technical Coordinating Committee to finalize standards and methods for the water quality monitoring to be used by local governments. In addition, the District also refined database and data collection spreadsheets to facilitate its role in data collection and management.

Based upon local government input, the sampling year for District stormwater monitoring data collection will be May 1 to April 30, with a deadline of June 1, for submitting data to the District staff. In addition, cities and counties will have until May 1, 2005, to fully implement the District standards and methods in all of their stormwater monitoring programs. Current Phase I MS4 monitoring efforts used the District's methods for the current sampling year (2004-2005).

### **Stormwater Maintenance Guidelines**

The District-wide Watershed Management Plan states that planning and implementation for stormwater system operations and maintenance activities should be a major focus of a local program. Working with the Technical Coordinating Committee, the District prepared guidelines to help local governments develop their own stormwater management operations programs.

### **Resources for Local Stormwater Programs**

In August, the District conducted a Phase II MS4 Stormwater Program Workshop for local government staff. The workshop provided information on resources available to implement the Phase II MS4 six minimum control measures: post-construction stormwater management, erosion and sedimentation control, illicit discharge and illegal connection remediation, good housekeeping and public education and involvement resources. Georgia Water and Pollution Control Association, Georgia's Pollution Prevention Assistance Division (P2AD), Adopt-A-Stream and the Georgia Department of Community Affairs joined the District in conducting this training.

## LOCAL GOVERNMENT IMPLEMENTATION PROGRESS IN 2004

Local governments in the District are responsible for implementing a majority of the Plan's requirements due to their responsibilities for land use planning, development regulations, stormwater management and infrastructure maintenance.

Based upon the results of the first annual survey sent to local governments in 2004, the following sections discuss some of the progress being made towards implementation

of the Watershed Management Plan's recommendations among the 108 cities and counties in the District.

### Adoption of Stormwater Management Model Ordinances

The implementation schedule included in the Watershed Management Plan specifies that those local jurisdictions that are currently covered under a Phase I NPDES MS4 stormwater permit were required to adopt and implement the five original model stormwater ordinances by April 2004. Those jurisdictions that are covered under the Phase II MS4 program will be required to implement the ordinances by April 2005. All other jurisdictions have until April 2006 to implement the ordinances. The model stream buffer ordinance is to be adopted one year after each of these dates.

As of October, 2004, 36 of the 48 Phase I jurisdictions had adopted at least one of the model ordinances, and 17 had adopted the five ordinances. Of the 31 Phase II jurisdictions, 16 had adopted at least one ordinance, and 7 had adopted the five ordinances.

### Stormwater Operations & Maintenance

An essential component of local stormwater management program activities is the ongoing operation and maintenance of the stormwater drainage, control and conveyance systems. Failure to provide effective maintenance can reduce both the hydraulic capacity and the pollutant removal efficiency of stormwater controls and conveyance systems. Under the District-Wide Watershed Management Plan, local governments in the District are required to develop and implement a stormwater operations and maintenance program which includes a plan for general routine and remedial maintenance and emergency response, as well as a tracking program for new stormwater management facilities. 58% of the local governments that responded stated that they had a stormwater operations and maintenance program that meet these criteria.

### Household Hazardous Waste Collection

A variety of hazardous and potentially harmful chemicals and materials, many of which pose potential water quality threats, are improperly used and disposed of by District residents. The District watershed plan recommends that local governments provide accessible recycling programs for toxic and hazardous household waste to ensure proper disposal of these materials. Though this program recommendation is voluntary for local governments, 23% of the jurisdictions that responded already have a household hazardous waste collection program in place.

### Municipal/County Good Housekeeping Programs

Many activities undertaken by local governments in their day-to-day activities can result in water quality

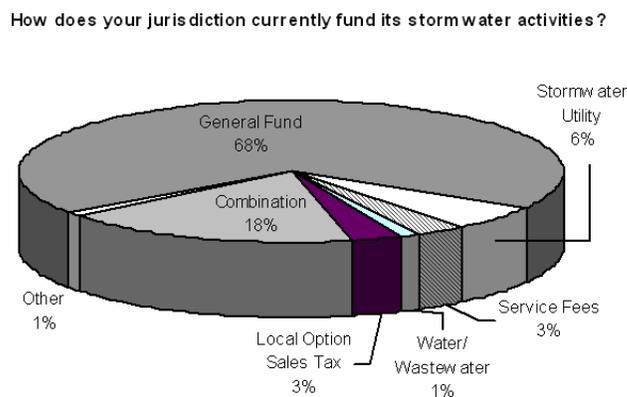
impacts and impairment. City and counties must ensure that their own operations are not contributing to water quality degradation through the implementation of appropriate "good housekeeping" practices to prevent stormwater pollution — particularly in the areas of site and grounds management, fleet maintenance and public works and utility operations. 43% of local governments that responded have put a good housekeeping program in place.

### Stormwater Public Awareness and Education

Local public awareness and outreach activities are an important way that cities and counties can help educate their residents and businesses about the detrimental effects of stormwater pollution and the steps that they can take to protect or improve the quality of our rivers, lakes and streams. Cities and counties in the District are to have a local program for stormwater education that makes use of the materials and efforts provided through the District's regional Clean Water Campaign public awareness effort. 65% of the cities and counties that responded currently have a local stormwater public education program.

### Stormwater Program Funding

Successful implementation of a local government's stormwater efforts hinges on the ability to fund the program activities. Within the District, general revenues from property taxes (general fund) are the primary source of funding for most cities and counties. Figure 1 below illustrates the relative funding sources.



**Figure 1. Current funding sources for local governments in the District.**

As this funding is often inadequate to meet the expanded requirements under new regulatory requirements, alternative funding methods for stormwater management are being considered and implemented, including the sale of bonds, development impact fees, plan

review fees and the creation of stormwater user fee (stormwater utility) systems.

Eight local governments reported that they have implemented a stormwater utility or stormwater user fee system. Of those cities and counties that do not currently have a stormwater utility, 58% are considering one.

### CONCLUSION

One year after the adoption of the District-wide Watershed Management Plan, progress is being made towards implementation of the Plan's recommendations, particularly at the local level. Continued coordination and facilitation between District staff, local governments and Georgia EPD in the future will make future success possible in implementation of the District-wide Watershed Management Plan implementation and help ensure the protection of water resources within the 16-county District.

### LITERATURE CITED

Metropolitan North Georgia Water Planning District,  
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