

STATE OF GEORGIA
TIER 2 TMDL IMPLEMENTATION PLAN REVISION #1
 Chattahoochee River Watershed
 Chattahoochee River Basin

Coweta, Carroll, Fulton, Douglas, Cobb, DeKalb, and Gwinnett Counties and the cities of Villa Rica, Douglasville, Powder Springs, Austell, Smyrna, Marietta, Palmetto, Fairburn, Union City, College Park, East Point, Atlanta, Decatur, Avondale Estates, Clarkston, Chamblee, Doraville, Norcross, Berkeley Lake, Duluth, Suwanee, Buford, Sugar Hill, Roswell and Alpharetta

I. INTRODUCTION

Total Maximum Daily Load (TMDL) Implementation Plans are platforms for evaluating and tracking water quality protection and restoration. These plans have been designed to accommodate continual updates and revisions as new conditions and information warrant. In addition, field verification of watershed characteristics and listing data has been built into the preparation of the plans. The overall goal of the plans is to define a set of actions that will help achieve water quality standards in the state of Georgia.

This implementation plan addresses the general characteristics of the watershed, the sources of pollution, stakeholders and public involvement, and education/outreach activities. In addition, the plan describes regulatory and voluntary practices/control actions (*management measures*) to reduce pollutants, milestone schedules to show the development of the management measures (*measurable milestones*), and a monitoring plan to determine the efficiency of the management measures.

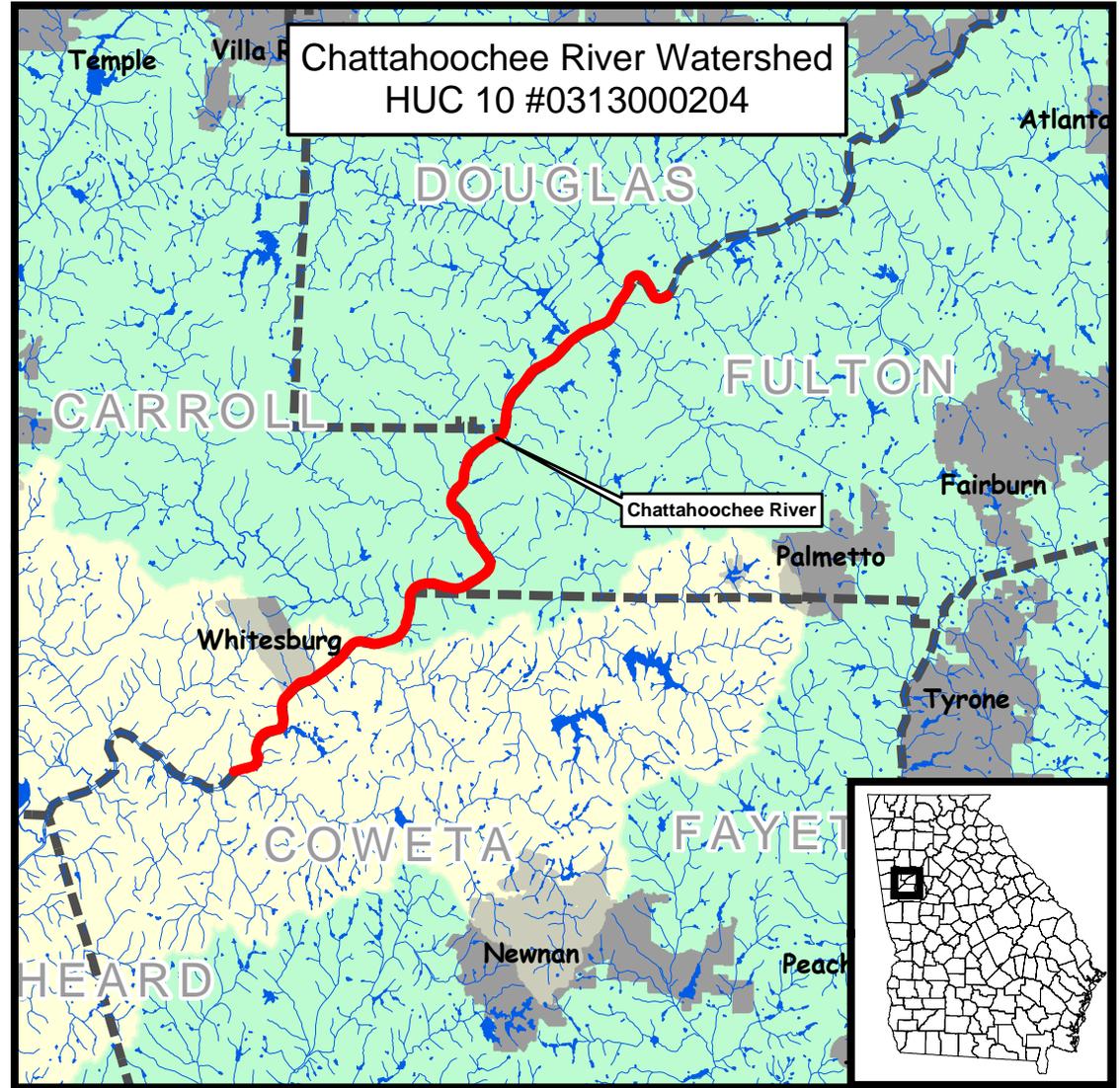


Table 1. IMPAIRMENTS

IMPAIRED STREAM SEGMENT	IMPAIRED SEGMENT LOCATION	IMPAIRMENT
Chattahoochee River	Pea Creek to Wahoo Creek	Fecal Coliform Bacteria
Chattahoochee River*	Pea Creek to Wahoo Creek	FCG(PCBs)

* Plan will be written by GA EPD

II. GENERAL INFORMATION ABOUT THE WATERSHED

Write a narrative describing the watershed, HUC 10 #0313000204. Include an updated overview of watershed characteristics. Identify new conditions and verify or correct information in the TMDL document using the most current data. Include the size and location of the watershed, political jurisdictions, and physical features which could influence water quality. Describe the source and date of the latest land cover/use for the watershed. Describe and quantify major land uses and activities which could influence water quality. See the instructions for more information on what to include.

The Chattahoochee River Watershed (HUC10 #0313000204) is located southwest of metro Atlanta in Heard, Coweta, Carroll and Fulton Counties. The land area for HUC 10 # 0313000204 is 199,515 acres. There are no interstate highways located in this HUC10 and based on available ARC 2001 land cover data this area appears to be primarily forested. There is however a small amount of commercial, residential and agricultural areas in this HUC10.

The Chattahoochee River (Pea Creek to Wahoo Creek) stream segment identified on Georgia Environmental Protection Division's 303(d) list is the only stream segment in HUC10 #0313000204 for which ARC has developed an implementation plan. The 303 (d) listed stream segment of the Chattahoochee River begins where Pea Creek flows into the Chattahoochee River from Fulton County. The segment then flows south along the Fulton / Douglas County border then along the Carroll / Coweta County border. This TMDL segment ends where Wahoo Creek flows into the Chattahoochee River from Coweta County. The Chattahoochee River TMDL segment watershed has a larger land area than the entire HUC10 watershed that affects the actual TMDL stream segment. The local governments with interest in the Section 305(b) / Section 303(d) listed stream segment watershed include: Coweta, Carroll, Fulton, Douglas, Cobb, DeKalb, and Gwinnett Counties and the cities of Villa Rica, Douglasville, Powder Springs, Austell, Smyrna, Marietta, Palmetto, Fairburn, Union City, College Park, East Point, Atlanta, Decatur, Avondale Estates, Clarkston, Chamblee, Doraville, Norcross, Berkeley Lake, Duluth, Suwanee, Buford, Sugar Hill, Roswell and Alpharetta.

We have included below a table describing the land cover for the Chattahoochee River (Pea Creek to Wahoo Creek) TMDL stream segment watershed, this watershed is larger than HUC10 #0313000204. The land cover data used to develop this table is data developed by the Atlanta Regional Commission in 2001. This land cover data has not changed significantly since the TMDL was prepared. The acreage total found in the below table reflects the watershed boundary ARC has updated. This updated TMDL stream segment watershed boundary will be provided to GA EPD. This table also defines how ARC has aggregated the ARC Land cover codes into simplified groupings similar to those found in the TMDL. An additional table has been added to the last page of this document that defines the Aggregated ARC Land Cover Codes.

**ARC 2001 Land Cover for Chattahoochee River (Pea Creek to Wahoo Creek)
TMDL Segment Watershed***

Land Cover Classification	Area (Acres)	% of Total Area	Aggregated ARC Land Cover Codes
Forest/Open Space	278,086.92	33.10%	40, 171, 172, 173
Medium-Density Residential	231,660.73	27.58%	112
Commercial	80,881.59	9.63%	12, 15, 121
Low-Density Residential	79,665.14	9.48%	111
Agricultural Lands	70,883.09	8.44%	21, 22, 23, 24
High-Density Residential	30,488.28	3.63%	113, 117, 119
Transitional & Extractive Lands	29,264.98	3.48%	17, 74, 75, 76
Water/Wetland	23,516.34	2.80%	51, 53, 60
Transportation and Utilities	12,003.35	1.43%	14, 145
Industrial/Institutional	3,657.40	0.44%	13
Total Acres	840,107.81	100.00%	

***Land cover data not available for some portions of the watershed located in Carroll County.**

This stream segment is listed for not meeting water quality standards for fecal coliform. Fecal Coliform bacteria are bacteria found in the intestinal tract of humans and animals. Its presence in streams, rivers, and lakes is an indicator of possible harmful pathogens. The GA Environmental Protection Division has developed the implementation plan for the other stream segment listed on the cover of this document. For information on this implementation plan please contact Mary Gazaway at (404) 675-1745.

For each waterbody on the 303(d) list, the U.S. Clean Water Act requires a TMDL be developed for each pollutant. A TMDL is a calculation of the maximum amount of a pollutant, from both point and non-point sources that a waterbody can receive and still meet water quality standards. The U.S. EPA developed a TMDL for this stream segment in February 2003 that shows an 85% reduction in fecal coliform loads is needed.

Staff from the City of Atlanta helped to identify the potential sources of fecal coliform in this segment watershed. The following potential fecal coliform sources were identified for this segment: urban runoff, animal waste, SSOs, Greensferry CSO, North Avenue CSO, Tanyard Creek CSO, Clear Creek CSO, illicit connections and leaking/failing septic systems.

This implementation plan was developed with the help of representatives from the DeKalb County Public Works, Fulton County Public Works, Cobb County Water System, Douglasville-Douglas County Water & Sewer Authority, the Metropolitan North Georgia Water Planning District and the cities of Atlanta, Duluth, Alpharetta, Roswell, Suwanee, Buford, Chamblee, Doraville, College Park, Fairburn, Powder Springs, Smyrna, Union City, Marietta and Austell. The Atlanta Regional Commission coordinated the public meetings and the input received from local stakeholders and technical advisory staff. Comments and requested revisions to the draft plan have been considered in developing this final draft implementation plan.

The GA EPD will be conducting TMDL monitoring in the Chattahoochee River Basin in 2005. This data will be used to list and possibly delist stream segments.

A portion of the affected governments' management measures are based on their NPDES Phase I and Phase II Municipal Separate Storm Sewer System (MS4) Permit requirements. These programs include: stormwater ordinances, public education & outreach programs, public participation/involvement programs, illicit discharge detection and elimination programs, construction site runoff control, post-construction runoff control and pollution prevention/good housekeeping.

The affected governments all have public education / outreach programs in place to educate the general public about water quality concerns. These programs include a range of activities such as educational brochures/bill inserts and activities for schools age students. DeKalb County, Fulton County, Cobb County and the Cities of Atlanta and Austell all participate in the Clean Water Campaign (www.cleanwatercampaign.com). The City of Atlanta provides water related educational information on two websites www.cleanwateratlanta.org and www.atlantapublicworks.org. DeKalb County also maintains a website with water related issues (<https://dklbweb.dekalbga.org/watersewer>). The City of Duluth maintains a website that also provides water related material (www.duluthga.net). An active Adopt-A-Stream program operates in Fulton, Cobb, and DeKalb Counties and the cities of Atlanta and Austell. Storm Drain stenciling programs are also common throughout the watershed area.

The purpose of this implementation plan is to reduce or eliminate the sources of fecal coliform bacteria contributing to this stream segment in order to meet the fecal coliform water quality standard. The water quality attainment date will be ten years from the time the implementation plan is approved.

Chattahoochee River

COMPLETE THE FOLLOWING TABLES FOR AND NARRATIVES ABOUT EACH IMPAIRED STREAM IN THE WATERSHED.

STREAM SEGMENT NAME	LOCATION	MILES/AREA	DESIGNATED USE	PS/NS
Chattahoochee River	Pea Creek to Wahoo Creek (Fulton/Douglas/Coweta/Carroll Co.)	21 miles	Fishing	NS

III. SOURCES AND CAUSES OF STREAM SEGMENT IMPAIRMENT LISTED IN TMDLs

After reviewing the TMDLs written for this stream, complete the following tables with **the information found in the TMDLs**. List each parameter for which the stream segment is impaired and the water quality standard violated. See the instructions for the water quality standards. Describe the sources and causes of each violation identified in the TMDLs.

Table 2. SOURCES OF IMPAIRMENT AS INDICATED IN TMDLs

PARAMETER 1	WQ STANDARD	SOURCES OF IMPAIRMENT	NEEDED REDUCTION FROM TMDL
Fecal Coliform	1,000 per 100 ml (geometric mean Nov-April) and 200 per 100 ml (geometric mean May-Oct)	Urban Runoff (UR)	85%

IV. IDENTIFICATION AND RANKING OF POTENTIAL SOURCES OR CAUSES OF IMPAIRMENT

INVESTIGATE AND EVALUATE the sources of impairment for each parameter listed in Table 2. Write a narrative describing efforts made or procedures used to verify the significance and extent of the sources or causes of each impairment listed in the TMDLs. Include:

- Involvement of stakeholder group
- Field surveys
- Review of land cover data
- Evaluation of sources

A meeting was held in March 2004 with local city and county staff to review the TMDL segment and discuss potential sources of pollution. In May 2004 public meetings were held to solicit general stakeholder involvement. Large presentation size maps using 2003 aerial imagery were developed for the public meetings as a tool to help locate sources. The stakeholders were asked for their input on any potential sources of pollution in the area. In addition to reviewing aerial imagery ARC staff will review the most recent landuse data available (year 2001) for the area and will be updating the watershed description found in the TMDLs. This process involved first verifying that the correct watershed was used in the development of the TMDL. ARC staff has updated watershed delineations and will provide the updated watershed boundaries to GA EPD.

ARC has conducted a visual field survey on this stream segment due to limited recent stream walk information. The visual field survey is attached. As a part of this visual field survey we reviewed existing point source data provided by GA EPD as well as reviewing 2003 aerial imagery. Using guidance documents provided by the State, a field assessment was conducted which included a windshield survey of the area adjacent to the stream and a foot survey where access was allowed. The summary of findings for this visual field survey is as follows. There are approximately 80 permitted point source discharges in the Chattahoochee River (Pea Creek to Wahoo Creek) TMDL segment watershed. However, all but one source are located approximately 4 miles away from the TMDL segment and it is undetermined how they may affect this TMDL segment. Based on the field survey and background investigation, potential septic system failures, animal waste and flow from the upstream Chattahoochee River (Utoy Creek to Pea Creek) and (Peachtree Creek to Utoy Creek) TMDL segments are the most likely potential source of pollution in and around this TMDL segment. Proposed management practices to address fecal coliform in this TMDL segment have been provided by local governments and are outlined in the 2004 Chattahoochee River (Pea Creek to Wahoo Creek) TMDL segment watershed TMDL implementation plan in tables 5, 6 and 7. Urban runoff and animal waste are probably contributing the most to the fecal coliform levels in this TMDL segment. The magnitude of these sources is ranked as significant and the entire segment is affected. There is also the potential for more significant affects due to animal waste in this segment than upstream. The known effects of the upstream CSO Facilities can also be considered a significant source affecting this Chattahoochee River (Pea Creek to Wahoo Creek) TMDL segment.

To the extent possible, identify sources and quantify the extent of pollution in the stream segment for each of the parameters listed in Table 2 and evaluate the likely impact on the parameter load to the stream. This should follow research performed and described in preceding narrative and should correct or add information to the TMDLs. **The SOURCES SHOULD BE RANKED** from those having the most impact to those having the least impact. The estimated extent of contribution can be expressed as the area of the watershed affected, the stream miles affected, or the number of activities contributing to the problem. The magnitude of contribution should be estimated to be large, moderate, small, or negligible.

Table 3. CONCLUSIONS MADE OF POTENTIAL SOURCES OF STREAM SEGMENT IMPAIRMENT

PARAMETER 1	POTENTIAL SOURCES	ESTIMATED EXTENT OF CONTRIBUTION	ESTIMATED MAGNITUDE OF CONTRIBUTION	COMMENTS
Fecal Coliform	Urban Runoff	High	Significant	Nonpoint source / stormwater runoff
Fecal Coliform	Animal wastes	High	Significant	Nonpoint source - pets and wildlife
Fecal Coliform	SSOs	High	Significant	Overflows from sanitary sewer system due to blockages from grease, roots, vandalism / pipe failures
Fecal Coliform	Greensferry CSO	High	Significant	Combined Sewer Overflow Facility
Fecal Coliform	North Avenue CSO	High	Significant	Combined Sewer Overflow Facility
Fecal Coliform	Tanyard Creek CSO	High	Significant	Combined Sewer Overflow Facility
Fecal Coliform	Clear Creek CSO	High	Significant	Combined Sewer Overflow Facility
Fecal Coliform	Illicit connections	Medium	Minimal	Improper connections of sanitary sewer flows to the storm drain system
Fecal Coliform	Septic tank systems	Low	Minimal	Leaking / runoff from failing septic tank systems, including faulty drain fields

V. STAKEHOLDERS

PUBLIC INVOLVEMENT AND THE ACTIVE PARTICIPATION OF STAKEHOLDERS is essential to the process of preparing TMDL implementation plans and improving water quality. Stakeholders can provide valuable information and data regarding their community, impaired water bodies, potential causes of impairments, and management practices and activities, which may be employed to reduce the impacts of the causes of impairment.

Describe outreach activities to advise and engage stakeholders in the TMDL implementation plan preparation process. Describe the stakeholder group employed or formed to address the impaired segments in the watershed. Summarize the results of the number of attendees and meetings and describe major findings, recommendations, and approvals.

As a first step an initial meeting was held with local government agencies to determine possible sources of pollution as well as any preventative / corrective measures in place or planned for the area. The local government agencies in the advisory group for this segment are listed in Table 4.

The most important part of developing these implementation plans is locating stakeholders in this area. ARC staff searched for stakeholders listed on existing mailing lists (Home Owner Associations, Adopt-A-Stream, Watershed Alliance groups, etc.) to invite to the public meetings. The staff also gathered tax assessment information on landowners who owned more than 50 acres in the county. These stakeholders were considered large landowners and included public, private, and commercial types of property. Businesses listed on EPA's Enforcement & Compliance History Online (ECHO) website (www.epa.gov/echo) that were located in the area were also invited to the public meetings. A list of elected officials, chambers of commerce, parks & recreation departments, NRCS, GA Soil & Water Conservation Commission, and National Park Service representatives were also invited to the public meetings. ARC staff also included schools, libraries, and large apartment complexes in the public meeting mailing list.

The next outreach activity was to develop a website for this project (www.atlantaregional.com/cleanerstreams). The website provided a variety of information and access opportunities for the TMDL Implementation Plan process. The website identified the local government participants, provided a list and map of the TMDL stream segments. The TMDL documents, the 303(d) list and other background information was available on this website. An online sign-up and feed-back form was included on the website so that people could sign up to be a stakeholder. These stakeholder names and other stakeholders can be found in Appendix A. In an effort to provide further detailed information on the TMDL stream segments and their watersheds, an interactive GIS map was developed as a part of the website. This interactive mapping technology allows individuals to zoom in to the area they are interested in and print out maps. The website also included access to a 10-minute video and slide presentation that explains the implementation plan development process and provides online feedback thus creating a virtual stakeholder public meeting and involvement process. This video resource was made available from May 3, 2004 to August 3, 2004. During this three month period a total of 129 visitors accessed the virtual public meeting. It was confirmed that public libraries in the area have high speed internet access and that the virtual public meeting could be viewed on computers at any public library in the metro Atlanta area.

The next step in this process involved holding 4 initial public meetings in May 2004 to educate stakeholders about this process and solicit input. A total of 43 persons attended the public meetings.

Methods used to inform the general public about the implementation plan development process and the public meetings include: having major environmental groups send out meeting notices in their electronic newsletters, distributing press releases, purchasing newspaper advertising space, sending out numerous e-mails announcing the initial meetings and finally mailing out 3500 meeting announcements to local groups (home owner associations, watershed alliances, etc.), businesses, large landowners, elected officials, Chambers of Commerce, Parks & Recreation Departments, NRCS, and the National Park Service.

After input had been received from our local government advisory group and stakeholders a draft implementation plan was developed. This draft document was made available to all stakeholders for discussion and input at the 4 public meetings held in June 2004. A total of 37 persons attended the public meetings.

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List the watershed or advisory committee members of the stakeholder group for this segment in the following table.

Table 4. COMMITTEE MEMBERS

NAME/ORG	ADDRESS	CITY	STATE	ZIP	PHONE	E-MAIL
GA EPD, Water Protection Branch	4220 International Pkwy, Suite 101	Atlanta	GA	30354	(404) 675-1751	
GA Adopt-A-Stream	4220 International Pkwy, Suite 101	Atlanta	GA	30354	(404) 675-1636	
Georgia Soil and Water Conservation Commission	1500 Klondike Road Suite A109	Conyers	GA	30094	770-761-3020	ksahladee@gaswcc.org
NRCS (Lawrenceville, GA Office)	750 South Perry St., Suite 410	Lawrenceville	GA	30045	770-963-9288	
DeKalb County Public Works	1580 Roadhaven Drive	Stone Mountain	GA	30083		
DeKalb County Extension Service	4380 Memorial Drive	Decatur	GA	30032		
DeKalb County Health Department	PO Box 987	Decatur	GA	30031		
NRCS (Marietta, GA Office)	678 South Cobb Drive, Suite 150	Marietta	GA	30060	770-792-0647	
City of Atlanta Office of the Mayor	55 Trinity Avenue Suite 2400	Atlanta	GA	30303	404-330-6100	sfranklin@atlantaga.gov
City of Atlanta Department of Watershed Management	55 Trinity Avenue Suite 5400	Atlanta	GA	30303	404-330-6081	rhunter@atlantaga.gov
City of Atlanta Department of Planning, Atlanta Planning & Advisory Board	55 Trinity Avenue, Suite 1450	Atlanta	GA	30303		
Duluth City Council	3578 West Lawrenceville St.	Duluth	GA	30096	(770) 476-3434	tlynn@duluthga.net
Duluth Planning & Development Department	3578 West Lawrenceville Street	Duluth	GA	30096	770-476-1790	ksuddreth@duluthga.net
Duluth Public Works Department	2450 Chattahoochee Drive	Duluth	GA	30097	770-476-2454	rfowler@duluthga.net
Fulton County Public Works (Nick Ammons)	141 Pryor St., S.W., Suite 6001	Atlanta	GA	30303	404-730-7589	
Fulton County Environmental Health Department (Pearl Gordon)	99 Jessie Hill Jr., Dr., Room 101	Atlanta	GA	30303	404-730-1308	
Fulton County Cooperative Extension Service	141 Pryor St., Suite 1031	Atlanta	GA	30303	404-730-7000	
Stu Moring / City of Roswell	Environment & Public Works 38 Hill Street, Suite G-60	Roswell	GA	30075	(770) 641-3715	smoring@ci.roswell.ga.us
Charles Richards / City of Roswell	Environment & Public Works 38 Hill Street, Suite G-60	Roswell	GA	30075	(770) 641-3715	crichards@ci.roswell.ga.us
Carter Lucas / City of Roswell	Planning and Zoning 38 Hill Street, Suite G-30	Roswell	GA	30075	(770) 641-3780	clucas@ci.roswell.ga.us
Rebecca McDonough / City of Alpharetta	Engineering and Public Works 1790 Hembree Road	Alpharetta	GA	30004	(678) 297-6200	rmcdonough@alpharetta.ga.us

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Steve Dempsey / Forsyth County	Engineering Department 110 East Main St., Suite 120	Cumming	GA	30040	(770) 781-2165	
Scott Morgan / City of Cumming	Dept. of Planning and Zoning 100 Main Street	Cumming	GA	30040	(770) 781-2024	s.morgan@cityofcumming.net
Earl Burrell, Fulton County	Department of Public Works 141 Pryor St., SW, Suite 6001	Atlanta	GA	30303	(404) 730-7462	earl.burrell@co.fulton.ga.us
City of Suwanee Public Works & Inspections Department	373 Highway 23	Suwanee	GA	30024	(770) 945-8996	edinger@suwanee.com
City of Buford	95 Scott Street	Buford	GA	30518	770-945-6761	
City of Chamblee	5468 Peachtree Road	Chamblee	GA	30341		
Bill Higgins/Cobb County Water System	680 South Cobb Drive	Marietta	GA	30060	(770)419-6435	William.Higgins@cobbcounty.org
Tom Campbell/ Cobb County Board of Health	3830 South Cobb Drive Suite 102	Smyrna	GA	30080	(770)435-7815	
Wayne McGary/ Marietta Water Authority	1660 Barnes Mill Rd.	Marietta	GA	30062	(770)794-8710	
Rob Hosack/ Cobb County Community Development	191 Lawrence St.	Marietta	GA	30090	(770)528-2125	
Jennifer McCoy/Cobb County Adopt-A-Stream	662 South Cobb Drive	Marietta	GA	30060	(770)528-1480	Jennifer.McCoy@cobbcounty.org
Valerie Pickard/USDA Natural Resources Conservation Service	678 South Cobb Drive	Marietta	GA	30060	770 792 0594	
Rusty Simpson/Cobb County Parks and Recreation	1792 County Services Parkway	Marietta	GA	30080	(770)528-8840	
Sally Bethea/Upper Chattahoochee River Keeper	3 Puritan Mill 916 Joseph Lowery Blvd.	Atlanta	GA	30318	(404)352-9828	
City of Marietta Public Works	205 Lawrence Street	Marietta	GA	30060	770-794-5650	
Douglasville – Douglas County Water & Sewer Authority (DDCWSA) Pete Frost, Executive Director	P.O. Box 1157	Douglasville	GA	30133	770-949-7617	
Douglas County Board of Commissioners Rita Rainwater, Chairman	8700 Hospital Dr.	Douglasville	GA	30134	770-949-2000	
City of Douglasville Mickey Thompson, Mayor	P.O. Box 219	Douglasville	GA	30133	770-920-3000	
City of Villa Rica Lamar Moody, City Manager	571 W. Bankhead Highway	Villa Rica	GA	30180	770-785-1000	
Douglas County Development Authority, Robert Reynolds, Executive Director	P.O. Box 2029	Douglasville	GA	30133	770-920-7459	
Homebuilders Association of Douglas County, Chris Collier, Executive Director	P.O. Box 1272	Douglasville	GA	30133	678-715-0904	

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Douglas County Board of Education, Don Remillard, Superintendent	P.O. Box 1077	Douglasville	GA	30133	770-920-4000	
Friends of Douglas County, Mike Mulcare	5735 E. Ridge Drive	Douglasville	GA	30135		
Carroll County Water Authority, Jim Baxley	P.O. Box 2029	Carrollton	GA	30117	770-834-6667	
Metropolitan North Georgia Water Planning District	40 Courtland Street, NE	Atlanta	GA	30303	404-463-3260	
Duane Demeritt/City of Austell	5000 Austell-Powder Springs Rd Suite 101	Austell	GA	30106	(770)944-4325	duane@austell.org
City of College Park (Phil Lee)	1886 W. Harvard Avenue	College Park	GA	30127	(404) 669-3757	plee@collegeparkga.com jhoward@collegeparkga.com cbrewer@collegeparkga.com
City of Doraville	3725 Park Ave	Doraville	GA	30340		
City of Fairburn / Jim Williams	56 Malone Street	Fairburn	GA	30213	(770) 964-2244	mgr@fairburn.com
City of Fairburn / Troy Besseche	56 Malone Street	Fairburn	GA	30213		troy@fairburn.com
Ron Feldner / Integrated Science & Engineering	275 S. Lee Street	Fayetteville	GA	30214	770-461-4292	
City of Powder Springs / Rodger Swaim	3006 Springs Industrial Drive	Powder Springs	GA	30127	770-943-8010	pubwkdir@cityofpowdersprings.org
Ken Hildebrandt/City of Smyrna	3180 Atlanta Rd.	Smyrna	Ga	30080	770 319 5381	
William Landrum / City of Union City	5047 Union Street	Union City	GA	30291	770-306-6855	blandrum@unioncityga.org

In Appendix A, list the names, addresses, telephone numbers, and e-mail addresses for local governments, agricultural or commercial forestry organizations, significant landholders, businesses and industries, and local organizations including environmental groups and individuals with a major interest in this watershed.

VI. MANAGEMENT MEASURES AND ACTIVITIES

Describe any management measures or activities that have been put into place or will be put into place including regulatory or voluntary actions or other controls by governments or individuals that specifically apply to the pollutant that will help achieve water quality standards. Include who will be responsible for the measure, how it will be funded, the status, the date it will be or was initiated, and a short description of how effective the measure is or will be.

Table 5. MANAGEMENT MEASURES AND ACTIVITIES

MEASURE	RESPONSIBILITY	DESCRIPTION	SOURCE OF FUNDING	STATUS	ENACTED/ IMPLEMENTED	EFFECTIVENESS (Very, Moderate, Weak)
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Phase I MS4 Municipal Stormwater Permit	DeKalb County	Under this permit, DeKalb County is required to have a comprehensive stormwater program, which includes public education and participation, illicit discharge detection and elimination, permitting and reporting, and program implementation.	DeKalb County Water / Wastewater Revenue	In-Progress	09/1997	Moderate
DeKalb County Storm Water Ordinance	DeKalb County Roads & Drainage	Ordinance to address storm water runoff, nonpoint source pollution controls.	Storm Water Revenue	In-progress	1998	Very
Sanitary Sewer Maintenance Program	DeKalb County Water & Sewer	Sanitary sewer system inventory and inspection (mapping, television inspections); infiltration & inflow identification and reduction (flow monitoring, smoke testing); sewer line rehabilitation (pipe bursting, relining, cleaning) and manhole rehabilitation.	DeKalb County Water / Wastewater Revenue	Ongoing	1996	Very
Restoration and Retrofit Programs	DeKalb County government	Utility line vegetation program using native prairie grasses to stabilize utility easements and enhance habitat, sheet flow filterability; and construction of hydrologic controls and stream restoration projects.	DeKalb County Water / Wastewater Revenue	Ongoing	2001	To Be Determined
IAW O.C.G.A. 290-5-26	DeKalb County Board of Health	Rules and regulations for installation and repair of on-site sewage management systems.	DeKalb County Board of Health	Enforced	June 30, 1980	Moderate
Consent Decree	EPA/EPD/City of Atlanta	Atlanta North Avenue CSO		In Progress	2007	Very
Consent Decree	EPA/EPD/City of Atlanta	Atlanta Greensferry CSO		In Progress	2007	Very
NPDES Phase I Permit GAS000100	City of Atlanta	MS4 Permit: The State of GA has issued the City of Atlanta with a permit to operate the City's Municipal Separate Storm Sewer System (MS4). Major aspects of the permit include public education, illicit discharge detection and elimination, source identification activities, water sampling and reporting.		Enforced	6/15/1994	Very
City of Atlanta Stormwater Management Ordinance	City of Atlanta	Ordinance to address stormwater management and nonpoint source pollution		Enforced	1993	Very
Illicit Discharge Ordinance	City of Atlanta	Ordinance to address illicit discharge and illegal dumping into the MS4 system.		Enforced	1996	Very

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Erosion and Sedimentation Control Ordinance	City of Atlanta	Ordinance to address erosion and sedimentation occurring at constructions site that limits sediment from entering the sewer system.		Enforced	1996	Very
Riparian Buffer Protection Ordinance	City of Atlanta	Ordinance that protects 75 feet from the top of bank on a perennial and intermittent stream.		Enforced	1999	Very
Floodplain Protection Ordinance	City of Atlanta	Ordinance that protects floodplains in the City from being developed.		Enforced	1985	Very
Sanitary Sewer Evaluation System	City of Atlanta	Inspection program evaluates the condition of every manhole and pipe (smoke test, tv, and radar). Assessing easements for problems		In progress	1998	Very
Elimination of Greensferry CSO	City of Atlanta	The Greensferry CSO sewer basin is to be sewer separated as part of the CSO Consent Decree.		In progress	2005	Very
Construction of West Area CSO Tunnel	City of Atlanta	West area tunnel to store CSO from the Clear Creek, Tanyard, and North Avenue CSOs. Tunnel will be 8.5 miles in length, 26 ft. in diameter, and storage capacity of 177 mgd.		In progress	2004	Very
New 85 mgd Dewatering Pump Station	City of Atlanta	Dewatering pump station to lift stored CSO flows from the West area tunnel for treatment at a dedicated CSO treatment plant.		In progress	2005	Very
New 85 mgd dedicated CSO treatment plant	City of Atlanta	CSO treatment plant to treat the stored CSO volume from the West area tunnel.		In progress	2005	Very
Dechlorination of CSO facilities	City of Atlanta	CSO facilities will be retrofitted with dechlorination equipment		In progress	2005	Very
CMOM Program	City of Atlanta	The required CMOM (Capacity Management, Operations & Maintenance) program includes the following: Collection and Transmission Systems Contingency and Emergency Response Plan; Short-Term Operation Plan; Maintenance Management System Plan; Pump Station Evaluations; Grease Management Program; Sewer Mapping Program; Safety Program; Training Program; Capacity Certification Program; and Long-Term Operation Plan.		In progress	1999	Moderate

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Grease Trap Inspection Program	City of Atlanta	Inspection of grease traps		In progress	1999	Very
BMP Program	City of Atlanta	Through development ordinance ensures that BMPs are properly selected and maintained for non point source pollution prevention.		Enforced	1995	Very
CMOM Program	Fulton County	Refer to Fulton County Watershed Protection Plan (June 2002)	Fulton County Water & Sewer Revenue Fund	In Development	2005	Very
Emergency Sanitary Sewer Evaluation Study (ESSES)	Fulton County	Refer to Fulton County Watershed Protection Plan (June 2002)	Fulton County Water & Sewer Revenue Fund	Completed in 2001	Completed in 2001	Moderate
Interim Collection System Master Plan	Fulton County	Refer to Fulton County Watershed Protection Plan (June 2002)	Fulton County Water & Sewer Revenue Fund	Completed in 2002	Completed in 2002	Moderate
Survey of Sanitary Sewer	Fulton County	Refer to Fulton County Watershed Protection Plan (June 2002)	Fulton County Water & Sewer Revenue Fund	Begin in 2003	2003	Moderate
Sanitary Sewer Modeling	Fulton County	Refer to Fulton County Watershed Protection Plan (June 2002)	Fulton County Water & Sewer Revenue Fund	Planned for 2005	2005	Very
Flow Monitoring	Fulton County	Refer to Fulton County Watershed Protection Plan (June 2002)	Fulton County Water & Sewer Revenue Fund	Ongoing	1988	Very
Improvements in Wastewater Treatment	Fulton County	Refer to Fulton County Watershed Protection Plan (June 2002)	Fulton County Water & Sewer Revenue Fund	Ongoing	1912	Very
Database and Tracking of Un-sewered Areas	Fulton County	Refer to Fulton County Watershed Protection Plan (June 2002)	Fulton County Water & Sewer Revenue Fund	Ongoing	2005	Moderate
Permitting of Septic Systems	Fulton County	Refer to Fulton County Watershed Protection Plan (June 2002)	Fulton County General Fund	Ongoing	1952	Moderate
Educational Efforts (Pet Waste)	Fulton County	Refer to Fulton County Watershed Protection Plan (June 2002)	Fulton County General Fund	Ongoing	1998	Weak
Providing sewer service to Developed Areas by 2030	Fulton County	Refer to Fulton County Watershed Protection Plan (June 2002)	Fulton County Water & Sewer Revenue Fund	Ongoing	1990	Moderate
Improving Waste Receptacles	Fulton County	Refer to Fulton County Watershed Protection Plan (June 2002)	Fulton County General Fund	Ongoing	2003	Weak
Reduction in agricultural land use through conversion to developed property	Fulton County	Refer to Fulton County Watershed Protection Plan (June 2002)	Private Development	Ongoing	1808	Moderate

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Reduction in habitat through development	Fulton County	Refer to Fulton County Watershed Protection Plan (June 2002)	Private Development	Ongoing	1808	Moderate
IAW O.C.G.A. 290-5-26	Fulton County Environmental Health Department	Rules and regulations for installation and repair of on-site sewage management systems.	Fulton County General Fund	Enforced	June 30, 1980	Moderate
Development Regulations	City of Duluth	Regulations modified to include water quality and quantity requirements in response to the Gwinnett County Watershed Protection Plan		Enforced	Amended March 2004	Very
Best Management Practices (BMP's)	City of Duluth	Inspection of water quality and quantity BMP's to insure they are properly maintained.		In progress	12/02	Very
Illicit Connection and Illicit Discharge Ordinance	City of Duluth	This ordinance provides the authority needed to inspect all drainage facilities and to actively regulate discharges of pollutants via storm runoff to streams. This ordinance is used to define the conditions upon which runoff to municipal storm water sewer systems are authorized.		Enforced	Adopted March 2004; replaced Storm Water Management Ordinance	Moderate
Phase I MS4 Municipal Stormwater Permit	City of Duluth	As a Co-permittee with Gwinnett County, the City is required to have a comprehensive stormwater program, which includes public education and participation, illicit discharge detection and elimination, permitting and reporting, and program implementation. Stream inspections are a component of this program.		In-progress	September 1997	Moderate
Health & Sanitation Ordinance	City of Duluth	Requires maintenance of properties within the City		Enforced	8/91; Amended 3/04	Moderate
Stormwater Management Ord. (Code Secs. 5-201 to 5-223)	City of Alpharetta	Protects streams by prohibiting illicit discharges, regulating post-development runoff quality & quantity, managing stormwater system. Revised to meet requirements of model ordinances.	General Funds	Active and ongoing	1995 (Revised March 2004)	Moderate
Stormwater Design Manual	City of Alpharetta	Requirement for Stormwater Ordinance. Sets design guidelines and requirements for stormwater systems.	General Funds	Active and ongoing	1995	Moderate

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Soil Erosion and Sedimentation Control Ord. (Code Secs.5-98 to 5-106)	City of Alpharetta	City is designated local issuing authority under MOA w/GA EPD. Requires state E&S buffers in addition to other required buffers.	General Funds	Active and ongoing	1989 (Updated in 2004)	Moderate
Chattahoochee River Protection Ordinance (Code Secs 5-118 to 5-136)	City of Alpharetta	Required under Metropolitan River Protection Act (GA Code 12-5-440 et seq.). Requires 35-foot buffer on flowing streams draining to Chattahoochee	General Funds	Active and ongoing	1985	Weak
Water Supply Watershed Protection (Unified Development Code Section 3.3.12)	City of Alpharetta	Required under GA Part 5 Criteria. Requires 100-foot undisturbed buffer and 150-foot impervious surface setback on perennial streams w/i 7 miles of Roswell Big Creek intake. Development greater than 25% impervious surface must treat first 1.2 in. of rainfall for water quality	General Funds	Active and ongoing	2001	Moderate
Metropolitan North Georgia Water Planning District Model Ordinances	City of Alpharetta	Revised and amended existing ordinances to meet model ordinance requirements. City minimum stream buffer is 50 feet.	General Funds	Active and ongoing	2004	Moderate
Stormwater Structural Control Maintenance	City of Alpharetta	Inspect and maintain 32 City-owned stormwater BMPs: stormceptors and oil/water separators inspected every 6 mos., detention ponds yearly. All cleaned and maintained as needed	General Funds	Active and ongoing	2000	Weak
Maintaining Roadside Drainage Systems	City of Alpharetta	Remove excess sediment and debris from storm inlets, catch, basins, pipes and ditches; maintain vegetation on roadside shoulders and ditches under City Landscape Contract	General Funds	Active and ongoing	2000	Weak
Roadside Litter Removal	City of Alpharetta	Remove litter from right-of-way. Inspections done daily by full-time employees of Engineering/Public Works	General Funds	Active and ongoing	2002	Weak
Illicit Discharge Program	City of Alpharetta	Responds to complaints, including downstream inspection and sampling, locating violator, if possible, and requiring clean-up. Revised to match District Model Ordinance standards	General Funds	Active and ongoing	1995	Moderate

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Dry Weather Screening	City of Alpharetta	Under MOA for NPDES Permit requirements. City monitors 9+ outfalls throughout year. Maintains outfall inventory. Investigates detected discharges. Also monitors 20 in-stream locations on Big Creek and its tributaries, investigates if problem appears. Has found illicit connections, leaks through program	General Funds	Active and ongoing	1998	Moderate
Education Programs	City of Alpharetta	City has Environmental Coordinator, works with Regional Clean Water Campaign. Provides educational material to public, businesses, homeowners associations on proper use of pesticides and fertilizers, disposal of toxic materials, participates in stream and river cleanups, has active Adopt-A-Stream and Adopt-A-Mile programs.	General Funds	Active and ongoing	1990	Moderate
Fulton Tributary Buffer Zone Ordinance	Fulton County	Required under Metropolitan River Protection Act (GA Code 12-5-440 et seq.). Requires 35-foot buffer on perennial tributaries to Chattahoochee	General Funds	Active and ongoing		
Streambank Protection Ordinance	City of Roswell	Requires a 100-foot undisturbed buffer and 150-foot impervious surface setback on all designated streams in the City. Septic Tanks and drainfields are not allowed in the 150-foot buffer.	General Funds	Active and ongoing	June 19, 2000	Very effective in new development areas
Structural Control Measures	City of Roswell	City requires that proposed structural controls be from the Georgia Stormwater Management Manual. Other designs must be specifically approved by the City. City inspects its own facilities, will issue violation notices for private facilities. Owners can enter into a lake and pond partnership with the City and must meet operational, design and inspection requirements.	General Funds	Active and ongoing	Amended, 02/06/2003	Very effective in new development areas
Steep Slopes Ordinance	City of Roswell	Requires additional buffer depth or other protection measures on steep slopes adjacent to streams.	General Funds	Active and ongoing	December 02, 2002	Very effective in new development areas

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Street Maintenance	City of Roswell	Transportation sweeps 360 miles of streets annually. Limited number of catch basins cleaned as part of regular street maintenance. Volunteer Adopt-A-Road program picks up litter	General Funds	Active and ongoing	Estimated circa 1980s	Limited (no data to correlate effectiveness)
Illicit Discharge Detection and Elimination	City of Roswell	Sixteen outfalls are screened annually. The areas are chosen using GA EPD criteria and standard forms are used. Random inspections and complaints also reveal violations. City requires elimination of discharge or connection when source is found. Sewer problems are reported to Fulton County, the responsible agency for sewers.	General Funds	Active and ongoing	Estimated 1995 with permit	Very effective
Education	City of Roswell	With the Keep Roswell Beautiful program, provides education to local owners and citizens on pet waste, proper lawn care and maintenance of facilities. Also coordinates volunteer river and stream cleanups, including Adopt-A Stream and River Awareness Day.	General Funds	Active and ongoing	Estimated 1995 with permit	Very effective

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Phase I MS4 Municipal Stormwater Permit	City of Suwanee	As a Co-permittee with Gwinnett County, the City is required to have a comprehensive stormwater program, which includes public education and participation, illicit discharge detection and elimination, permitting and reporting, and program implementation. Stream inspections are a component of this program.		In-progress	September 1997	
Revised Development Regulations	City of Suwanee	Adopted the revised development regulations produced by Gwinnett County. Regulations modified to include water quality and quantity requirements in response to county's Watershed Protection Plan		Enforced	Feb. 2001	
City of Buford zoning and developmental Regs.	City of Buford	As a Co-permittee with Gwinnett County, the City is required to have a comprehensive stormwater program, which includes public education and participation, illicit discharge detection and elimination, permitting and reporting, and program implementation. Stream inspections are a component of this program.		In-progress	2001	
Street Sweeping Program	City of Chamblee	Year round street sweeping program that covers the town approximately once a month. This includes sweeping all streets, and storm drains.	City General Fund	Ongoing	2002 (Enacted)	Moderate
Stream Monitoring/Dry Weather Screening	Cobb Water System, Cobb Marietta Water Authority	Water quality sampling/illicit discharge detection, NPDES fecal sites	Cobb	current	1976	very
Fecal Coliform Monitoring Program	Cobb Water System	Fecal coliform sampling	Cobb	current	2002	moderate
Pet Waste Management Program	Cobb Water, Cobb Parks and Recreation, Keep Cobb Beautiful	Measures to control pet waste from being washed into creeks at County Park locations	Cobb	proposed	Pending	moderate
Inflow and Infiltration stream walks	Cobb Water System Engineering	Infrastructure inspections and repair	Cobb	current	1988	very
County Ordinances	Cobb Community Development	Ordinances to protect stream bank buffers, control erosion, stop illicit discharges	Cobb	current	1977-illicit discharge, 1999-stream buffer, 1990-erosion control	moderate

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Nuisance Ordinance	Cobb Board of Health	Required removal of health nuisances, maintenance and installation of septic tanks	Cobb	current	1988	moderate
Clean Water Campaign	Atlanta Regional Commission, Cobb Water System, Environmental Protection Division	Campaign to improve water quality in streams and rivers	ARC, Cobb	current	2001	moderate
Chattahoochee Tunnel Project	Cobb Water System	Relieve sewer system loads in the basin to prevent overloading and spills	Cobb	under construction	1988	moderate
buffer incentives	USDA/NRCS	incentives for fencing and restoring buffers	NRCS	current	1996	moderate
Adopt A Stream	Ga. EPD, Cobb	trains volunteers for bio, physical and chem. monitor	Cobb	current	2001	moderate
manhole raising	Cobb Water Engineering	raises manholes caps above latest floodplain level	Cobb	current	1999	moderate
grease trap maintenance section	Cobb Water Protection	prohibits running grease to septic tanks and requires restaurants to pump traps regularly in order to prevent grease buildup in lines causing overflows	Cobb	current	1988	very
foam root control	Cobb Water System Maintenance	chemical dissolving of encroaching roots in sewers	Cobb	current	1997	moderate
beaver control	USDA / Cobb Stormwater	remove beavers from building dams and raising water levels above manholes	Cobb/USDA	current	1998	very
streambank stabilization program	Cobb Stormwater Management	reinforces stream banks in order to stabilize sewer infrastructure	Cobb Stormwater Management	current	1995	moderate
CMOM Program	EPD, Cobb Water System (System Maintenance)	CMOM Program -- (Capacity, Management, Operation, and Maintenance): Program that provides incentives to Cobb County to reduce sanitary sewer spills, maintain infrastructure, prioritize problem areas, and provide a Capital Improvement Plan that ensures funding for sewage system improvements.	Cobb Water System	current	2003	very
Preventative Maintenance	Cobb Water System: System Maintenance	Measures taken to prevent spills such as tracking patterns of spills and lining, cleaning, video analysis, re-routing of sewer lines.	Cobb Water System	current	since inception of sewer infrastructure	very
Emergency Response Policy	Cobb Water System: System Maintenance	Employees are on call and respond to sewer spills within one hour of reporting for remediation.	Cobb Water System	current	1960's	very

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NPDES Phase I Permit # GA00019	City of College Park	MS4 Permit: The State of GA has issued the City of College Park with a permit to operate the City's Municipal Separate Storm Sewer System (MS4). Major aspects of the permit include public education, illicit discharge detection and elimination, source identification activities, water sampling and reporting.	City of College Park	Current	1994	Very
NPDES Phase I Permit # GAS000115	City of Fairburn	MS4 Permit: The State of GA has issued the City of Fairburn with a permit to operate the City's Municipal Separate Storm Sewer System (MS4). Major aspects of the permit include public education, illicit discharge detection and elimination, source identification activities, water sampling and reporting.	General Funds	Current	1994	Very
NPDES Phase I Permit # GAS000129	City of Powder Springs	MS4 Permit: The State of GA has issued the City of Powder Springs with a permit to operate the City's Municipal Separate Storm Sewer System (MS4). Major aspects of the permit include public education, illicit discharge detection and elimination, source identification activities, water sampling and reporting.	Powder Springs	Enforced	Both	moderate
NPDES Phase I Permit # GAS000132	City of Smyrna	MS4 Permit: The State of GA has issued the City of Smyrna with a permit to operate the City's Municipal Separate Storm Sewer System (MS4). Major aspects of the permit include public education, illicit discharge detection and elimination, source identification activities, water sampling and reporting.	City of Smyrna	Current	1992	Very
Open Space Conservation Overlay District	City of Union City	Part of Metropolitan North Georgia Water Planning District's effort to improve water quality.	local	Current	2004	unknown
Post Development Storm Water Runoff Ordinance	City of Union City	Part of Metropolitan North Georgia Water Planning District's effort to improve water quality.	local	Current	2004	unknown
Illicit Discharge Ordinance	City of Union City	Part of Metropolitan North Georgia Water Planning District's effort to improve water quality.	local	Current	2004	unknown

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Flood Plain Management & Damage Prevention Ordinance	City of Union City	Part of Metropolitan North Georgia Water Planning District's effort to improve water quality.	local	Current	2004	unknown
Phase I MS4 Permit GAS000125	City of Marietta	See Current Stormwater Management Plan	General Funds	ongoing		
District-Wide Watershed Management Plan	Metropolitan North Georgia Water Planning District and Local Governments in 16 county District Area	As a part of this watershed management plan MS4 Phase I and Phase II communities will be required to adopt the following ordinances: Post Development Storm Water Management for New Development and Redevelopment, Illicit Discharge and Illegal Connection, and Stream Buffer Protection. As well as establishing municipal Good Housekeeping Practices.	Local Funds	Ongoing	2004 & 2005	Very
Long-Term Wastewater Management Plan	Metropolitan North Georgia Water Planning District and Local Governments in 16 county District Area	Local wastewater systems will implement a policy on private wastewater systems, develop interim decentralized system plans with concept of merging into larger systems, a grease management program, and numerous sewer system programs (mapping, maintenance programs, Rehab identification and construction program and capacity certification program).	Local Funds	Ongoing	2005	Very
City Ordinances	City of Austell – Stormwater Division	Adopted suite of 6 ordinances, Stormwater Management Ordinances, Erosion and Sediment Control Ordinances	Austell	Current	Both - 2004	Very
Clean Water Campaign	Atlanta Regional Commission, City of Austell – Stormwater Division	Public outreach on the importance of improving water quality	Austell	Current	Both – 1999	Moderate
Preventive Maintenance	City of Austell – Sewer Division	Routine inspections to pump stations, line cleaning, televising	Austell	Current	Both - 1977	Very
Emergency Response	City of Austell – Sewer Division	On call staff responds to sewer spill within one hour of receiving report	Austell	Current	Both - 1977	Very
GIS	City of Austell – Stormwater Division	Stormwater infrastructure mapping	Austell	Current	Both - 2000	Moderate
Storm Drain Curb Marking Program	City of Austell – Stormwater Division	Storm drain curb marker application	Austell	Current	Both - 2002	Weak

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Program Partnership	City of Austell – Stormwater Division	To involve local businesses as a partner in our Stormwater Management Program	Austell, Local Businesses	Current	Both - 2002	Weak
Stormwater Utility	City of Austell – Stormwater Division	\$1.00 monthly fee charge to all residents to help offset the cost of controlling problems as they arise	Austell	Current	Both - 1998	Very
Stormwater Utility	City of Austell – Stormwater Division	Monthly fee based on amount of impervious surface	Austell	Proposed - 2005	In planning stages	
Business Inspection Program	City of Austell – Stormwater Division	Inspection of all area businesses to assure proper working order of drainage infrastructure and BMP's	Austell	Current	Both - 2004	Very
1	DDCWSA	See Below	User Fees	Ongoing	2003	Moderate
2	DDCWSA	See Below	User Fees	Ongoing	2003	Moderate
3	DDCWSA	See Below	User Fees	Ongoing	2003	Moderate
4	DDCWSA	See Below	User Fees	Under Development	Proposed for 2006	Unknown
5	Douglas County Zoning Ordinance	See Below		Ongoing	Adopted 10/23/00	
6	DDCWSA	See Below		Pending EPD Approval	NOI Submitted	

1. The City of Douglasville and unincorporated Douglas County have six middle schools. A stormwater presentation will be given annually to the entire sixth grade of each of these schools or some equivalent. The presentation will focus on community contributions to stormwater problems. Using an *Enviroscape* watershed model, WSA will illustrate the damaging effects of industry, agriculture and common daily activities (illegal discharges, dumping, fertilizers, etc.) on stormwater runoff and ultimately, the environment.
2. Each year, the Douglas County Chamber of Commerce sponsors a Business-to-Business Exposition featuring nearly one hundred booths. Golf courses, bakeries, utilities, realty companies, banks and other local organizations typically sponsor these booths, which serve as a showcase for local products and services that are available to City of Douglasville and Douglas County residents. WSA will display a booth manned by the WSA communications coordinator with posters and informational handouts (e.g., flooding, silt deposition, the impact of lawn fertilizers on streams and reservoirs, the impact of illegal discharges and dumping, etc.) related to stormwater issues. Typical attendance at these events is approximately 300.
3. A five part series of educational handouts will be distributed to all WSA customers (currently, over 30,000) as bill inserts. The five part series will address issues such as stream bank erosion, runoff, siltation, contaminants, the impact of illegal discharges and dumping and other such topics. This information will also be made available at public buildings, including the WSA Administrative Offices, City Hall, the Douglas County Courthouse, the Douglas County Chamber of Commerce and at Douglas County public libraries. The WSA Communications Coordinator will be responsible for assuring pamphlet availability and restocking at the public buildings.

4. Illicit discharge detection program. Activities include a) Outfall mapping and b) Outfall screening. Prior to completion of the outfall map, WSA will investigate reports of illegal dumping that are expected to result from heightened stormwater awareness throughout the community and the Authority's workforce (see Public Education and Outreach and Public Involvement/Participation BMPs listed above, as well as Illicit Discharge Detection and Elimination BMPs listed below).

Once outfall mapping has been completed, WSA will conduct a screening program based on examining at least 19 prioritized outfalls throughout the City of Douglasville and unincorporated Douglas County per year (note that it is not possible to effectively monitor illicit discharges without an accurate and comprehensive stormwater outfall map). The number of prioritized outfalls to be examined annually is consistent with the recommendations of the draft Metropolitan North Georgia Planning District Watershed Management Plan dated June 2003 (see Table 8-4, page 8-8 of this report for details).

A listing of outfalls located in the vicinity of commercial and industrial developments will be compiled from the completed outfall map. Outfalls from this listing that discharge to impaired streams will receive the highest priority. Inspections of these outfalls will take place quarterly under dry weather conditions and sites will be rotated on an annual basis. Dry weather conditions will be defined as times when no measurable rainfall has occurred within the previous 48 hours. Grab samples will be collected and field analyzed for chlorine (illicit connection of a potable water line), pH (illicit connection of wastewater or industrial discharges) and specific conductivity (illicit discharge of sanitary sewage) from outfalls that flow during dry weather conditions. Follow-up laboratory for TSS and COD may also be conducted if odors are present or if field testing results indicate additional testing may be required. The prioritized outfalls will be selected based on the potential for illicit discharges. Smoke testing, televising and analysis of the sample results will be used to assist in identifying the discharge source.

WSA will make every effort to contact parties the Authority believes are responsible for illicit discharges via telephone and registered mail, return receipt requested. WSA is also open to meeting with parties the Authority believes are responsible for illicit discharges. All correspondence and meetings will be designed to explain the importance of eliminating illicit discharges. Financial penalties will be assessed for offenders. WSA will insist that responsible parties disconnect any and all lines that feed the stormwater system other than those lines solely dedicated to stormwater conveyance. Responsible parties will have 90 days to make repairs as necessary. WSA will retest the illicit discharge point at the end of this 90 day period to ensure compliance. Additional financial penalties will be assessed if the line continues to discharge illicit flow.

5. The Douglas County Planning and Zoning Department have established environmental overlay districts as defined by the Douglas County Code Appendix A, Article 7 Section 70.140 stating that all regulated streams within the Dog River Watershed Protection area are subject to 200-foot stream buffers, 250-foot setbacks for all regulated activities from the bank of the

regulated stream. The ordinance also requires a 15% maximum impervious surface area if sewer and 10% if not sewer with 0.334 du/acre maximum residential density with or without sewer.

- NPDES Phase II MS 4 Municipal Stormwater Permit requires jurisdiction to have a comprehensive stormwater program which includes public education and participation, illicit discharge detection and elimination, construction site runoff control, post construction runoff control, pollution prevention, permitting and reporting, and program implementation plans.

VII. MONITORING PLAN

The purposes of monitoring are to obtain more data, to determine the sources of pollution, to describe baseline conditions, and to evaluate the effects of management and activities on water quality. Describe any sampling activities or other surveys - active, planned or proposed - and their intended purpose. Reference the development and submission of a Sample Quality and Assurance Plan (SQAP) if monitoring for delisting purposes.

Table 6. MONITORING PLAN

PARAMETER(S) TO BE MONITORED	ORGANIZATION	STATUS (CURRENT, PROPOSED, PLANNED)	TIME FRAME		PURPOSE (If for delisting, date of SQAP submission)
			START	END	
FC	Georgia EPD, Water Protection Branch or local government	Recommended	2004	2005	TMDL Evaluation and Monitoring for 305(b) and 303(d) lists for Georgia

VIII. PLANNED OUTREACH FOR IMPLEMENTATION

List and describe outreach activities, which will be conducted to support this plan and the implementation of it.

Table 7. PLANNED OUTREACH

RESPONSIBILITY	DESCRIPTION	AUDIENCE	DATE
DeKalb County Roads & Drainage Division	Storm drain stenciling program	General public (residential /commercial/industrial)	Ongoing (1999)
DeKalb County Roads & Drainage Division	Educational brochures	General public (residential/commercial/industrial)	Ongoing (1999)
DeKalb County / Atlanta Regional Commission	Clean Water Campaign	General public	Ongoing (2000)
DeKalb County Keep DeKalb Clean Office	Clean Up campaigns; Adopt-A-Stream	General public	Ongoing (2002)

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DeKalb County Water & Sewer Division	Utility bill inserts: septic tank maintenance, nonpoint source pollution control; pet wastes	General public	Ongoing (2000)
DeKalb County Water & Sewer Division	WaterMatters newsletters	General public	Ongoing (2001)
DeKalb County Water & Sewer Division	Web site: https://dklbweb.dekalbga.org/watersewer	General public (residential/commercial/industrial); teachers; students	Ongoing (2000)
DeKalb County Water & Sewer Division	WaterMatters poster contest	Grade school students	Ongoing (2003)
DeKalb County Water & Sewer Division	Web search and poster/collage	Middle school students	Ongoing (2003)
City of Atlanta	Stenciling program	General Public	Ongoing
City of Atlanta	Utility bill inserts	General Public	Ongoing
City of Atlanta	Great American Cleanup	General Public	Ongoing
City of Atlanta	Clean Water Campaign	General Public	Ongoing
City of Atlanta	Community watershed workshops	General Public	Ongoing
City of Atlanta	Stream clean ups	General Public	Ongoing (1998)
City of Atlanta	Adopt-A-Stream	General Public	Ongoing
City of Atlanta	Citizens participation program	General Public	Ongoing
City of Atlanta	Project WET	General Public	Ongoing
City of Atlanta	Website: www.cleanwateratlanta.org	General Public	Ongoing
City of Atlanta	Website: www.atlantapublicworks.org	General Public	Ongoing
City of Atlanta	Programming on City Channel 26	General Public	Ongoing
City of Atlanta	Neighborhood Planning Unit presentations	General Public	Ongoing
City of Duluth	www.duluthga.net	General public, professional and industry	Ongoing
City of Duluth	Gwinnett County Storm Drain Stenciling program	General Public	Oct. 2002 to present
City of Duluth	Use of Gwinnett County Utility bill inserts in public areas of City Hall	Duluth residents	Ongoing
City of Duluth	Distribution of Gwinnett County stormwater educational information	General Public	Ongoing
City of Duluth	Duluth Newsletter	General Public, residents and business owners	6 times per year
City of Duluth	Code Enforcement Gazette newsletter	Specific target reader with each issue	2 times per year
Fulton County	Stenciling program	General Public	Ongoing
Fulton County	Utility bill inserts	General Public	Ongoing
Fulton County	Clean Water Campaign	General Public	Ongoing
Fulton County	Community watershed workshops	General Public	Ongoing
Fulton County	Stream clean ups	General Public	Ongoing
Fulton County	Adopt-A-Stream	General Public	Ongoing
Fulton County	Citizens participation program	General Public	Ongoing
Fulton County	Develop & submit print ads/public service announcements/press releases.	General Public	Ongoing
Fulton County	Develop & distribute educational packets to new septic tank permit applicants.	General Public	Ongoing
Fulton County	Conduct workshops at community meetings, reaching homeowners.	General Public	Ongoing
Fulton County	Conduct classroom demonstrations, reaching students.	General Public	Ongoing
Fulton County	Conduct dye testing on septic tanks.	General Public	Ongoing

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Fulton County	Perform Fecal Coliform analysis in conjunction with above dye tests and analyze results.	General Public	Ongoing
Fulton County	Copies of <i>The Septic System Owner's Manual</i> by Lloyd Kahn, Blair Allen, & Julie Jones will be placed in every Fulton County Library and will be available for checkout by the general public.	General Public	Ongoing
Fulton County	Grease Abatement Education	Restaurant Operators	Ongoing
City of Suwanee	Distribution of Gwinnett County stormwater educational information	General population	Ongoing
City of Buford	Distribution of Storm water educational flyers in mail outs.	General population	Quarterly
City of Chamblee	Distribute Education Stormwater Flyers	City Residents	2002 (Enacted)
City of Chamblee	Storm Drain Stenciling	General Public	1997 (Enacted)
Cobb Water System, Cobb Parks and Recreation, Keep Cobb Beautiful	Pet waste management at County Park Locations	General Public	tentative
Cobb Water System, Marietta Water Authority, Atlanta Regional Commission	Clean Water Campaign	General Public	current
Cobb Water System	Adopt-A-Stream program	General Public, School systems	2001 and future
City of Marietta	See Current Stormwater Management Plan	General Public	Ongoing
Metropolitan North Georgia Water Planning District and Local Governments in 16 county District Area	Local Governments will participate in a regional public education program such as the Clean Water Campaign, or establish its own program. The program must address water quality issues and the promotion of water conservation.	General Public	2004
City of Austell, Atlanta Regional Commission	Clean Water Campaign	General Public	current
City of Austell – Stormwater Division	Curb Marker Program	General Public	current
City of Austell – Stormwater Division	Adopt-A-Stream program	General Public, School systems	2001 and future
City of College Park	Provide educational brochures on stormwater issues	General Public	Ongoing
City of College Park	Storm drain / Curb marking	General Public	Ongoing
City of Doraville	Storm Drain Stenciling	General Public	2003 (started)
City of Doraville	Providing Educational Stormwater Flyers (available at City Hall)	General Public / Business Community	2002 (started)
City of Fairburn	"Fairburn Focus " City Newsletter covering stormwater issues	General Public	Continuous
City of Powder Springs	Provide educational brochures on stormwater issues	General Public	2001
City of Smyrna	Provide educational brochures on stormwater issues	General Public	ongoing
See below			

The DDCWSA has previously received newspaper coverage on many, if not all of our watershed monitoring sampling activities. The Authority will continue efforts to promote the importance of the Stormwater Management Program on improving water quality.

IX. MILESTONES/ MEASURES OF PROGRESS OF BMPs AND OUTREACH

This table will be used to **track and report progress of management measures including BMPs and outreach**. Record milestone dates for:

- Accomplishment of management practices or activities - outreach activities
- Installation of BMPs

to attain water quality standards. Comment on the effectiveness of the management measure, how much support the measure was given by the community, what was learned, how the measure might be improved in the future, and any other observations made. This table can be "pulled out" of this template and used to report and track progress.

Table 8. MILESTONES

MANAGEMENT MEASURE	RESPONSIBLE ORGANIZATIONS	STATUS		COMMENT
		PROPOSED	INSTALLED	
Phase I MS4 Municipal Stormwater Permit	DeKalb County	1997	Ongoing	Annual Reports submitted to EPD

TMDL Implementation Plan for Chattahoochee River (Pea Creek to Wahoo Creek)
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DeKalb County Storm Water Ordinance	DeKalb County Roads & Drainage	1994	Ongoing	Inspections of Industrial / commercial sites for spill prevention and control
DeKalb County Storm Water Ordinance	DeKalb County Roads & Drainage	1994	Ongoing	Outfall screenings for illicit connections
DeKalb County Storm Water Ordinance	DeKalb County Roads & Drainage	2000	Ongoing	Implementation of Storm Water Management Design Manual to provide BMPs for development sites
Land Development Ordinance (Chapter 14, DeKalb County Code)	DeKalb County government	2002	Ongoing	Passage of ordinance modifications
Land Development Ordinance (Chapter 14, DeKalb County Code)	DeKalb County government	2003	Ongoing	Implementation of conservation zoning
Land Development Ordinance (Chapter 14, DeKalb County Code)	DeKalb County government	2003	Ongoing	Increase level of site inspections for compliance with erosion and sediment control requirements
Point Source Pollution Control	DeKalb County Water & Sewer	2005	2010	Projects initiated and/or completed for design and construction
Sanitary Sewer Maintenance Program	DeKalb County Water & Sewer	1999	Ongoing	Number of inspections completed;
Sanitary Sewer Maintenance Program	DeKalb County Water & Sewer	1996	Ongoing	Miles of sewer line mapped and cleaned
Restoration and Retrofit Programs	DeKalb County government	2001	Ongoing	Number of projects or linear feet of prairie grass planted;
Restoration and Retrofit Programs	DeKalb County government	2005	Ongoing	Number of projects identified through feasibility studies, and then designed and constructed
IAW O.C.G.A. 290-5-26	DeKalb County Board of Health.	1980	Ongoing	Continue the process of reviewing the installation of septic systems as a part of the development review process
IAW O.C.G.A. 290-5-26	DeKalb County Board of Health.	1980	Ongoing	Continue to identify and respond to instances of septic system failure. Enforcement responses to failing septic systems are by complaint only. Home and business owners who don't have a complaint lodged against them can consult with Environmental Health about their failing systems and can pay for an onsite assessment for repair.
Development Regulations	City of Duluth	Dec. 2002	Dec. 2002; amended 3/04	Increase requirements for water quality and quantity, along with channel protection requirements
Best Management Practices (BMP's)	City of Duluth	12/02	On going	Require maintenance agreements and maintenance schedule at the time of construction
Best Management Practices (BMP's)	City of Duluth	2003	On going	Annual Field Inspections
Illicit Connection and Illicit Discharge Ordinance	City of Duluth	9/96	On-going	Industrial inspections and illicit discharge investigations
Phase I MS4 Municipal Stormwater Permit	City of Duluth	2003	Ongoing	Implement an employee education program through internal quarterly meetings
Phase I MS4 Municipal Stormwater Permit	City of Duluth	2002	2005	Storm Drain Stenciling
Phase I MS4 Municipal Stormwater Permit	City of Duluth	2001	Ongoing	Issue educational information on the City website
Phase I MS4 Municipal Stormwater Permit	City of Duluth	2002	Ongoing	Implement an employee education program through videos purchased
Health & Sanitation Ordinance	City of Duluth	8/91	Ongoing	Respond to/follow-up on neighborhood complaints regarding excessive pet waste.
Consent Decree (Atlanta North Avenue CSO)	EPA/EPD/City of Atlanta			Refer to Permit GA0037133
Consent Decree (Atlanta Greensferry CSO)	EPA/EPD/City of Atlanta			Refer to Permit GA0037133
NPDES Phase I Permit GAS000100	City of Atlanta	6/95	Ongoing	Refer to Annual Report to GA EPD

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City of Atlanta Stormwater Management Ordinance	City of Atlanta	1993	Ongoing	Plan review and field inspections (Inspections are performed on all construction activities within the City of Atlanta through the issuance of a building permit)
Illicit Discharge Ordinance	City of Atlanta	1996	Ongoing	Illicit discharge investigations (inspection forms are included in annual NPDES report)
Erosion and Sedimentation Control Ordinance	City of Atlanta	1996	Ongoing	Erosion and sedimentation investigations (inspection forms and violations are filed and recorded electronically within the Department of Watershed Management)
Riparian Buffer Protection Ordinance	City of Atlanta	1999	Ongoing	Riparian buffer investigations and variances (Variance applications are filed and kept on record by the Department of Planning and Watershed Management)
Floodplain Protection Ordinance	City of Atlanta	1985	Ongoing	Floodplain determinates and permits
Sanitary Sewer Evaluation System	City of Atlanta	1998	2010	Inspections (Investigations are recorded by city and field reports; they are recorded by the Department of Watershed Management under guise of the consent decree)
Elimination of Greensferry CSO	City of Atlanta	1999	2007	Removal of the CSO facility
Elimination of Greensferry CSO	City of Atlanta	1995	Ongoing	Ongoing public involvement
Construction of West Area CSO Tunnel	City of Atlanta	2004	2007	Tunnel construction
New 85 mgd Dewatering Pump Station	City of Atlanta	2005	2007	Construction of a pump station
New 85 mgd dedicated CSO treatment plant	City of Atlanta	2005	2007	Construction of a dedicated CSO treatment plant
Dechlorination of CSO facilities	City of Atlanta	2005	2007	Retrofit of CSO facilities
CMOM Program	City of Atlanta	1999	Ongoing	Inspections and maintenance
Grease Trap Inspection Program	City of Atlanta	1999	Ongoing	Inspections and permits (Inspection forms and corrective action requests are filed and recorded by the Department of Watershed Management)
BMP Program	City of Atlanta	1995	Ongoing	Plan review and field inspection
CMOM Program	Fulton County			Refer to Fulton County Watershed Protection Plan (June 2002)
Emergency Sanitary Sewer Evaluation Study (ESSES)	Fulton County			Refer to Fulton County Watershed Protection Plan (June 2002)
Interim Collection System Master Plan	Fulton County			Refer to Fulton County Watershed Protection Plan (June 2002)
Survey of Sanitary Sewer	Fulton County			Refer to Fulton County Watershed Protection Plan (June 2002)
Sanitary Sewer Modeling	Fulton County			Refer to Fulton County Watershed Protection Plan (June 2002)
Flow Monitoring	Fulton County			Refer to Fulton County Watershed Protection Plan (June 2002)
Improvements in Wastewater Treatment	Fulton County			Refer to Fulton County Watershed Protection Plan (June 2002)
Database and Tracking of Un-sewered Areas	Fulton County			Refer to Fulton County Watershed Protection Plan (June 2002)
Permitting of Septic Systems	Fulton County			Refer to Fulton County Watershed Protection Plan (June 2002)
Educational Efforts (Pet Waste)	Fulton County			Refer to Fulton County Watershed Protection Plan (June 2002)
Providing sewer service to Developed Areas by 2030	Fulton County			Refer to Fulton County Watershed Protection Plan (June 2002)
Improving Waste Receptacles	Fulton County			Refer to Fulton County Watershed Protection Plan (June 2002)
Reduction in agricultural land use through conversion to developed property	Fulton County			Refer to Fulton County Watershed Protection Plan (June 2002)
Reduction in habitat through development	Fulton County			Refer to Fulton County Watershed Protection Plan (June 2002)

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Phase I MS4 Municipal Stormwater Permit	City of Suwanee	1998	Ongoing	Compliance inspections of business locations to check for illicit connections to the MS4.
Revised Development Regulations	City of Suwanee	2001	Ongoing	Review of development plans to ensure compliance with revised development regulations
Revised Development Regulations	City of Suwanee	2001	Ongoing	Require maintenance agreements and 18 month maintenance bond post construction
City of Buford zoning and developmental Regs.	City of Buford	1998	Ongoing	Compliance inspections of business locations to check for illicit connections to the MS4.
Street Sweeping Program	City of Chamblee		2002 (Enacted)	In 2002 the city ran the program for 1280 man hours and for 450 hours in 2003. Year round street sweeping program that covers the town approximately once a month.
Distribute Education Stormwater Flyers	City of Chamblee		2002 (Enacted)	Efforts were made to speak with all residents and business owners about the importance of not polluting the storm water system.
Storm Drain Stenciling	City of Chamblee		1997 (Enacted)	All city storm drains in residential neighborhoods were stenciled in 1997. The stencils will be reapplied as necessary.
Stream Monitoring Program	Cobb Water System: Stream Monitoring, Water Quality Section	1976	1976	mentioned comprehensive bio and chem. monitoring including fecals and walks once a quarter
NPDES Fecal Coliform Monitoring Program	Cobb Water System: Stream Monitoring, Water Quality Section	2002	2002	collect fecal NPDES permit mandated samples at 8 sites
Stream walks at stream sewer crossings and manholes	Cobb Water: Engineering Inflow and Infiltration, Stream Monitoring	1988	1988	walk all segments for overflow at manholes and creek crossings
buffer ordinance	Community Development	1990	1990, 1999	regulates, maintains 50-200 feet buffers
education	ARC, Cobb County, Austell	1994	1994	ads and literature concerning water quality, fecals
nuisance ordinance, septic regulate	Cobb Board of Health	1988	1988	regulate and enforce septic tanks, removal of improper waste
Wetland and Buffer Preservation, beaver removal	USDA/Cobb County National Resource Conservation Service, U.S. Army Corp of Engineers, USDA/Stormwater	1996, 1998	1996, 1998	incentives for buffer restoration, fencing off and wetland protection
grease trap program	Cobb Water Protection	1988	1991	every restaurant inspected, prohibit discharge into septic
manhole raising program	Cobb Water Engineering	1999	1999	sewer caps raised above current/latest floodplain
CMOM Program	Cobb Water System: System Maintenance	2003	2003	Comprehensive program that provides incentives and gives the guidelines of how the County's collection system will operate.
Pet Waste Management Program	Cobb AAS, Keep Cobb Beautiful, Parks and Recreation	2003	2004	every restaurant inspected, prohibited discharge into septic tanks
Stream Monitoring (NPDES)	City of Austell – Stormwater Division	X - 2005		comprehensive bio and chem. include fecal
Nuisance Ordinance (septic tanks, removal of health hazards)	City of Austell, Cobb Board of Health		X - 1976	regulate and enforce septic tanks, remove improper waste
County Ordinances (illicit discharges, Erosion and Sediment Control, buffer)	City of Austell Stormwater Division		X – 2004 (updated)	City of Austell and County enforce water quality standards, maintain buffers, regulate
Clean Water Campaign	Atlanta Regional Commission, City of Austell		X – 1999	ads and literature concerning water quality, fecals

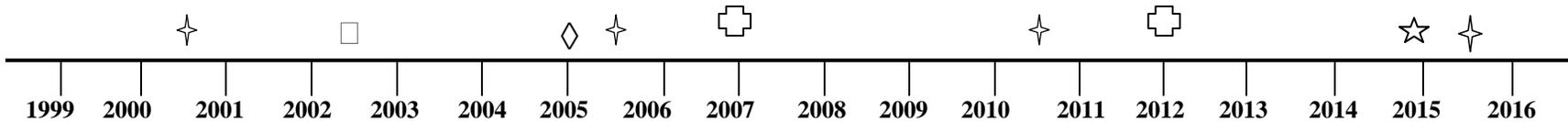
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Wetland and Buffer Preservation, beaver removal	USDA Natural Resources Conservation Service, U.S. Army Corp of Engineers, City of Austell Stormwater Division		X Unsure of date	provide incentives for buffers restoration, fencing buffers, removing beavers
NPDES Phase I Permit # GA00019	City of College Park			Refer to Annual Report
NPDES Phase I Permit # GAS000132	City of Smyrna			Refer to Annual Report
Phase I MS4 Permit GAS000125	City of Marietta			Refer to annual report for program effectiveness
District-Wide Watershed Management Plan	Metropolitan North Georgia Water Planning District and Local Governments in 16 county District Area		2004 & 2005	Refer to the District-wide Watershed Management Plan
Long-Term Wastewater Management Plan	Metropolitan North Georgia Water Planning District and Local Governments in 16 county District Area		2005	Refer to the Long-Term Wastewater Management Plan
Phase I Permit # GAS000115	City of Fairburn		1995	Refer to Annual Report
NPDES Phase I Permit # GAS000129	City of Powder Springs			Refer to Annual Report
See below				

The DDCWSA has intentionally left out their programs from the above table because the Notice of Intent for both the City of Douglasville and Douglas County have not yet been approved by GAEPD and WSA is only beginning the process of implementing stormwater BMPs.

PROJECTED ATTAINMENT DATE

The projected date to attain and maintain water quality standards in this watershed is 10 years from acceptance of the TMDL Implementation Plan by Georgia EPD.



- Scheduled EPD basin Group Monitoring 
- TMDL Completed 
- TMDL Implementation Plan Accepted 
- Evaluation of implementation plan/water quality improvement 
- Project Attainment 

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TMDL Implementation Plan for Chattahoochee River (Pea Creek to Wahoo Creek)
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APPENDIX A

STAKEHOLDERS

List the names, addresses, telephone numbers, and e-mail addresses for local governments, agricultural or commercial forestry organizations, significant landholders, businesses and industries, and local organizations including environmental groups and individuals with a major interest in this watershed.

NAME/ORG	ADDRESS	CITY	STATE	ZIP	PHONE	E-MAIL
City of Sugar Hill	4988 W Broad St	Sugar Hill	GA	30518	770-945-6716	
City of Villa Rica	571 W Bankhead Hwy	Villa Rica	GA	30180	678-785-1016	
City of Palmetto	PO Box 190	Palmetto	GA	30268		
City of Avondale Estates	21 North Avondale Place	Avondale	GA	30002	404-294-5400	
Allison Cohen / Emory University	Emory University	Atlanta	GA	30322		
Dieter Franz	3653 N. Stratford Road				404-261-8697	cdf Franz@comcast.net
Janie Dewald Bailey	60 North River Road	McDonough	GA	30252-8711		JPDBailey@juno.com
Steve Boudreaux	P.O. Box 36	Pine Lake	GA	30072		steveboudreaux@yahoo.com
Pam Caird					770-751-9716	pjcaird@aol.com
Robyn Stalson					770-454-6526	rstalson@bellsouth.net
Kevin Johns / Parsons	5320 Mill Run Drive	Marietta	GA	30068	770-992-7470	kevin.johns@parsons.com
Ben G. Stratham / Sandy Spring Fulton Clean & Beautiful					770-475-9214	stratham@mindspring.com
Madelene Reamy / Keep SSNF Beautiful	2394 Harrington Drive	Decatur	GA	30033	404-318-1720	mreamy@mindspring.com
Earnie W. Cortis	2686 Farmstead	Smyrna	GA		770-436-8873	uniproinc@aol.com
Alice Champagne / Upper Chattahoochee Riverkeeper	916 Joseph Lowery Blvd	Atlanta	GA	30318	404-352-9828	achampagne@ucriverkeeper.org
Ben R. Jordan	124 Mockingbird Lane	Decatur	GA	30030		brjordan@alum.mit.edu
Carol Hayes / Burnt Fork Watershed Alliance	2665 Spicer Lane	Decatur	GA	30033	404-320-9187	cehayes@mindspring.com
Robert Schreiber	515 Claire Drive	Atlanta	GA	30307	404-373-1947	robertsschreiber@msn.com
Laura Beall / Council for Quality Growth	6500 Sugarloaf Pkwy, Ste 220	Duluth	GA	30097	770-813-4470	lb@councilforqualitygrowth.org
Mark Thelen / Landmark Landscapes	559 S. Cemetery Street	Norcross	GA	30071	770-446-0044	mark@landmarklandscapes.net
Kristin Rowles / GSU					404-822-2395	krowles@comcast.net
Curt Helling	2617 Bridgewater Circle	Gainesville	GA	30506-1855	770-287-3938	HellingC@aol.com
Elizabeth Morris / Lake Lanier Assn	6578 Johnson Circle	Flowery Branch	GA	30542	770-965-1784	donmo@bellsouth.net
Roberta Cook / Nickajack Watershed Alliance	5911 Graywood Circle	Mableton	GA	30126	404-699-2326 (H) 770-563-5259 (W)	roberta.cook@worldspan.com

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Dennis Chase / Line Creek Assoc. of Fayette County					770-719-8425	dechase65@hotmail.com
Ron Feldner / ISE					770-461-4292	rfeldner@intse.com
Bill Bierbaum / Martins Landing Homeowners Board	185 Southwind Circle	Roswell	GA	30076	770-998-4663	bill@bierbaum.com
Camille Scent	1345 Parkmont Dr.	Roswell	GA	30076		earthdancing@earthlink.net
Diana Weber	950 Jones Road	Roswell	GA	30075	770-643-1621	diweber@hotmail.com
Michael Jones	1441 Buckner Road	Mableton	GA	30126	770-739-5191	mikejones@h-hinsurance.com
Anne Marie Hoffman	1037 Colquitt Avenue, #12	Atlanta	GA		404-588-9980	
Glen Behrend	1771 Defoor Avenue, Unit F	Atlanta	GA	30318	404-603-9960	gbehrend@att.net
Graham Anthony	9575 Marsh Cove Court	Atlanta	GA	30350	770-643-8286	gha2@mac.com
JP Bertulfo	3504 Sexton Woods Dr	ATLANTA	GA	30341	206-309-0864	JBERTULF@HSC.USF.EDU
Ken Johnson	457 Overbrook Drive, NW	Atlanta	GA	30318	404-351-4652	
Nancy Rinzler	225 Northland Ridge Trail	Atlanta	GA	30342	404 255 8081	nancyrinzler@earthlink.net
Andrea Pinabell / Stormwater Management Inc.	430 Lindbergh Drive #F3	Atlanta	GA	30305	404-846-5785	andreap@stormwaterinc.com
Ben R. Jordan / The Coca-Cola Company	P.O. Box 1734	Atlanta	GA	30301		bjordan@na.ko.com
Bruce W. Thurlby / Archaea Solutions, Inc.	100 Lloyd Avenue, Suite D	Tyrone	GA	30290	770-487-5303	bruce.thurlby@archaseasolutions.com
Bryan Barrett / USDA	355 East Hancock Ave	Athens	GA	30601	706-546-2039	bryan.barrett@ga.usda.gov
Buddy Belflower / USDA/NRCS	734 Cresent Dr	Gainesville	GA	30501	770-536-6981	buddy.belflower@ga.usda.gov
Chad Knudsen / Ecological Solutions					770-998-7848	chadknudsen@ecologicalsolutions.net
Chrissy Marlowe / GA DCA	225 West Broad St.	Athens	GA	30601	706-425-3077	cmarlowe@dca.state.ga.us
Chuck Budinger / Corporate Env. Risk Management	2116 Monroe Drive, Suite 110	Atlanta	GA	30324	678-999-0173	cbudinger@cerm.com
David Smith	740 Hunterhill Court	Roswell	GA	30075	770-641-3096	davidsmith@ecologicalsolutions.net
David Smith / Ecological Solutions	630 Colonial Park Drive, Suite 200	Roswell	GA	30075	770-998-7848	davidsmith@ecologicalsolutions.net
Duncan Cottrell / Adopt-A-Stream Coordinator / Upper Etowah River Alliance					770-735-2778	duncancottrell@yahoo.com
Geneva Nelson / Foundation for Global Community	899 Chippendale Lane	Norcross	GA	30093	770-564-2730	genevaan@yahoo.com
Jason Barringer	2446 Fallview Terrace	East Point	GA	30344		forrain2@hotmail.com
Kevin Johnson / The Trust for Public Land	1447 Peachtree Street Suite 601	Atlanta	GA	30309	404.873.7306	kevin.johnson@tpl.org
Kimberly Ajj / Jordan Jones and Goulding	6801 Governors Lake Parkway	Norcross	GA	30071	6783330232	kajy@jgg.com
Linda MacGregor / McKenzie MacGregor Incorporated	3455 Lawrenceville Suwanee Road, Suite A	Suwanee	GA	30024	678-546-9450	lmacgregor@mckmacg.com
Max Walker	941 Pine Roc Drive	Stone Mountain	GA	30083	770/469/4786	MAXWALKER@mindspring.com
Rose Mary Seymour / UGA - Griffin Campus	1109 Experiment St	Griffin	GA	30223	770 229-3214	rseymour@griffin.uga.edu

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John Ripley Forbes	11 Wildwood Valley	Atlanta	GA	30350	770-394-4350	
Dunwoody Nature Center	5343 Roberts Dr.	Atlanta	GA	30338	770-394-3322	
Atlanta Audubon Society	Box 29189	Atlanta	GA	30359	770-913-0511	
Austin Elementary School	5435 Roberts Dr.	Atlanta	GA	30338	678-874-8102	
Findley Oaks Elementary School	5880 Findley Chase Dr	Duluth	GA	30097-1421		
Abbotts Hill Elementary School	5575 Abbotts Bridge Road	Duluth	GA	30097	(770) 667-2860	
State Bridge Crossing Elementary School	5530 State Bridge Road	Alpharetta	GA	30022	(770)497-3850	
Gary Deckert (realtor/homeowner in Forsyth Co.)						gdeck@adelphia.net
Dr. Edward Mills	5685 Lake Placid Drive	Atlanta	GA	30342	(404) 252-2125	
City of Berkeley Lake	4040 Berkeley Lake Road	Berkeley Lake	GA	30096	770-368-9484	
City of Clarkston	3921 Church Street	Clarkston	GA	30021		
City of Decatur	2635 Talley Street	Decatur	GA	30030	404-377-6198	
City of East Point	2777 East Point Street	East Point	GA	30344	404-765-1183	
Norcross City Council	65 Lawrenceville St.	Norcross	GA	30071		
Norcross Public Utilities	168 Wingo Street	Norcross	GA	30071		

APPENDIX B

UPDATES TO THIS PLAN

Describe any updates made to this plan. Include the date, section or table updated, and a summary of what was changed and why.

APPENDIX C

VISUAL FIELD SURVEY

For

**Chattahoochee River TMDL Segment
(Pea Creek to Wahoo Creek)**

In the

Chattahoochee River Basin

July 2004

Visual Field Survey

For

**Chattahoochee River TMDL Segment
(Pea Creek to Wahoo Creek)**

In the

Chattahoochee River Basin

July 2004

Prepared by the Atlanta Regional Commission with the support of the Environmental Protection Division of the Georgia Department of Natural Resources

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1.0 INTRODUCTION

1.1 Location

The Chattahoochee River (Pea Creek to Wahoo Creek) TMDL segment is located southwest of the Atlanta Metropolitan region on the border of Fulton, Douglas, Coweta and Carroll Counties. As shown in Figure 1, the Chattahoochee River (Pea Creek to Wahoo Creek) TMDL segment watershed is located within eleven counties including Fulton, Forsyth, Gwinnett, Cobb, DeKalb, Paulding, Douglas, Carroll, Coweta and small portions of Hall and Cherokee Counties. The TMDL segment begins at the confluence of Pea Creek and the Chattahoochee River.

1.2 Watershed Description

The Chattahoochee River (Pea Creek to Wahoo Creek) TMDL segment watershed is comprised of 885,966 acres of land within the eleven counties listed above. The watershed for this TMDL segment was delineated based on the watershed boundary used by Georgia EPD in the modeling for the TMDL. The Chattahoochee (Pea Creek to Wahoo Creek) TMDL segment is located within HUC 10 – 0313000204. Based upon the ARC 2001 Land Cover, mapping of the TMDL segment watershed shows that land cover within the TMDL segment watershed is varied, with forests and open space accounting for 33% of the area. Medium density residential accounts for another 28% of land cover. Table 1 below details all land covers within the TMDL segment watershed. Table 2 outlines how ARC’s land cover categories are aggregated into the categories used for this project. A map showing land use in the watershed is included as Figure 2.

Table 1. Watershed Land Cover*

Land Cover Classification	Area (Acres)	% of Total Area	Aggregated ARC Land Cover Codes
Forest/Open Space	278,086.92	33.10%	40, 171, 172, 173
Medium-Density Residential	231,660.73	27.58%	112
Commercial	80,881.59	9.63%	12, 15, 121
Low-Density Residential	79,665.14	9.48%	111
Agricultural Lands	70,883.09	8.44%	21, 22, 23, 24
High-Density Residential	30,488.28	3.63%	113, 117, 119
Transitional & Extractive Lands	29,264.98	3.48%	17, 74, 75, 76
Water/Wetland	23,516.34	2.80%	51, 53, 60
Transportation and Utilities	12,003.35	1.43%	14, 145
Industrial/Institutional	3,657.40	0.44%	13
Total Acres	840,107.81	100.00%	

*Land cover data not available for some portions of the watershed located in Carroll County.

Table 2. TMDL Watershed Land Cover Matrix (Aggregated ARC Land Cover Categories)

Aggregated Category	Description of Original ARC Categories	ARC Land Cover Code
<i>Commercial</i>	Commercial and Services	12
	Industrial and Commercial Complexes	15
	Intensive Institutional	121
<i>Industrial/Institutional</i>	Industrial	13
<i>Transportation & Utilities</i>	Transportation, Communication & Utilities	14
	Limited Access Highways	145
<i>Agricultural Lands</i>	Agriculture-Cropland and Pasture	21
	Agriculture-Orchards, Vineyards and Nurseries	22
	Agriculture-Confined Feeding Operations	23
	Agriculture-Other	24
<i>Forest / Open Space</i>	Forest	40
	Golf Courses	171
	Cemeteries	172
	Parks	173
<i>Water / Wetlands</i>	Rivers	51
	Reservoirs, Lakes, and Ponds	53
	Wetlands	60
<i>Transitional & Extractive Lands</i>	Other Urban	17
	Bare Exposed Rocks	74
	Quarries, Gravel Pits, and Strip Mined	75
	Transitional Areas	76
<i>Low-Density Residential</i>	Low Density Single Family Residential	111
<i>Medium-Density Residential</i>	Medium Density Single Family Residential	112
<i>High-Density Residential</i>	High Density Residential	113
	Multifamily Residential	117
	Mobile Home Parks	119

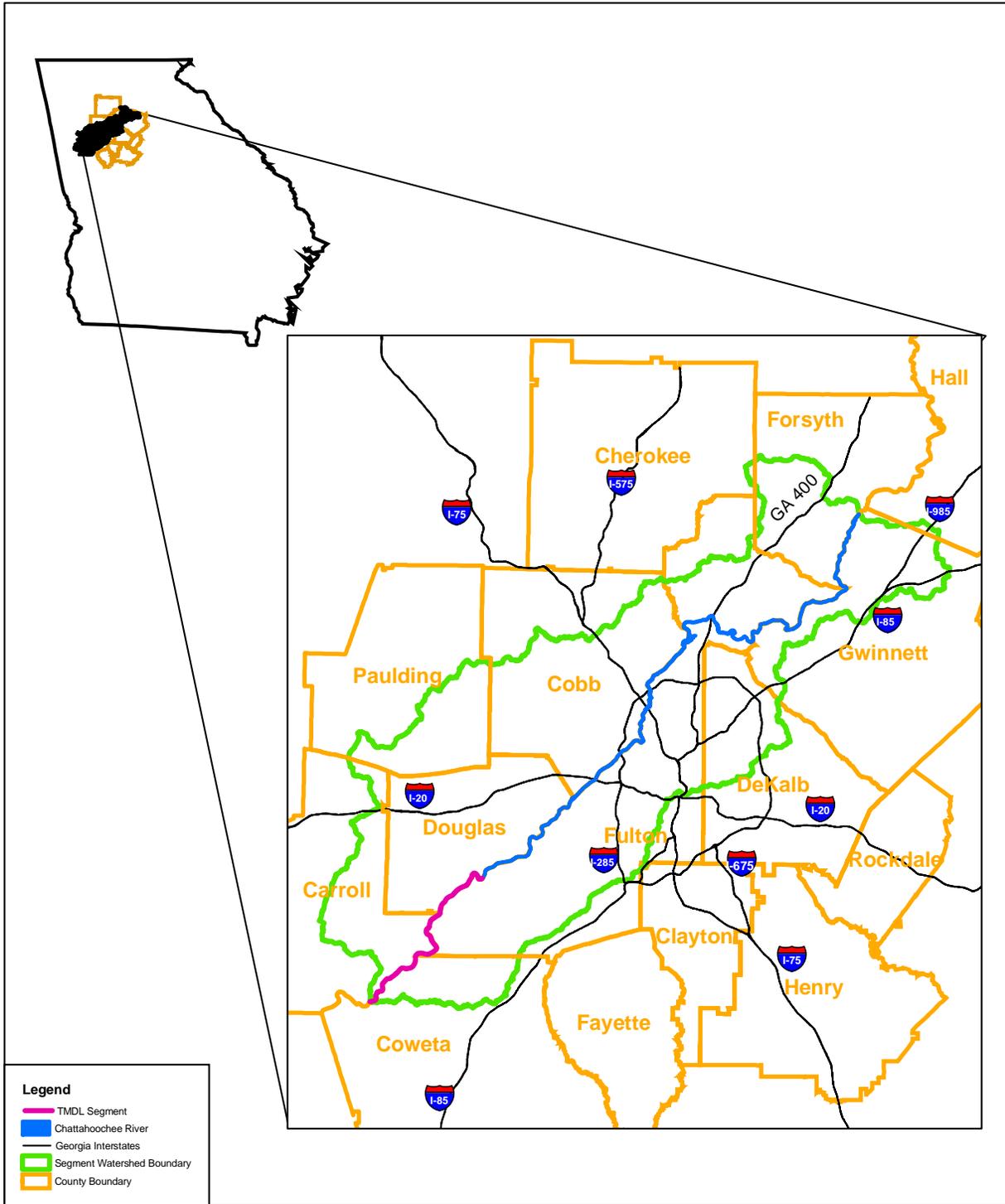
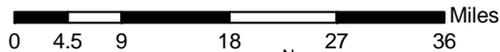


Figure 1
 Location of Chattahoochee River (Pea Creek to Wahoo Creek) TMDL Segment Watershed



Prepared by the Atlanta Regional Commission with the support of the Environmental Protection Division of the Georgia Department of Natural Resources.

The preparation of this map was financed in part through a grant from the U.S. Environmental Protection Agency under the provisions of Section 106 of the Federal Water Pollution Control Act, as amended.

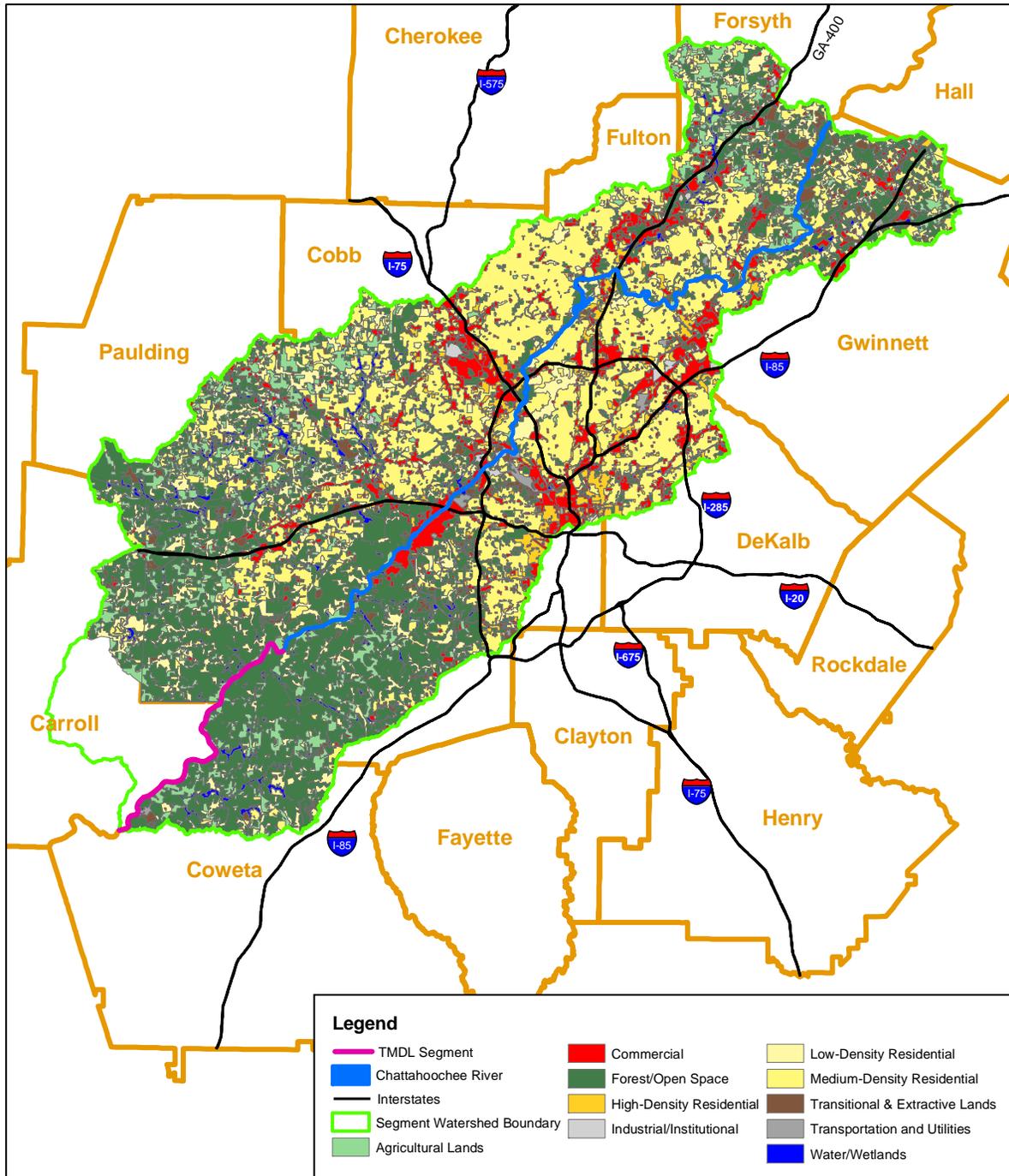


Figure 2
 ARC 2001 Land Cover for Chattahoochee River (Pea Creek to Wahoo Creek) TMDL Segment Watershed*
 *Land cover data not available for some portions of the watershed located in Carroll County

0 3 6 12 18 24 Miles

Prepared by the Atlanta Regional Commission with the support of the Environmental Protection Division of the Georgia Department of Natural Resources.

The preparation of this map was financed in part through a grant from the U.S. Environmental Protection Agency under the provisions of Section 106 of the Federal Water Pollution Control Act, as amended.

2.0 METHODOLOGY

Prior to beginning the field study, point data from the State of Georgia Environmental Protection Division were studied to determine the locations of any known point sources and potential individual sources of pollution in relation to the area of interest. Known potential individual sources of pollution located in the Chattahoochee River (Pea Creek to Wahoo Creek) TMDL segment watershed are shown in Figure 3. Additionally, aerial photos were compiled and used to further evaluate land use along the stream prior to the beginning of field observations.

Using guidance documents provided by the state, a field assessment of the TMDL segment watershed was conducted on July 9, 2004. The initial step was a windshield survey of the TMDL segment watershed area adjacent to the stream segment performed on July 7, 2004. This windshield survey incorporated visits to the majority of the public roads intersecting or adjacent to the TMDL segment. There are only two roads crossing the TMDL segment; State Highway 16, shown in Figures 3 and 4, and Capps Ferry Road, the location of which is shown as Figure 7 and Figure 8 on Figure 4. The purpose of the TMDL segment visual survey was to identify and observe possible sources of pollution. The characteristics of the TMDL segment were not conducive to physically walking the stream segment. Mr. John Lawrence, Chairman of the Water District Chattahoochee Basin Advisory Council, escorted ARC staff by boat down this TMDL segment. He provided input on the characteristics of the TMDL segment watershed and details on some surrounding land cover. Observations were documented and captured in photographs of the channel and its surroundings.

3.0 FIELD FINDINGS

3.1 General Characteristics

The field findings discussed here are the results of the visual survey performed from a boat on the river throughout the designated TMDL segment. The land cover in the area was verified in addition to careful observations of the current conditions in the stream and its surroundings. A map of included images taken during the visual field survey is shown as Figure 4.

The Chattahoochee River (Pea Creek to Wahoo Creek TMDL segment) is consistently bordered by a vegetative buffer that is mostly moderately wooded with thick overgrowth and occasional areas with thinner tree cover or thin brush. The water appears muddy, cloudy and somewhat opaque throughout the entire TMDL segment. The uniform color of the water in this TMDL segment could not be linked to any particular source. General photographs of the stream condition are shown below in Figures 5-14.

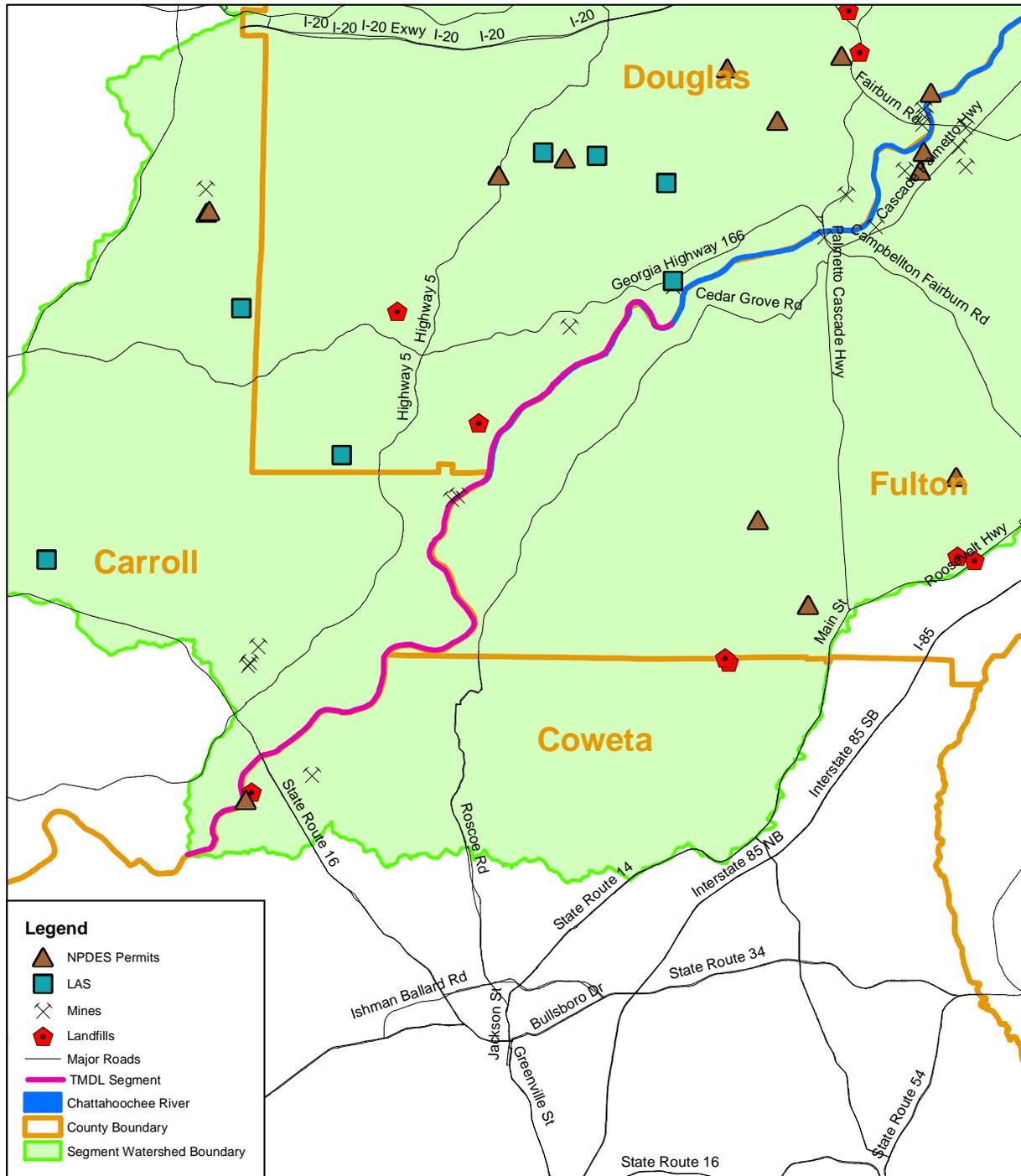
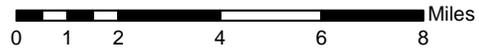


Figure 3
 Chattahoochee River (Pea Creek to Wahoo Creek) TMDL Segment Watershed
 Potential Individual Sources of Pollution
 Data Provided by Georgia EPD



Prepared by the Atlanta Regional Commission with the support of the Environmental Protection Division of the Georgia Department of Natural Resources.

The preparation of this map was financed in part through a grant from the U.S. Environmental Protection Agency under the provisions of Section 108 of the Federal Water Pollution Control Act, as amended.

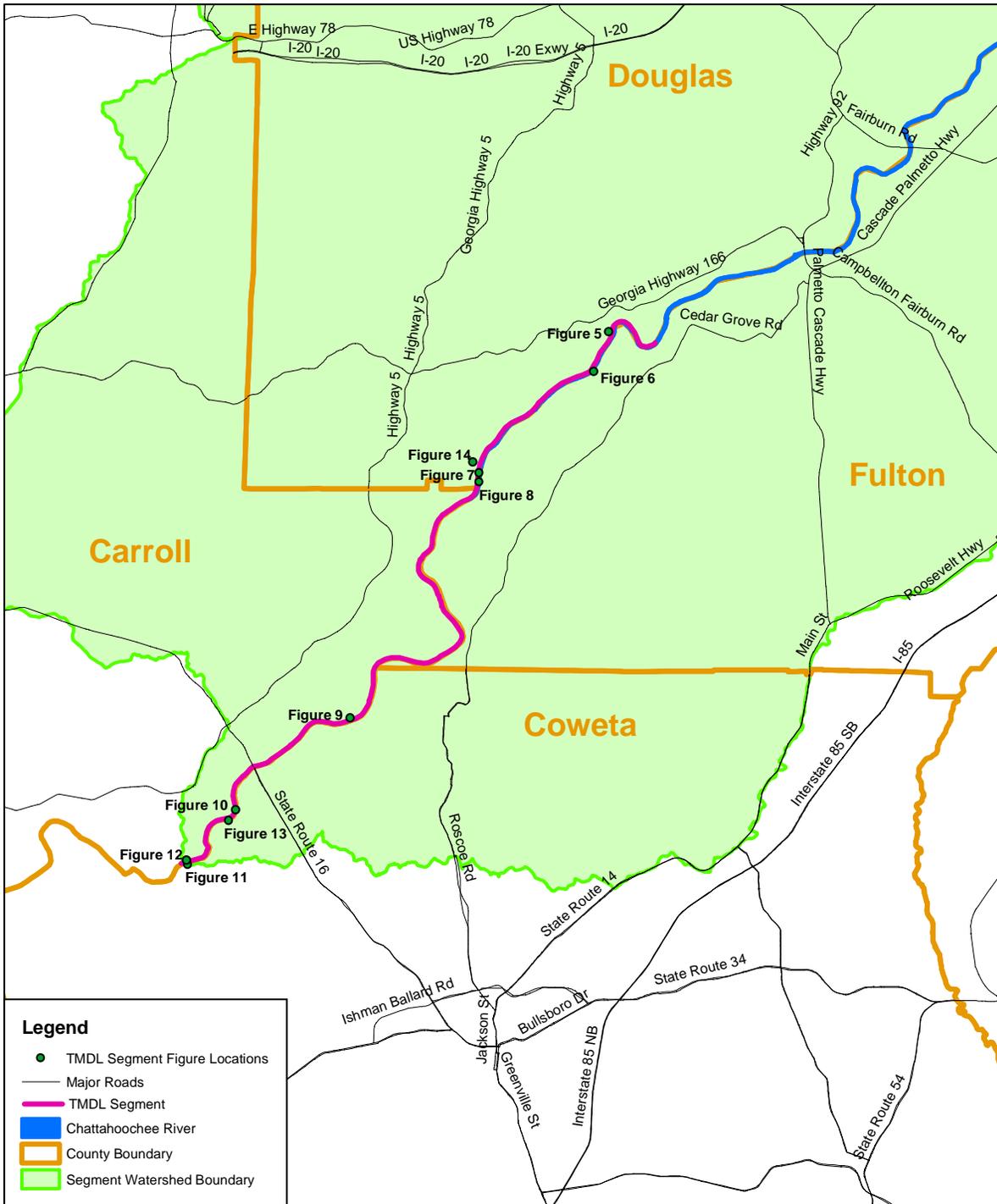


Figure 4
Location of Images Taken
During Visual Field Survey



Prepared by the Atlanta Regional Commission with the support of the Environmental Protection Division of the Georgia Department of Natural Resources.
 The preparation of this map was financed in part through a grant from the U.S. Environmental Protection Agency under the provisions of Section 105 of the Federal Water Pollution Control Act, as amended.

The Chattahoochee River (Pea Creek to Wahoo Creek) TMDL Segment is bordered mostly by forest and farmland (Figure 9) with the only noticeable industrial/commercial activity occurring at Georgia Power Plant Yates (Figure 10) located near the bottom of the TMDL segment.



Figure 5. Bear Creek Confluence on West bank- Douglas County



Figure 6. Sand Dredging Operation at Bear Creek- Fulton County

Sand dredging operations (Figure 6), which extract sand from the river, were occasionally sighted in the Chattahoochee River (Pea Creek to Wahoo Creek) TMDL segment, but were not as common as in the upstream Chattahoochee River (Utoy Creek to Pea Creek) and (Peachtree Creek to Utoy Creek) TMDL segments. These locations are shown by the mining symbols on Figure 3. We do not believe the sand dredging operations have an affect on fecal coliform levels in this TMDL segment.



Figure 7. Looking upstream from Capps Ferry Bridge



Figure 8. Capps Ferry Bridge and view downstream

Additional observations made along the TMDL segment include: two bridges at road crossings. The picture in Figure 8 shows the Capps Ferry Road Bridge.



Figure 9. Irrigation intake for center pivot downstream of Capps Ferry Bridge-west bank



Figure 10. Georgia Power Plant Yates intake downstream of Highway 16



Figure 11. Wahoo Creek confluence-East bank



Figure 12. Upstream view from Wahoo Creek at bottom of TMDL segment

Potential sources affecting the overall health of the Chattahoochee River (Pea Creek to Wahoo Creek) TMDL segment are discussed in the Point Source and Non-point Source sections.

3.2 Point Sources

There are approximately 80 permitted point source discharges in the Chattahoochee River (Pea Creek to Wahoo Creek) TMDL segment watershed. The points located closest to this TMDL segment are shown in Figure 3 and identified in the legend as NPDES Permits. Only one of these points, Georgia Power Plant Yates, is located directly on the TMDL segment. There are eight additional NPDES permitted facilities located 4 or more miles away from the TMDL segment on tributaries that directly drain to this TMDL segment. The data names these facilities as Vulcan Materials 1 and 2, Blue Circle Aggregate, Bill Arp Elementary School, Evoline C. West Elementary School, Pine Lake MHP, Palmetto WPCP, and Little Bear Creek.

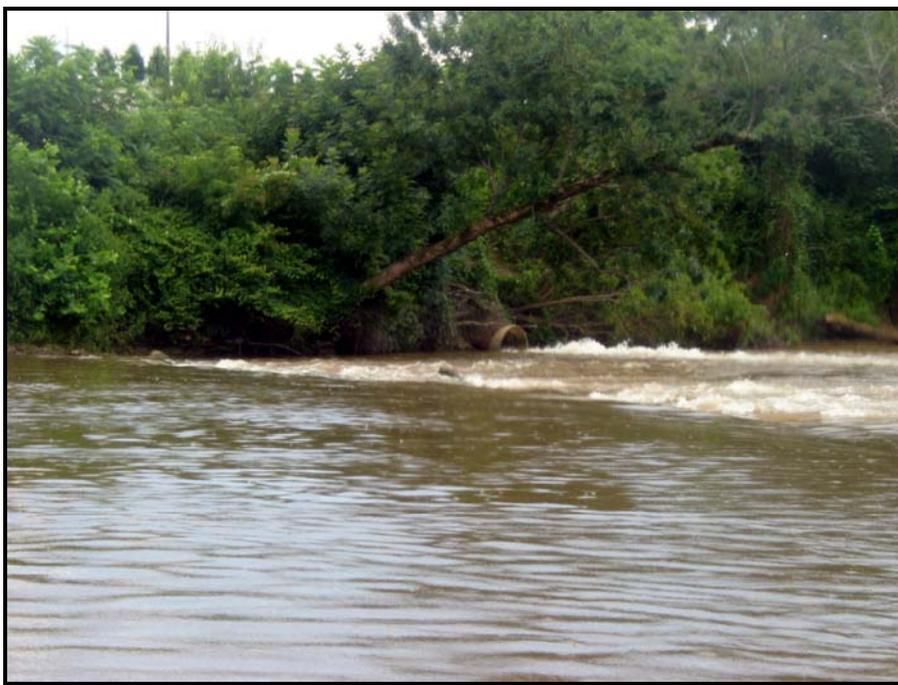


Figure 13. Outflow from Plant Yates- cooling water discharge

The NPDES point adjacent to the TMDL segment is located at Georgia Power Plant Yates (Figures 10 and 13) and is located approximately two miles upstream of the end of the Chattahoochee River (Pea Creek to Wahoo Creek) TMDL segment.

The NPDES points located adjacent to the Chattahoochee River in the (Utoy Creek to Pea Creek) and (Peachtree Creek to Utoy Creek) TMDL segments may potentially affect the Fecal Coliform levels of the Chattahoochee River (Pea Creek to Wahoo Creek) TMDL segment. Measures to correct elevated bacteria levels are listed in the 2004 TMDL Implementation Plan for this TMDL stream segment

3.3 Non-Point Sources

The majority of the area adjacent to the Chattahoochee River (Pea Creek to Wahoo Creek) TMDL segment is served by septic systems.

This portion of the Chattahoochee River (Pea Creek to Wahoo Creek) TMDL segment watershed is more rural than the two TMDL segments directly upstream. Much of the land adjacent to this TMDL segment appears to be used for pasture land- some with active cattle and horse farms. There is a substantial equestrian venue located on the upstream west bank of the TMDL segment at Capps Ferry Road Bridge (Figure 14). Spill data recording un-permitted discharges that reach state waters and should be comprised of only municipal sewage were obtained from the State of Georgia Environmental Protection Division and reviewed. This data covers spills which occurred between January 2001 and March 2004. No spills were recorded near this TMDL segment in the past three years.



Figure 14. Horse farm at upstream west bank at Capps Ferry Road

3.4 Other Potential Individual Sources of Pollution

Point data obtained from the Georgia Environmental Protection Division show potential individual sources of pollution in the Chattahoochee River (Pea Creek to Wahoo Creek) TMDL segment watershed (Figure 3). There are 14 Land Application Sites (LAS) in the Chattahoochee River (Pea Creek to Wahoo Creek) TMDL segment watershed. Six of the LAS are located on or near tributaries that drain directly to this TMDL segment. The data names these facilities as LJS Grease and Tallow, Carroll

County Water Authority, Douglas County Water and Sewer Authority, Inner Harbour Hospital Ltd., Alexander High School, and Dorsett Shoals Elementary School. There are 85 landfills, as designated by the State of Georgia data, located in the Chattahoochee River (Pea Creek to Wahoo Creek) TMDL segment watershed. Only two of these are located either adjacent to or in close proximity to this TMDL segment; no problems related to these two landfills were observed during the visual field survey.

4.0 RANKS ASSIGNED TO POLLUTION SOURCES

Urban runoff and animal waste are probably contributing the most to the fecal coliform levels in this TMDL segment. The magnitude of these sources is ranked as significant and the entire segment is affected. There is also the potential for more significant affects due to animal waste in this segment than upstream. The known effects of the upstream CSO Facilities can also be considered a significant source affecting this Chattahoochee River (Pea Creek to Wahoo Creek) TMDL segment.

5.0 SUMMARY OF FINDINGS

There are approximately 80 permitted point source discharges in the Chattahoochee River (Pea Creek to Wahoo Creek) TMDL segment watershed. However, all but one source are located approximately 4 miles away from the TMDL segment and it is undetermined how they may affect this TMDL segment. Based on the field survey and background investigation, potential septic system failures, animal waste and flow from the upstream Chattahoochee River (Utoy Creek to Pea Creek) and (Peachtree Creek to Utoy Creek) TMDL segments are the most likely potential source of pollution in and around this TMDL segment. Proposed management practices to address fecal coliform in this TMDL segment have been provided by local governments and are outlined in the 2004 Chattahoochee River (Pea Creek to Wahoo Creek) TMDL segment watershed TMDL implementation plan in tables 5, 6 and 7.

6.0 STAKEHOLDER INVOLVEMENT

Mr. John Lawrence, Chairman of the Water District Chattahoochee Basin Advisory Council, accompanied ARC staff during this field survey. Results have been made available and discussed with local government representatives.

TMDL Watershed Land Cover Matrix (Aggregated ARC Land Cover Categories)

Aggregated Category	Description of Original ARC Categories	ARC Land Cover Code
<i>Commercial</i>	Commercial and Services	12
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	Multifamily Residential	117
	Mobile Home Parks	119