

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

Fulton, Douglas, Cobb, DeKalb, and Gwinnett Counties and the cities of Douglasville, Powder Springs, Austell, Smyrna, Marietta, 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.

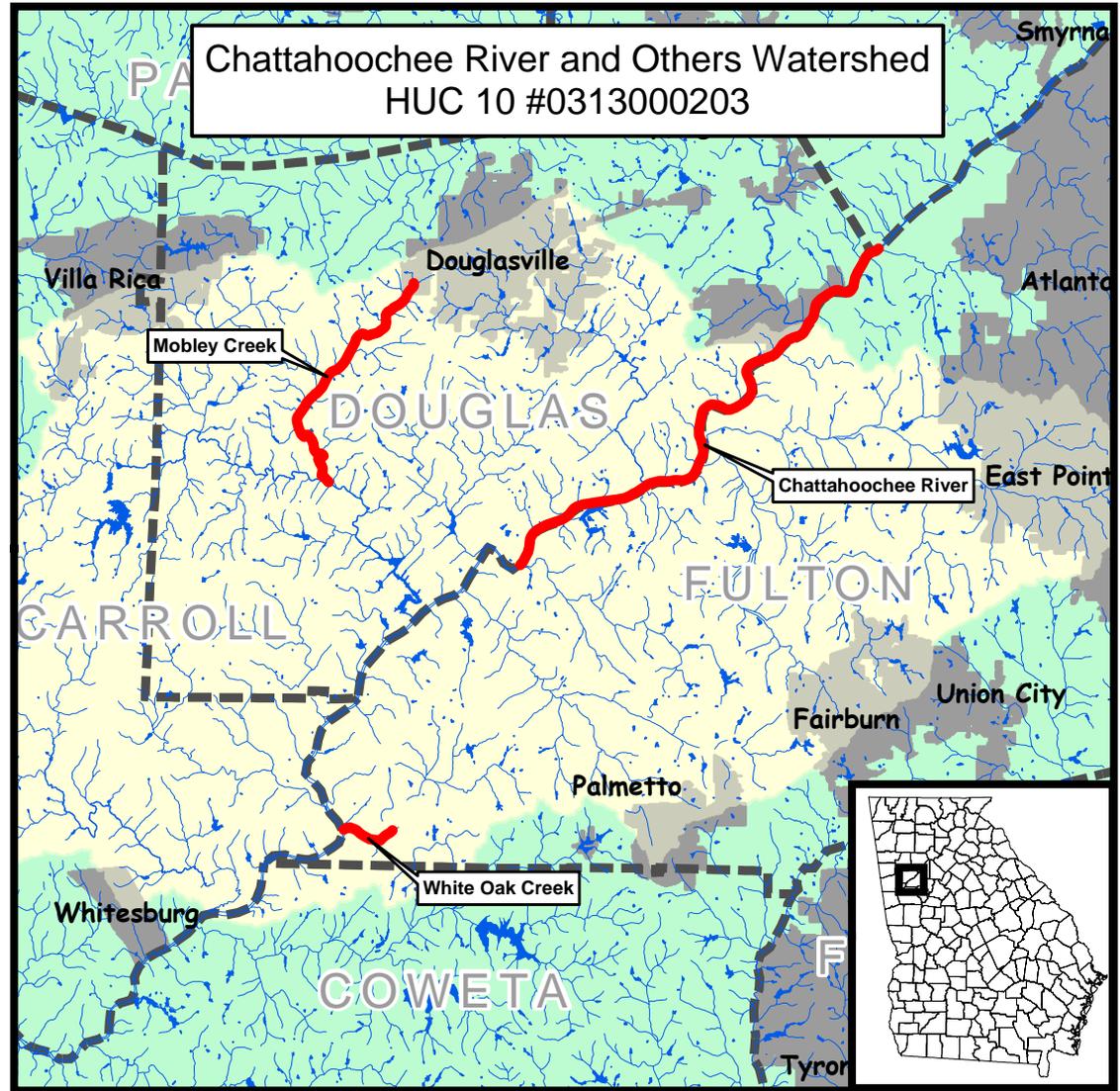


Table 1. IMPAIRMENTS

IMPAIRED STREAM SEGMENT	IMPAIRED SEGMENT LOCATION	IMPAIRMENT
Chattahoochee River	Utoy Creek to Pea Creek	Fecal Coliform Bacteria
Moblely Creek	Douglas County	Fecal Coliform Bacteria
White Oak Creek	Fulton County	Fecal Coliform Bacteria
Anneewakee Creek*	House Creek to Lake Monroe	Fecal Coliform Bacteria
Anneewakee Creek*	House Creek to Lake Monroe	Biota (sediment)
Camp Creek*	Fulton County	Fecal Coliform Bacteria
Chattahoochee River*	Utoy Creek to Pea Creek	FCG(PCBs)
Pea Creek*	Fulton County	Fecal Coliform Bacteria

* Plan will be written by GA EPD

II. GENERAL INFORMATION ABOUT THE WATERSHED

Write a narrative describing the watershed, HUC 10 #0313000203. 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 and Others Watershed (HUC10 #0313000203) is located in the southwest portion of metro Atlanta in Fulton, Douglas and Carroll Counties. The land area for HUC 10 #0313000203 is 249,469 acres. There are two major highways that cross through this HUC10; Interstate 20 runs through the northern portion and Interstate 285 runs through the eastern side. Based on available ARC 2001 land cover data this area appears to be primarily forested. Although in the center of Douglas County and in western Fulton County in this HUC10 there is a concentration of residential areas in addition to minimal commercial areas.

The stream segments identified on Georgia Environmental Protection Division's 303(d) list in HUC10 #0313000203 for which ARC has developed an implementation plan include: Chattahoochee River (Utoy Creek to Pea Creek), Mobley Creek (Douglas County), and White Oak Creek (Fulton County). The 303 (d) listed stream segment of Chattahoochee River (Utoy Creek to Pea Creek) is located on the border of Douglas and Fulton Counties. The Mobley Creek (Douglas County) segment begins in the city of Douglasville and then flows south through Douglas County ending where Mobley Creek flows into the Dog River. The White Oak Creek (Fulton County) stream segment is located entirely in Fulton County in the southwest most corner of the county. This stream segment flows directly into the Chattahoochee River. The Mobley Creek and White Oak Creek stream segments both have smaller land areas than the entire HUC10 watershed that affect the actual TMDL stream segments. The Chattahoochee River (Utoy Creek to Pea Creek) on the other hand 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 segments in HUC10 #0313000203 include: Fulton, Douglas, Cobb, DeKalb, and Gwinnett Counties and the cities of Douglasville, Powder Springs, Austell, Smyrna, Marietta, 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 three tables that describe the land cover for each of the three TMDL stream segment watersheds. The land cover data used to develop these tables 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 totals found in the below tables reflect the watershed boundaries ARC has updated. These updated TMDL stream segment watershed boundaries will be provided to GA EPD. These tables also define 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 (Utoy Creek to Pea Creek)
TMDL Segment Watershed**

Land Cover Classification	Area (Acres)	% of Total Area	Aggregated ARC Land Cover Codes
Medium-Density Residential	224,412.72	33.05%	112
Forest/Open Space	180,958.56	26.65%	40, 171, 172, 173
Commercial	79,572.33	11.72%	12, 15, 121
Low-Density Residential	58,923.22	8.68%	111
Agricultural Lands	46,008.58	6.78%	21, 22, 23, 24
High-Density Residential	30,422.84	4.48%	113, 117, 119
Transitional & Extractive Lands	26,617.80	3.92%	17, 74, 75, 76
Water/Wetland	17,498.17	2.58%	51, 53, 60
Transportation and Utilities	11,033.75	1.62%	14, 145
Industrial/Institutional	3,571.48	0.53%	13
Total Acres	679,019.44	100.00%	

**ARC 2001 Land Cover for Mobley Creek (Douglas County)
TMDL Segment Watershed**

Land Cover Classification	Area (Acres)	% of Total Area	Aggregated ARC Land Cover Codes
Forest/Open Space	4710.52	46.34%	40, 171, 172, 173
Agricultural Lands	2241.31	22.05%	21, 22, 23, 24
Medium-Density Residential	1238.91	12.19%	112
Low-Density Residential	1211.49	11.92%	111
Transitional & Extractive Lands	248.85	2.45%	17, 74, 75, 76
Commercial	231.04	2.27%	12, 15, 121
Transportation and Utilities	195.18	1.92%	14, 145
Water/Wetland	87.69	0.86%	51, 53, 60
Total Acres	10164.98	100.00%	

**ARC 2001 Land Cover for White Oak Creek (Fulton County)
TMDL Segment Watershed**

Land Cover Classification	Area (Acres)	% of Total Area	Aggregated ARC Land Cover Codes
Forest/Open Space	7011.61	66.12%	40, 171, 172, 173
Agricultural Lands	2267.05	21.38%	21, 22, 23, 24
Low-Density Residential	727.23	6.86%	111
Water/Wetland	598.34	5.64%	51, 53, 60
Total Acres	10604.23	100.00%	

All three stream segments are 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 plans for the other five stream segments listed on the cover of this document. For information on these implementation plans 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 these stream segments in February 2003 that shows a reduction in fecal coliform levels is needed. The required reductions in Fecal Coliform loads are as follows: 84% for Chattahoochee River (Utoy Creek to Pea Creek), 53% for Mobley Creek (Douglas County), and 25% for White Oak Creek (Fulton County).

Staff from the City of Atlanta, Fulton County Department of Public Works and the Douglasville-Douglas County Water & Sewer Authority helped to identify and rank the potential sources of fecal coliform in these segment watersheds. The following potential fecal coliform sources were identified for the stream segments in HUC10 #0313000203: urban runoff, animal waste, SSOs, Greensferry CSO, North Avenue CSO, Tanyard Creek CSO, Clear Creek CSO, illicit connections, agricultural sources, 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. The Douglasville-Douglas County Water & Sewer Authority conducts fecal coliform monitoring on Mobley Creek for internal purposes. Fulton County has a monitoring component in their Watershed Protection Plan which identifies a sample site on White Oak Creek.

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 these stream segments 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	Utoy Creek to Pea Creek (Fulton/Douglas Co.)	14 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) Combined Sewer Overflow (CSO)	84%

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 70 NPDES permitted point source discharges in the Chattahoochee River (Utoy Creek to Pea Creek) TMDL segment watershed. However, there are only 4 sources located adjacent to or directly on the river. The next closest NPDES permitted sources are approximately 4 miles away from the segment and it is undetermined how they may affect the TMDL segment. The field survey and background investigation identified non-point sources such as urban runoff, potential septic system failures, and animal waste. Proposed management practices to address fecal coliform have been provided by local governments and are outlined in the 2004 Chattahoochee River (Utoy Creek to Pea Creek) TMDL segment Implementation Plan in tables 5, 6 and 7. Urban runoff is considered a significant source of fecal coliform bacteria affecting this entire TMDL segment. The known affects of the upstream CSO Facilities can also be considered a significant source affecting the entire Chattahoochee River (Utoy Creek to Pea Creek) TMDL segment. There is also the potential for more significant effects due to animal waste in this segment than upstream.

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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	kshahlaee@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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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
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

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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
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.
6. 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)
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: http://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

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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
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)

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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

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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
Wetland and Buffer Preservation, beaver removal	USDA Natural Resources Conservation Service, U.S. Army Corp of Engineers, City of Austell		X Unsure of date	provide incentives for buffers restoration, fencing buffers, removing beavers

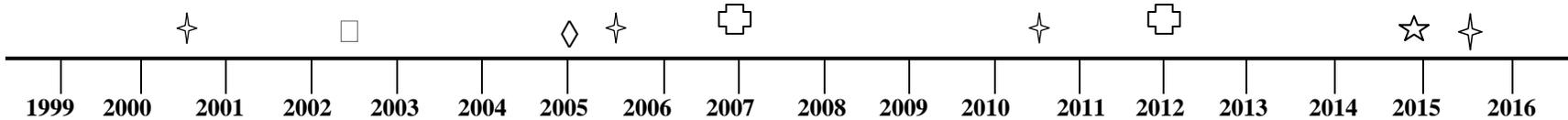
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	Stormwater Division			
NPDES Phase I Permit # GA00019	City of College Park			Refer to Annual Report
NPDES Phase I Permit # GAS000129	City of Powder Springs			Refer to Annual Report
NPDES Phase I Permit # GAS000132	City of Smyrna			Refer to Annual 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
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 ☆

Prepared By:	Matt Harper		
Agency:	Atlanta Regional Commission		
Address:	40 Courtland Street, NE		
City:	Atlanta	ST:	GA ZIP: 30303
E-mail:	mharper@atlantaregional.com		
Date Submitted to EPD:	August 30, 2004	Revision:	#1

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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 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	cdfranz@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
Dennis Chase / Line Creek Assoc. of Fayette County					770-719-8425	dechase65@hotmail.com

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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 Rinzier	225 Northland Ridge Trail	Atlanta	GA	30342	404 255 8081	nancyrinzier@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 Crescent 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 Aji / Jordan Jones and Goulding	6801 Governors Lake Parkway	Norcross	GA	30071	6783330232	kaji@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
John Ripley Forbes	11 Wildwood Valley	Atlanta	GA	30350	770-394-4350	
Dunwoody Nature Center	5343 Roberts Dr.	Atlanta	GA	30338	770-394-3322	

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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
(Utoy Creek to Pea Creek)**

In the

Chattahoochee River Basin

July 2004

Visual Field Survey

For

**Chattahoochee River TMDL Segment
(Utoy Creek to Pea 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 (Utoy Creek to Pea Creek) TMDL segment is located in the southwest portion of the Atlanta Metropolitan region on the border of Fulton and Douglas Counties. As shown in Figure 1, the Chattahoochee River (Utoy Creek to Pea Creek) TMDL segment watershed is located within ten counties including Cobb, DeKalb, Douglas, Forsyth, Fulton, Gwinnett, Paulding, and small portions of Carroll, Cherokee and Hall counties. The TMDL segment begins approximately 2.5 miles downstream of I-20. Downstream there are three road crossings on bridges at Thornton Road, Georgia Highway 166 (Fairburn Road), and Georgia Highway 92.

1.2 Watershed Description

The Chattahoochee River (Utoy Creek to Pea Creek) TMDL segment watershed is comprised of 679,019 acres of land within the ten counties listed above. The Chattahoochee (Utoy Creek to Pea Creek) TMDL segment is located within HUC 10 – 0313000203. Mapping of the TMDL segment shows medium density residential accounting for 33% of the area. Forests and open space account for another 27% of land cover. Table 1 below details all land covers within the TMDL segment watershed. Table 2 outlines how ARC’s land cover categories have been 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
Medium-Density Residential	224,412.72	33.05%	112
Forest/Open Space	180,958.56	26.65%	40, 171, 172, 173
Commercial	79,572.33	11.72%	12, 15, 121
Low-Density Residential	58,923.22	8.68%	111
Agricultural Lands	46,008.58	6.78%	21, 22, 23, 24
High-Density Residential	30,422.84	4.48%	113, 117, 119
Transitional & Extractive Lands	26,617.80	3.92%	17, 74, 75, 76
Water/Wetland	17,498.17	2.58%	51, 53, 60
Transportation and Utilities	11,033.75	1.62%	14, 145
Industrial/Institutional	3,571.48	0.53%	13
Total Acres	679,019.44	100.00%	

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

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

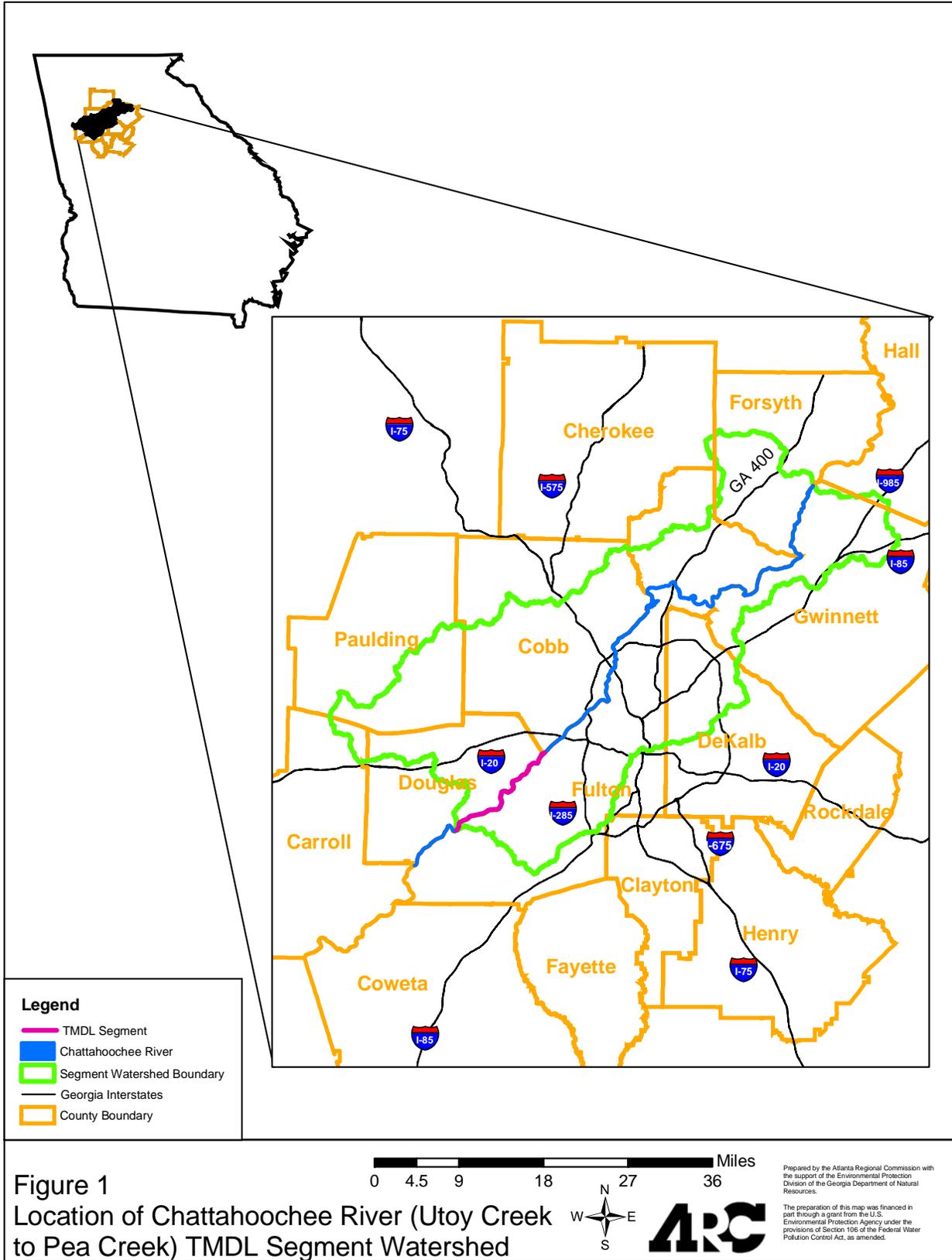


Figure 1
 Location of Chattahoochee River (Utoy Creek to Pea Creek) TMDL Segment Watershed

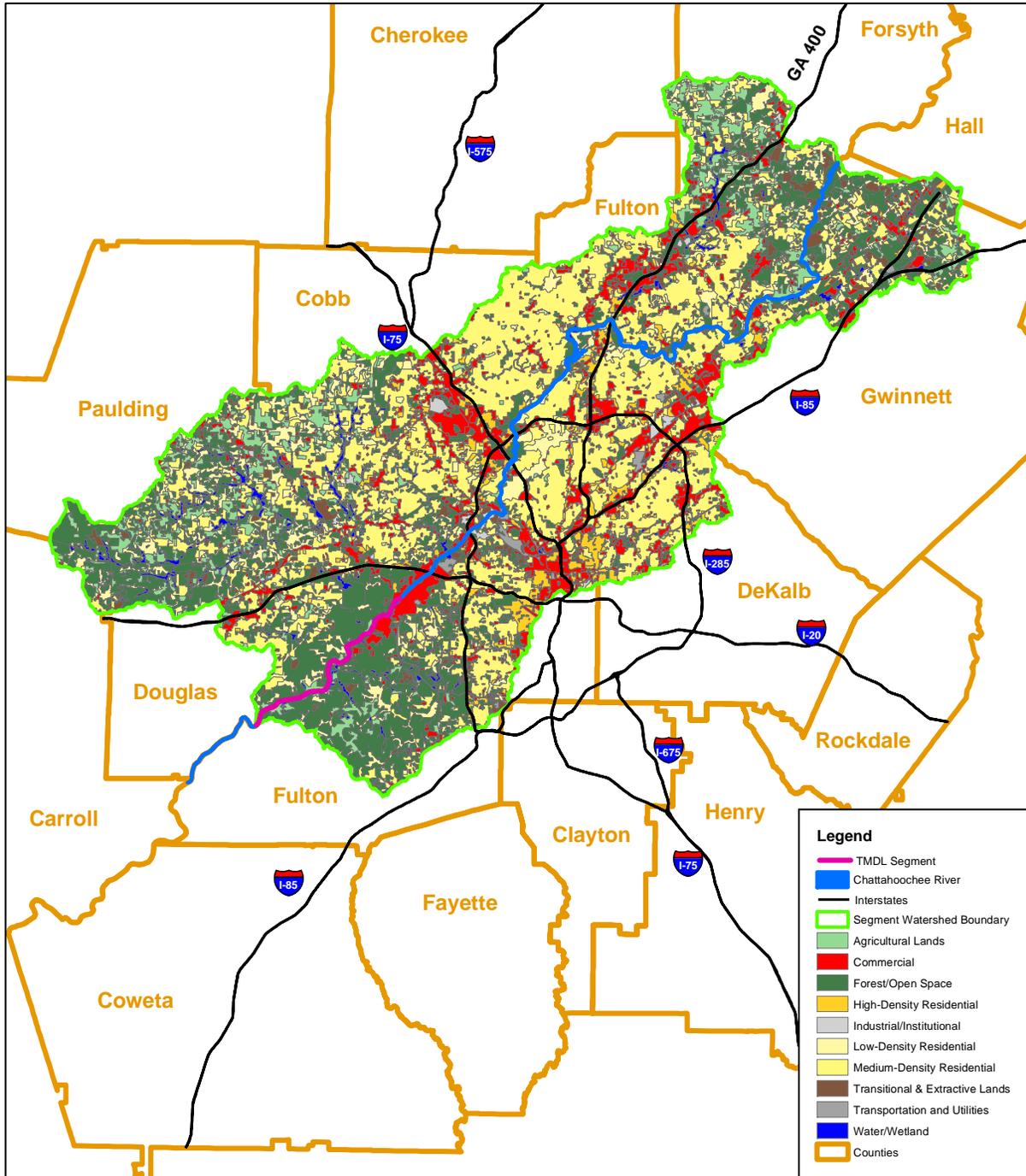


Figure 2
 ARC 2001 Land Cover for Chattahoochee River (Utoy Creek to Pea Creek) TMDL Segment Watershed

0 2.5 5 10 15 20 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 State of Georgia Environmental Protection Division was 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 (Utoy to Pea 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 watershed was conducted. The purpose of the stream segment visual survey was to identify and observe possible sources of pollution. The characteristics of the stream 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 segment. He provided input on the characteristics of the area and details on some surrounding land cover. Observations were documented and captured in photographs of the stream 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 segment. Careful observations were made 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 segment is consistently bordered by a vegetative buffer that is moderately wooded with thick undergrowth and occasional areas with thinner tree cover or thin brush. The water appears muddy, cloudy and somewhat opaque throughout the segment. The uniform color of the water in this TMDL segment could not be linked to any particular source. General photographs of the river condition are shown below in Figures 5-10.

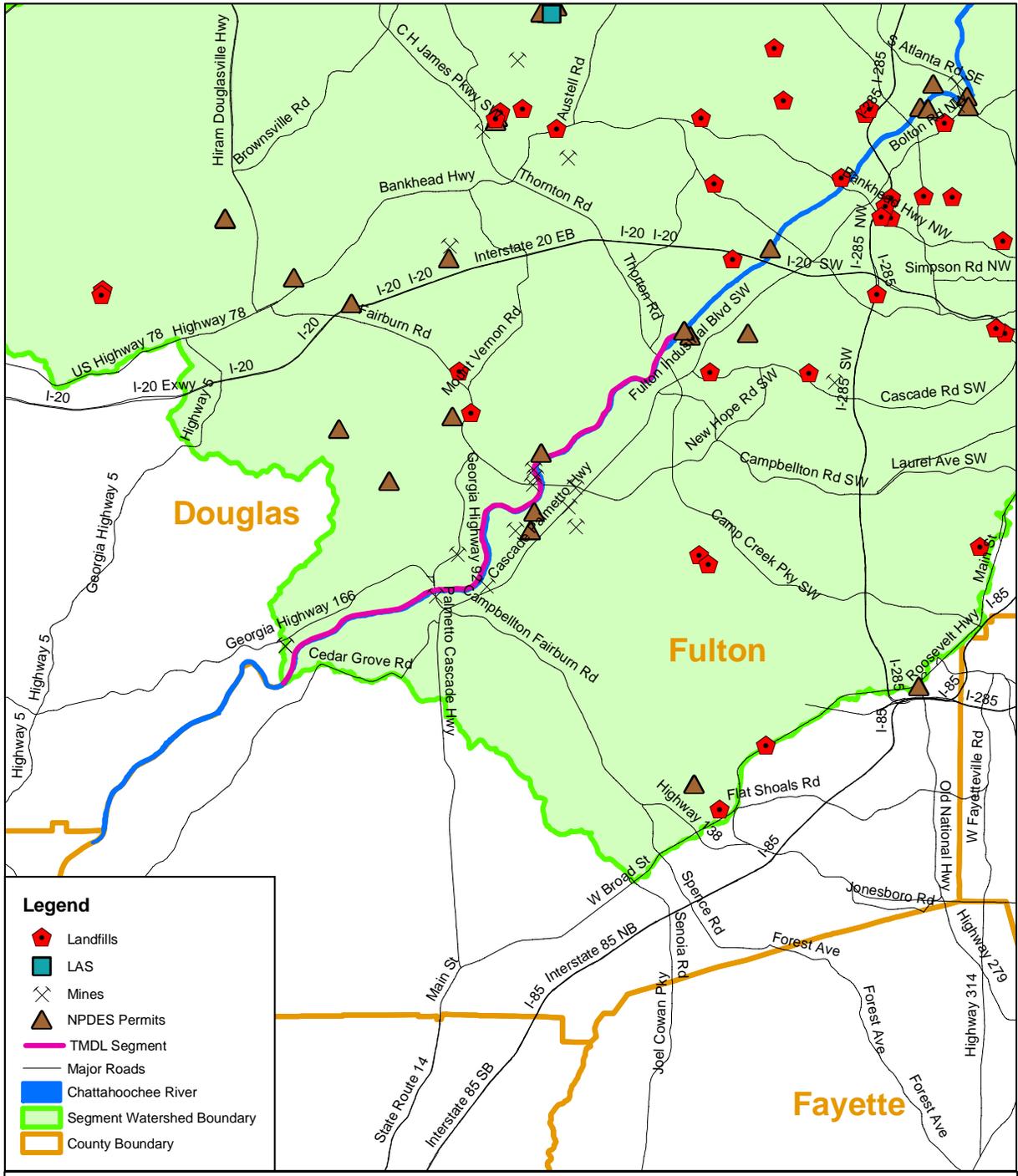


Figure 3
 Chattahoochee River (Utoy Creek to Pea
 Creek) TMDL Segment Watershed
 Potential Individual Sources of Pollution
 Data Provided by Georgia EPD



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 106 of the Federal Water Pollution Control Act, as amended.

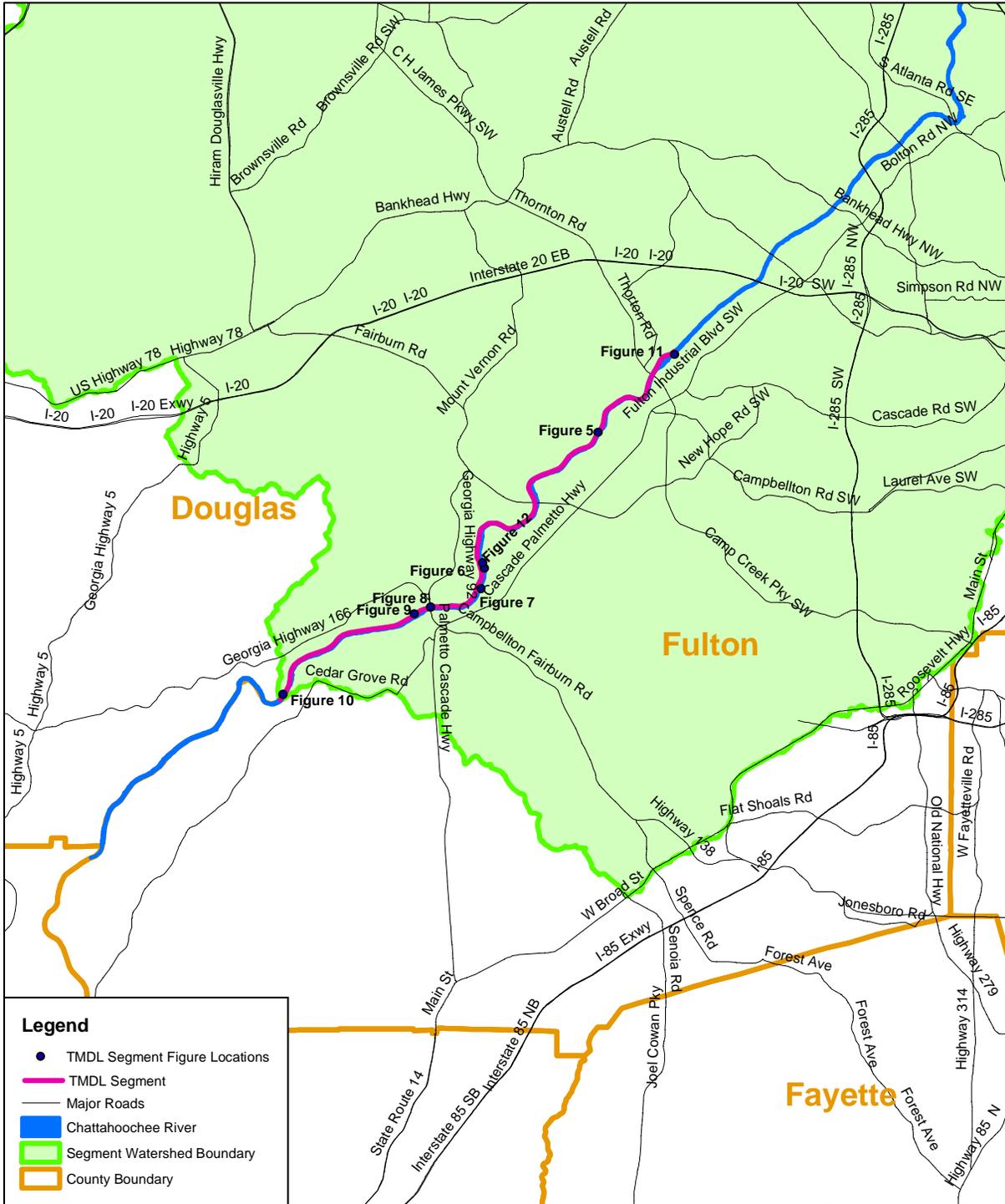


Figure 4
Location of Images Taken
During Visual Field Survey

0 1 2 4 6 8 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.

The Chattahoochee River (Utoy Creek to Pea Creek) TMDL segment is bordered by a variety of land cover. The top of the segment is bordered by urban land cover that is largely commercial and industrial. Moving downstream, the land cover becomes more rural and less activity can be seen from river.



Figure 5. Sweetwater Creek Confluence (West bank)



Figure 6. Camp Creek Confluence (East bank)

Sand dredging operations (Figure 7) are located at several points along the banks of the Chattahoochee River (Utoy Creek to Pea Creek) TMDL segment. Some of these locations are shown by the mining symbols on Figure 3.



Figure 7. Sand Dredging Operation at Deep Creek (East bank looking downstream)



Figure 8. Bridge and USGS gauge at Highway 92 (looking upstream)



Figure 9. Anneewakee Creek Confluence (West bank)

Near the bottom of the segment, the river is bordered mostly by active pasture and farmland. One active dairy is located along the west bank of the river. A downstream view from this area is shown in Figure 10.



Figure 10. Downstream view from Patterson's Dairy (bottom of TMDL segment)

Potential sources affecting the overall health of the Chattahoochee River are discussed in the Point Source and Non-point Source sections.

3.2 Point Sources

There are approximately 70 NPDES permits in the Chattahoochee River (Utoy Creek to Pea Creek) TMDL segment watershed. The points closest to the TMDL segment are shown in Figure 3 and are identified in the legend as NPDES Permits.

Notable NPDES points include three wastewater treatment plants along the Utoy Creek to Pea Creek TMDL segment. One is located at the top of the segment: Utoy Creek Water Reclamation Center (Figure 11). A few miles downstream on the west bank of the river is Sweetwater Creek Wastewater Treatment Plant. Several miles downstream of Sweetwater Creek, on the East bank of the River, is the Camp Creek Water Reclamation Plant (Figure 12). Utoy Creek Water Reclamation Center primarily serves the City of Atlanta, Sweetwater Creek WWTP serves portions of Douglas County, and Camp Creek Water Reclamation Plant serves portions of Fulton County.



Figure 11. Outflow from Utoy Creek Water Reclamation Center (East bank)



Figure 12. Outflow from Camp Creek Water Reclamation Plant (East bank)

In addition to the wastewater treatment plants located along this segment, it is likely that Wastewater Treatment plants and Combined Sewer Overflow Facilities located on upstream segments of the Chattahoochee (Peachtree Creek to Utoy Creek TMDL segment) affect the fecal coliform levels in this TMDL segment as well. However, during the visual field survey no activities related to these facilities were observed along the upstream segment of the Chattahoochee River. As listed in the TMDL implementation plan for this segment the City of Atlanta has programs in place to correct the CSO problems by November 2007. Other measures to correct elevated bacteria levels are also listed in the 2004 TMDL Implementation Plans for each of the three TMDL segments of the Chattahoochee River.

3.3 Non-Point Sources

Approximately half of the watershed is sewered. The remaining portion of the watershed is either undeveloped or served by septic systems, which may fail and contribute to elevated levels of fecal coliform in this TMDL segment.

Additionally, as land cover becomes less intense moving downstream in this section, there are farms as well as the potential for wildlife present in the area.

Additional non-point sources have been identified through spill data obtained from the State of Georgia Environmental Protection Division. According to the State, these spills are un-permitted discharges that reach state waters and should be comprised of only municipal sewage. This data covers spills which occurred between January 2001 and March 2004. Along the Chattahoochee River (Utoy Creek to Pea Creek) TMDL segment, there are several creeks which are frequently impacted by

un-permitted spills. These creeks include Anneewakee, Camp, Crooked, Sweetwater, and Utoy.

Anneewakee Creek was impacted by approximately 9 spills, including one over 10,000 gallons, caused primarily by heavy rain events. Camp Creek was impacted by 55 spills caused primarily by grease or debris in pipes; 14 of these spills were in excess of 10,000 gallons. Crooked Creek and Sweetwater Creek were impacted by 3-4 spills. Two spills on Crooked Creek exceeded 10,000 gallons. Utoy Creek was affected by approximately 250 spills; of which 12 were greater than 10,000 gallons. The majority of spills on Utoy Creek were caused by blockages in the sewage lines from grease and debris, or occasionally by a collapsed line. Additionally, the Chattahoochee River was the receiving body of 5 spills less than 10,000 gallons, reported as rain-induced events.

3.4 Other Potential Individual Sources of Pollution

Point Data obtained from the State Environmental Protection Division show potential pollution point sources in the Chattahoochee River (Utoy Creek to Pea Creek) TMDL segment watershed (Figure 3). There are 78 landfills, as designated by the State of Georgia data, located in the Chattahoochee River (Utoy Creek to Pea Creek) TMDL segment watershed. None of these are located adjacent to or in close proximity to this TMDL segment and no problems related to landfills were observed during the visual field survey.

4.0 RANKS ASSIGNED TO POLLUTION SOURCES

Urban runoff is considered a significant source of fecal coliform bacteria affecting this entire TMDL segment. The known effects of the upstream CSO Facilities can also be considered a significant source affecting the entire Chattahoochee River (Utoy Creek to Pea Creek) TMDL segment. There is also the potential for more significant effects due to animal waste in this segment than upstream.

5.0 SUMMARY OF FINDINGS

There are approximately 70 NPDES permitted point source discharges in the Chattahoochee River (Utoy Creek to Pea Creek) TMDL segment watershed. However, there are only 4 sources located adjacent to or directly on the river. The next closest NPDES permitted sources are approximately 4 miles away from the segment and it is undetermined how they may affect the TMDL segment. The field survey and background investigation identified non-point sources such as urban runoff, potential septic system failures, and animal waste. Proposed management practices to address fecal coliform have been provided by local governments and are outlined in the 2004 Chattahoochee River (Utoy Creek to Pea Creek) TMDL segment Implementation Plan in tables 5, 6 and 7.

6.0 STAKEHOLDER INVOLVEMENT

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

Mobley Creek

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

STREAM SEGMENT NAME	LOCATION	MILES/AREA	DESIGNATED USE	PS/NS
Mobley Creek	Douglas County	7 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)	Nonpoint Sources (NP)	53%

Source & Cause: Stormwater runoff, malfunctioning septic tank systems, wild animals and agricultural sources.

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 two permitted point source discharges in the Mobley Creek TMDL segment watershed. However, they are not located near the stream segment. The field survey and background investigation identified non-point sources such as wildlife and horse and cattle farms. Animal waste and urban runoff are the most likely potential sources of pollution in and around the Mobley Creek TMDL segment. Proposed management practices to address fecal coliform have been provided by local governments and are outlined in the 2004 Mobley Creek TMDL Implementation Plan in tables 5, 6 and 7. Wildlife and horse and cattle farms are considered significant sources of fecal coliform bacteria affecting this entire TMDL segment. Urban runoff is another source that may largely affect the entire Mobley Creek TMDL segment. Leaking or failing septic tank systems are considered a small source affecting sporadic areas of the Mobley Creek TMDL segment.

The Douglasville / Douglas County Water & Sewer Authority (DDCWSA) has performed weekly sampling for fecal coliform bacteria, pH and turbidity since 1988.

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 effected, the stream miles effected, 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	Animal wastes	35%	Large	Nonpoint source - pets and wildlife
Fecal Coliform	Agricultural Sources	30%	Large	
Fecal Coliform	Urban Runoff	20%	Large	Nonpoint source / stormwater runoff
Fecal Coliform	Septic tank systems	15%	Moderate	Leaking / runoff from failing septic tank systems, including faulty drain fields
Fecal Coliform	Illicit connections	0%	No Contribution	Improper connections of sanitary sewer flows to the storm drain system
Fecal Coliform	SSOs	0%	No Contribution	Overflows from sanitary sewer system due to blockages from grease, roots, vandalism / pipe failures

The DDCWSA only samples Mobley Creek where it crosses Banks Mill Road. Mobley Creek continues approximately seven upstream of this sample point. Since the sampling is only performed in this one location, we do not agree that the entire seven-mile upstream stretch has necessarily been impacted because it is possible that one or more of the approximately ten upstream tributaries could be the cause of the elevated fecal coliform numbers. We do not sample anything upstream of the Mobley Creek sample site.

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.

The DDCWSA has planned the following stakeholders programs:

1. DDCWSA will organize focus groups comprised of 8 – 10 individuals each. These groups will consist of City of Douglasville and Douglas County residents including representatives from organized groups such as the Douglas County Homebuilders Association, the Douglas County Chamber of Commerce and community activists. Two focus groups (as opposed to one single focus group) will be formed to assure that the number of participants in each group will be no more than ten (focus groups in excess of ten participants are ineffective). WSA has compiled a list of eight to ten business and community leaders that are expected to be focus group participants. A single focus group would severely limit voluntary participation by City of Douglasville and Douglas County citizens. Input from each group will be combined and analyzed by WSA staff. Input from each group will also be shared between the groups.

The WSA executive staff will facilitate the focus group meetings. Topics to be discussed include general educational information and stormwater fees as well as proposed stormwater projects, including assistance in selecting and prioritizing stormwater project improvement on private property that may receive partial public funding and the anticipated results of implementing these projects.

Focus group meetings will be chaired by a WSA employee and will be held at the WSA offices. WSA will schedule the initial focus group meetings and invite participants. Although the WSA executive staff will encourage members to meet at least twice per year, identifying when subsequent meetings will take place is not possible at this time because focus group participants will schedule these meetings based on the members' schedules and prior commitments. WSA will advertise for participation in this group to replace members as needed.

2. WSA will partner with a local group (high school environmental club or local boy/girl scout troops) to sponsor a stream clean up. Although the local group(s) will assist by providing sponsorship, the event will also be open to the general public. Care will be taken in advertising both prior to as well as after the event. WSA will provide all the necessary materials for the clean up. Photos of the event, including a group shot of all the volunteers, will be used in a thank you advertisement. It is anticipated that this publicity will generate additional public interest in the event.

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	kshahlaee@gaswcc.org
NRCS	678 South Cobb Drive, Suite 150	Marietta	GA	30060	770-792-0594	
Douglasville – Douglas County Water & Sewer Authority 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	
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	

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)
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
1	WSA	See Below	User Fees	Ongoing	2003	Moderate
2	WSA	See Below	User Fees	Ongoing	2003	Moderate
3	WSA	See Below	User Fees	Ongoing	2003	Moderate
4	WSA	See Below	User Fees	Under Development	Proposed for 2006	Unknown
5	Douglas County Zoning Ordinance	See Below		Ongoing	Adopted 10/23/00	
6	WSA	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 sewered and 10% if not sewered with 0.334 du/acre maximum residential density with or without sewer.
6. 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	
Fecal Bacteria, pH and turbidity	DDCWSA	Current	1988	On-going	Internal Water Quality Data

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
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
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.

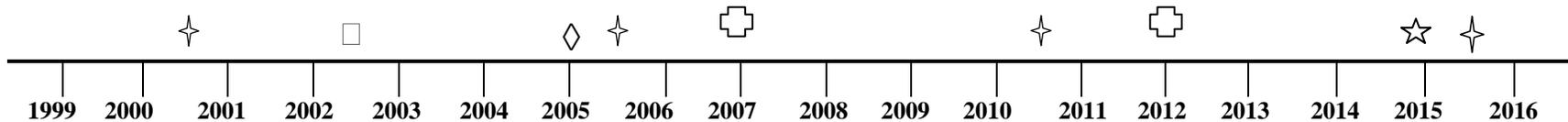
Table 8. MILESTONES

MANAGEMENT MEASURE	RESPONSIBLE ORGANIZATIONS	STATUS		COMMENT
		PROPOSED	INSTALLED	
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
See below				

The above table has been intentionally left blank 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 ☆

Prepared By:	Matt Harper		
Agency:	Atlanta Regional Commission		
Address:	40 Courtland Street, NE		
City:	Atlanta	ST:	GA ZIP: 30303
E-mail:	mharper@atlantaregional.com		
Date Submitted to EPD:	August 30, 2004	Revision:	#1

The preparation of this report was financed in part through a grant from the U.S. Environmental Protection Agency under the provisions of Section 106 or Section 604(b) of the Federal Water Pollution Control Act, as amended.

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
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 Ajy / 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
Alice Champagne / Upper Chattahoochee Riverkeeper	916 Joseph Lowery Blvd	Atlanta	GA	30318	404-352-9828	achampagne@ucriverkeeper.org
See below						

Mobley Creek is a tributary to Dog River, the raw water source for the Authority's Bear Creek Water Treatment Plant. Consequently, all citizens of Douglas County that receive potable water service from the Authority are stakeholders. A listing of the names and addresses of these stakeholders is available upon request.

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
Mobley Creek TMDL Segment
(Douglas County)
In the
Chattahoochee River Basin
July 2004

Visual Field Survey
For
Mobley Creek TMDL Segment
(Douglas County)
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

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

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1.0 INTRODUCTION

1.1 Location

Mobley Creek is located in the western portion of the Atlanta Metropolitan region in Douglas County. As shown in Figure 1, the Mobley Creek TMDL segment watershed extends from just north of I-20 through a portion of Douglas County as it flows towards the Dog River and ultimately into the Chattahoochee River.

The TMDL segment begins approximately 1,800 ft. upstream of the crossing on John West Drive. There are 7 roads (shown in figures 1-4) crossing the Mobley Creek TMDL segment: John West Rd., Interstate 20, Baggett Rd., Mason Creek Rd., Pool Rd., Berea Rd., and Banks Mill Rd. The segment ends as it confluences with the Dog River approximately 3,800 feet downstream of the Banks Mill Road crossing.

1.2 Watershed Description

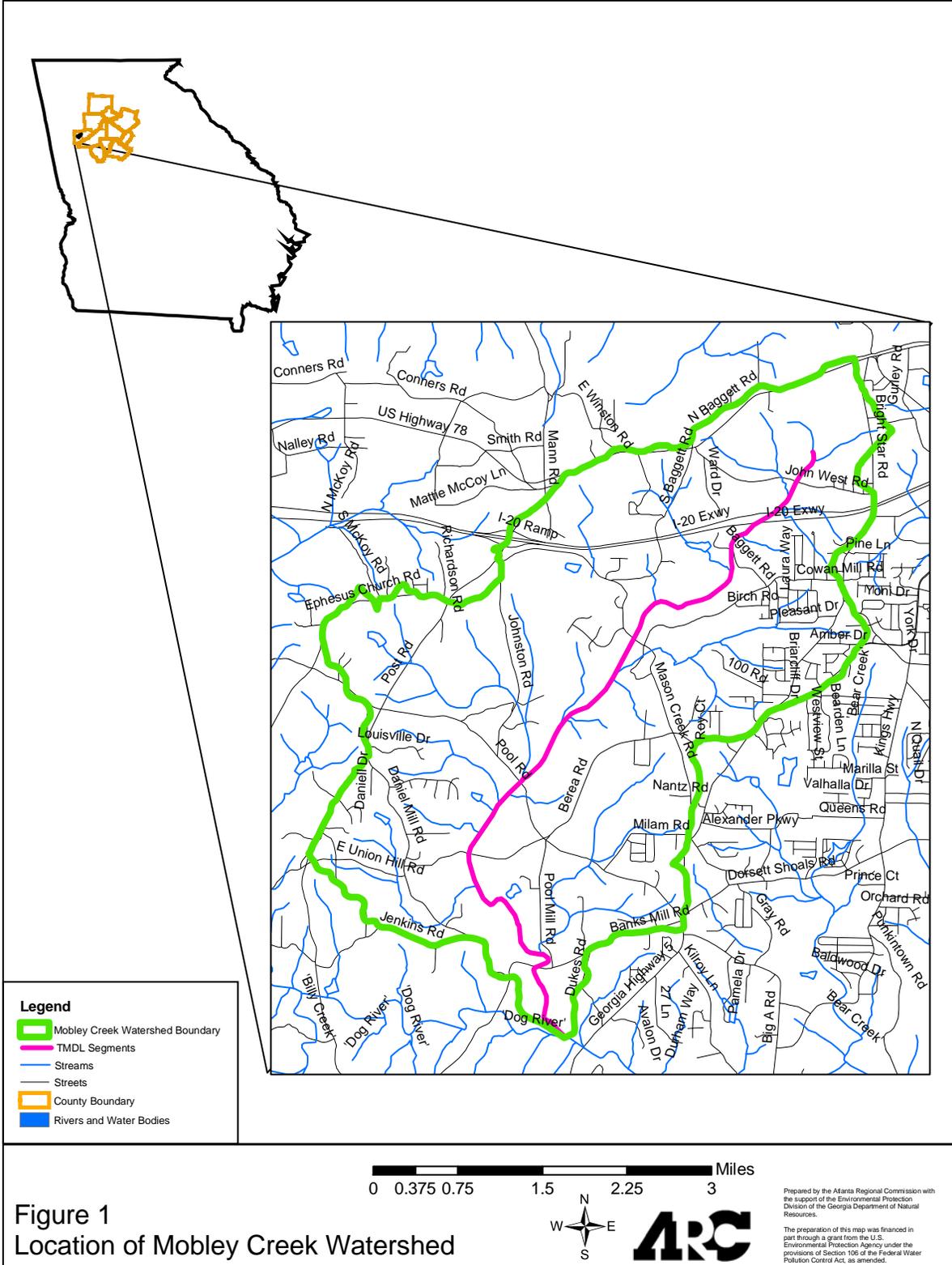
The Mobley Creek TMDL segment watershed is comprised of 10165 acres of land within Douglas County. The Mobley Creek TMDL segment watershed is located within HUC 10 – 0313000203 and HUC 12 – 031300020309. Mapping of the watershed shows that land cover within the watershed is predominately forest that accounts for 46% of the area. Agriculture accounts for another 22% and residential 24%. Percentages for all land covers are presented below in Table 1. Table 2 outlines how ARC’s land cover categories have been 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	4710.52	46.34%	40, 171, 172, 173
Agricultural Lands	2241.31	22.05%	21, 22, 23, 24
Medium-Density Residential	1238.91	12.19%	112
Low-Density Residential	1211.49	11.92%	111
Transitional & Extractive Lands	248.85	2.45%	17, 74, 75, 76
Commercial	231.04	2.27%	12, 15, 121
Transportation and Utilities	195.18	1.92%	14, 145
Water/Wetland	87.69	0.86%	51, 53, 60
Total Acres	10164.98	100.00%	

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



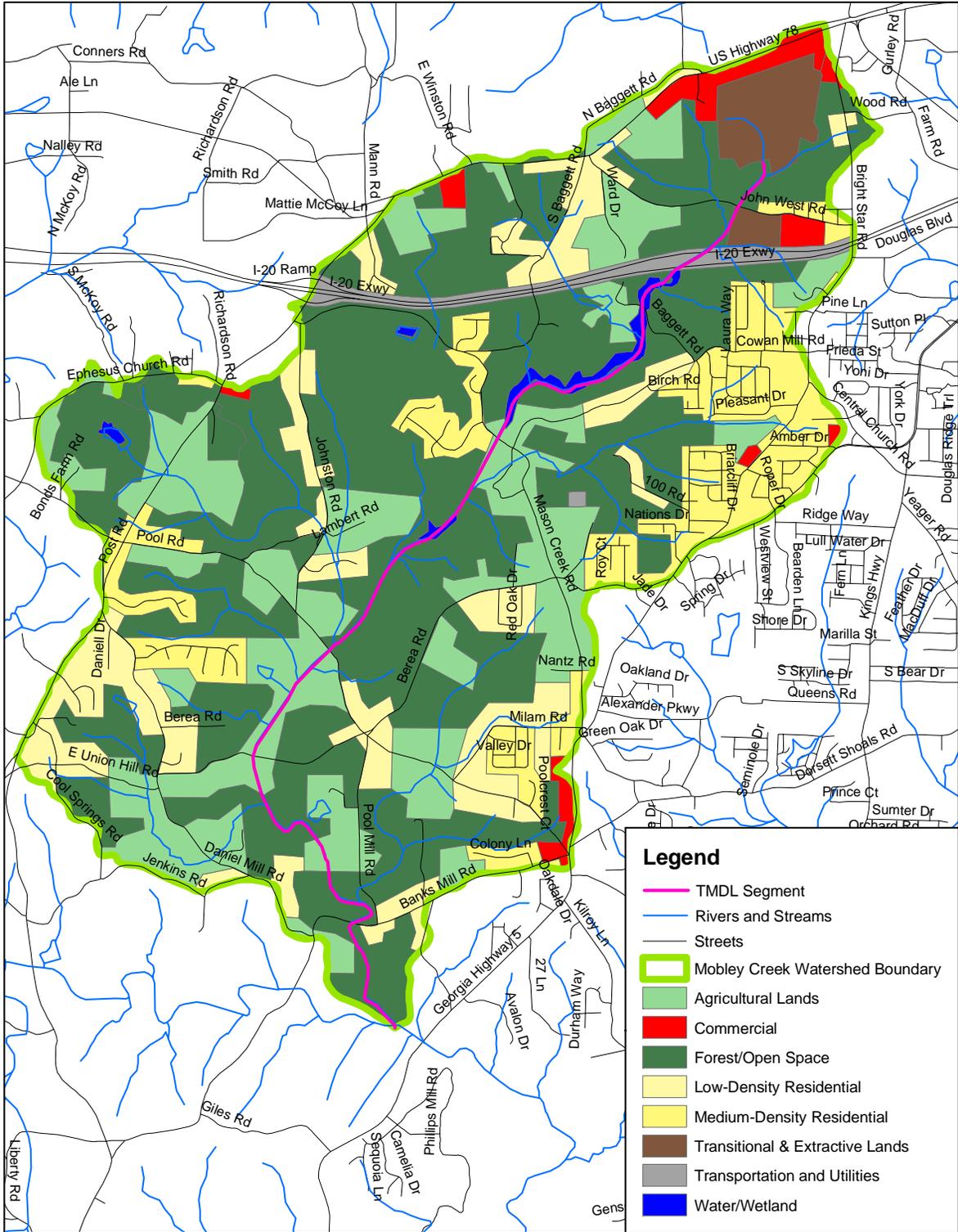
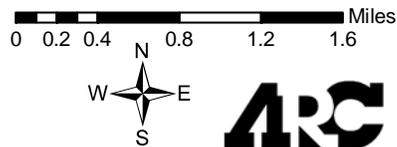


Figure 2
2001 ARC Land Cover for
Mobley Creek watershed



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.

2.0 METHODOLOGY

Prior to beginning the field study, data from the 2001 ARC Source Water Assessment Project 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 Mobley 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 watershed was conducted. The initial step was a windshield survey of the watershed area adjacent to the Mobley Creek TMDL stream segment. Following completion of the windshield survey, a foot survey of the stream segment was performed where access permitted. The purpose of the stream segment walk was to identify and observe possible sources of pollution. Observations were documented and captured in photographs of the stream 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 largely on foot throughout the designated 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 portion of the Mobley Creek TMDL segment located upstream of Baggett Road is consistently bordered by a vegetative buffer that is lightly wooded with occasional areas of thick brush. The middle portion of Mobley Creek, from Baggett Road to Banks Mill Road flows through an area of farmland and pastures, then through heavily forested and vegetated areas (Figures 6-8). Much of the stream flowing through pasture and farmland was not fenced to keep livestock out of the stream. However, no livestock was seen in the stream at the time of the visual field survey. There did not appear to be any areas of significant stream bank erosion in the TMDL stream segment.

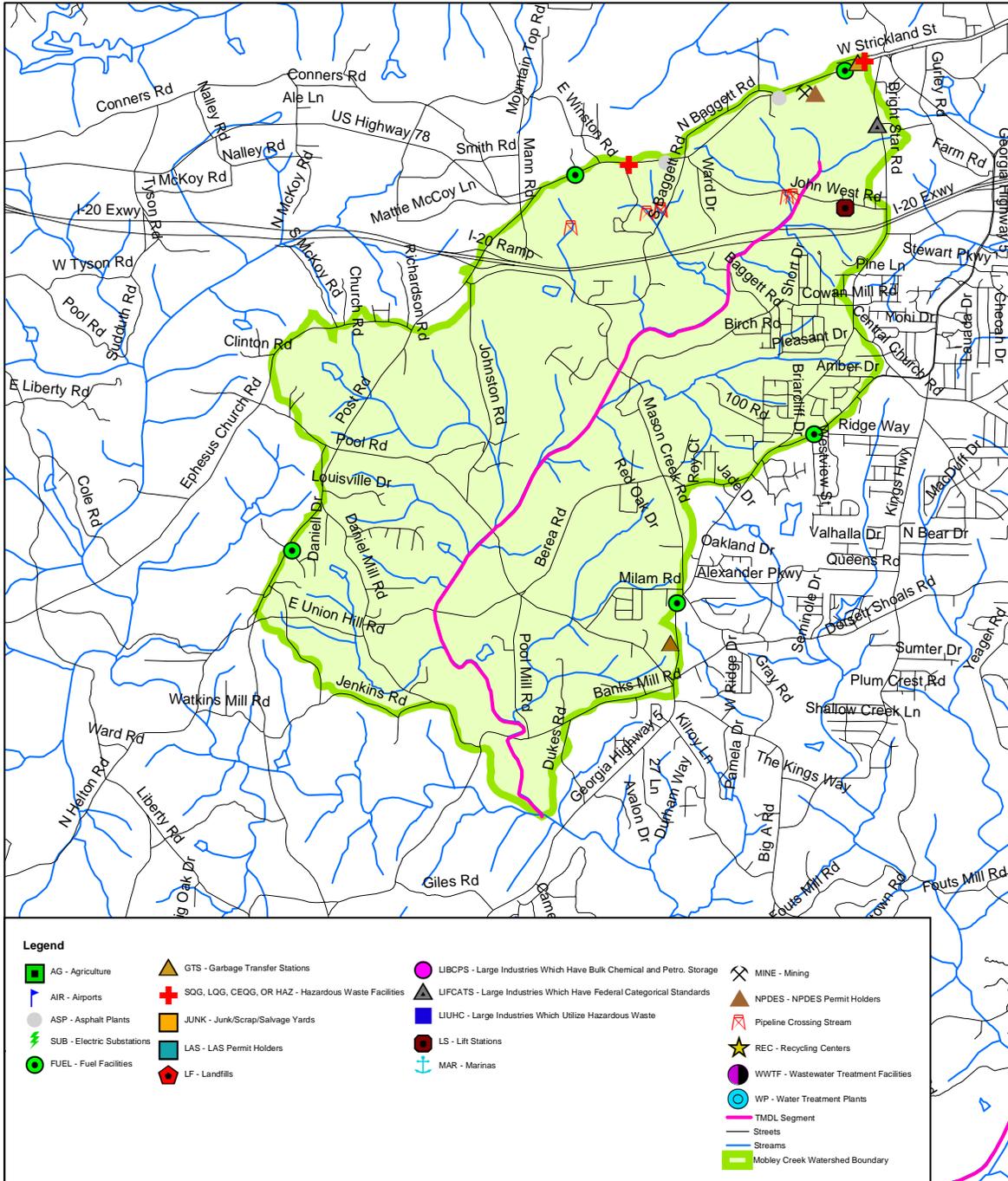
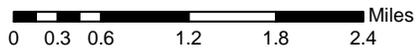


Figure 3
 Mobley Creek Watershed
 Potential Individual Sources of Pollution
 Identified in ARC's 2001 Source Water
 Assessment Project



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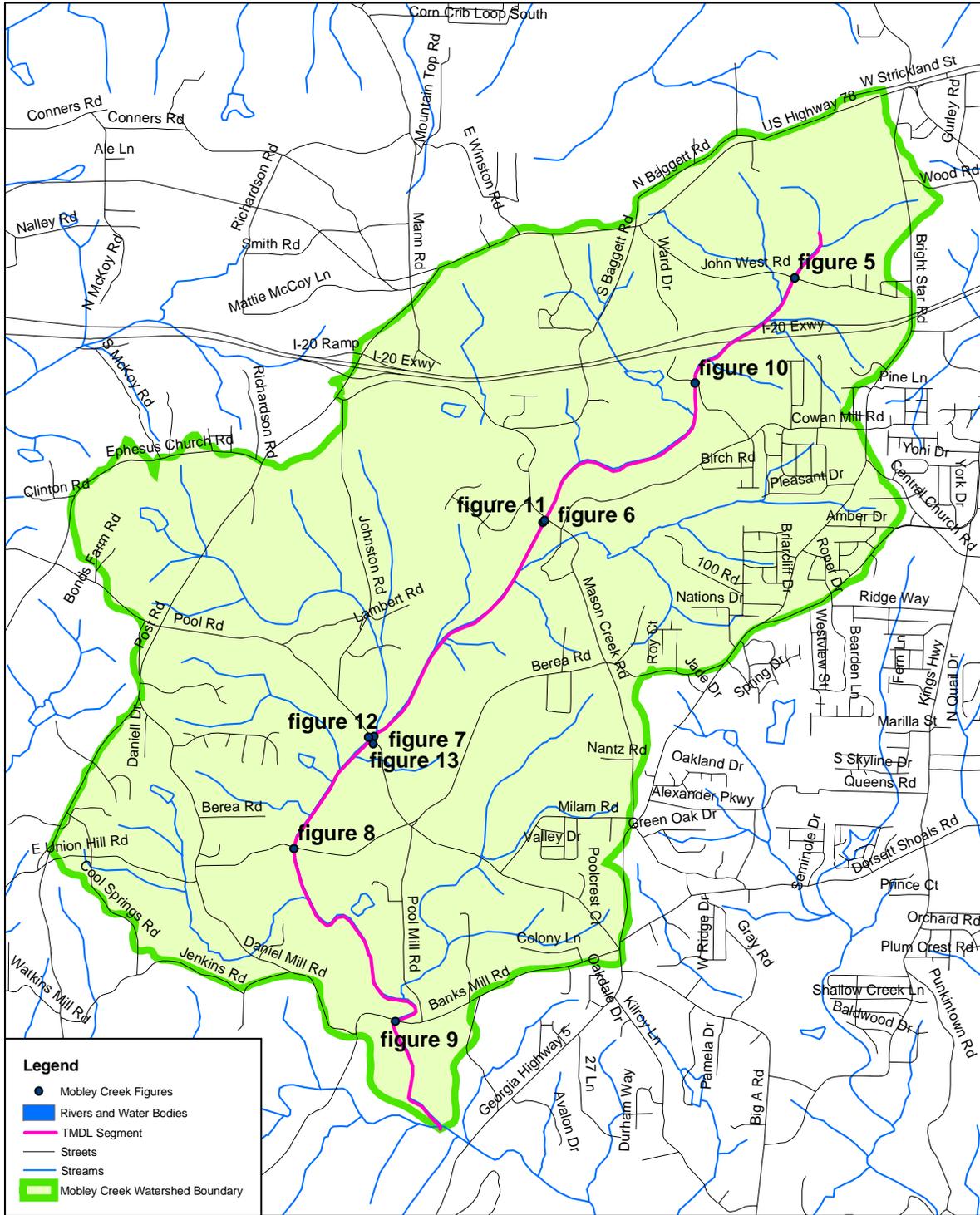


Figure 4
Location of Images Taken
During Visual Field Survey

0 0.2 0.4 0.8 1.2 1.6 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.



Figure 5. Looking upstream from John West Road



Figure 6. Looking downstream from Mason Creek Road



Figure 7. Looking upstream from Pool Road crossing

During the field work the following observations were made along the Mobley Creel TMDL stream segment: two bridges, one beaver dam and culverts at all 5 non-bridge road crossings. The beaver dam is located just off of the segment on a small tributary immediately above the Baggett Road crossing.

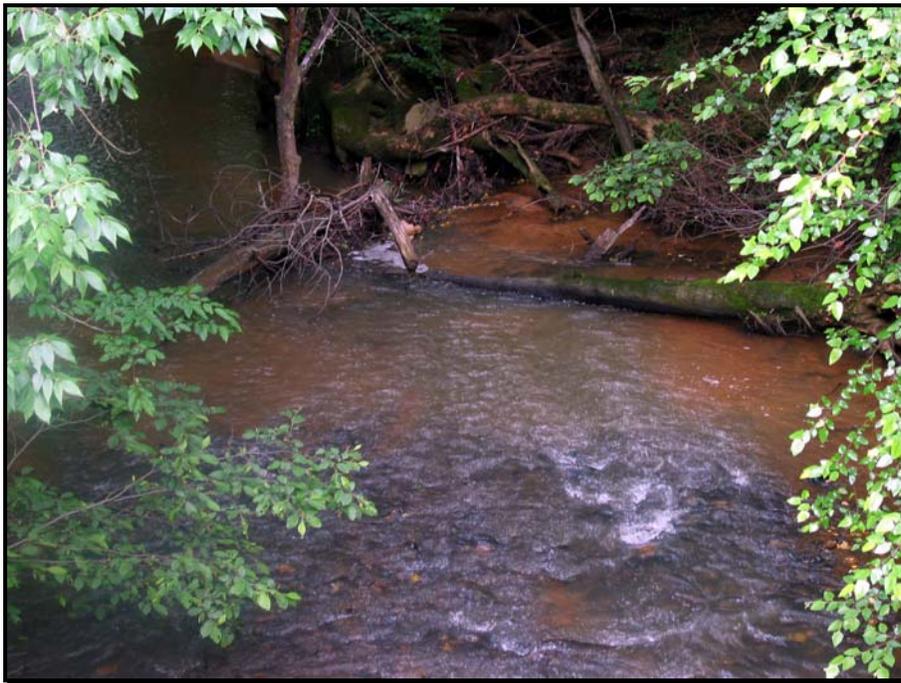


Figure 8. Looking downstream from Berea Road

The only bridges in the segment are at the Interstate 20 crossing and at the Banks Mill Road Crossing (Figure 9). The stream segment passes through culverts at all of the other road crossings (Figure 10).



Figure 9. Looking upstream at Banks Mill Road bridge

Very little litter and trash was seen in the TMDL stream segment. Occasional food wrappers and cans were spotted near the road crossings. The water appeared to be clear in most of the vegetated and forested areas. However, in the sections where the segment flowed directly through pastures, the water appeared cloudy and somewhat opaque (Figure 7), even in faster moving sections. Potential sources affecting the overall health of Mobley Creek are discussed in the Point Source and Non-point Source sections.

3.2 Point Sources

There are two permitted point source discharges in the Mobley Creek TMDL segment watershed. One is an aggregate manufacturing plant, and the second is an elementary school. These points are represented on Figure 3 and are identified in the legend as NPDES – NPDES Permit Holders.

3.3 Non-Point Sources

The majority of the watershed does not appear to be sewered. Much of the remaining land is undeveloped, but it is likely that there are many areas served by only septic systems.

No wildlife was observed in the streambed, but evidence of beaver, raccoons and deer was prevalent throughout the TMDL segment. There were also areas where the segment flowed through pastures and farmland where livestock may have direct access to the stream segment (Figures 6, 10, & 11). No livestock was seen in the segment at the time of the survey, but there were places where livestock tracks were seen on the banks of the stream (Figure 11). Active cattle and horse farms were observed directly adjacent to the TMDL segment (Figures 12 & 13). Small fish were present throughout the segment. No waterfowl were observed in or around the stream segment during the survey.



Figure 10. Fence and culverts at Baggett Road (looking downstream)

3.4 Other Potential Individual Sources of Pollution

Data obtained from the 2001 ARC Source Water Assessment Project show potential individual sources of pollution in the Mobley Creek TMDL segment watershed (Figure 3). No individual sources of pollution were observed directly adjacent to the stream segment. In Figure 3 the red crosses symbolize hazardous waste facilities. Examples of the types of businesses categorized as hazardous waste facilities include dry cleaners, vehicle maintenance facilities, and leather manufacturing facilities. This data was used as a part of the Source Water Assessment Project for Metro Atlanta and the data source was US EPA's Resource Conservation and Recovery Information System (RCRIS). A brief review of these data types shows little or no potential influence on fecal coliform levels in this TMDL stream segment.



Figure 11. Livestock tracks and waste at Mason Creek Road (looking downstream)



Figure 12. Pasture with abundant livestock waste downstream at Pool Road



Figure 13. Horse ring and pasture on the downstream side of Pool Road

4.0 RANKS ASSIGNED TO POLLUTION SOURCES

Wildlife and horse and cattle farms are considered significant sources of fecal coliform bacteria affecting this entire TMDL segment. Urban runoff is another source that may largely affect the entire Mobley Creek TMDL segment. Leaking or failing septic tank systems are considered a small source affecting sporadic areas of the Mobley Creek TMDL segment.

5.0 SUMMARY OF FINDINGS

There are two permitted point source discharges in the Mobley Creek TMDL segment watershed. However, they are not located near the stream segment. The field survey and background investigation identified non-point sources such as wildlife and horse and cattle farms. Animal waste and urban runoff are the most likely potential sources of pollution in and around the Mobley Creek TMDL segment. Proposed management practices to address fecal coliform have been provided by local governments and are outlined in the 2004 Mobley Creek TMDL Implementation Plan in tables 5, 6 and 7.

6.0 STAKEHOLDER INVOLVEMENT

Local government staff was informed of the date the fieldwork would occur. Results have been made available and discussed with local government representatives.

White Oak Creek

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

STREAM SEGMENT NAME	LOCATION	MILES/AREA	DESIGNATED USE	PS/NS
White Oak Creek	Fulton County	2 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)	25%

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 no permitted point source discharges in the White Oak Creek watershed. The field survey and background investigation identified non-point sources such as wildlife and urban runoff. Additionally, field observations showed evidence that the Chattahoochee River often backs up White Oak Creek to the bridge at Highway 70 (Campbellton Redwine Road on Figure 1). The sampling point for the state data on fecal coliform levels in White Oak Creek was the Highway 70 bridge. The content of the samples on the day they were collected may have been affected by such a back-up from the Chattahoochee River. Proposed management practices to address fecal coliform have been provided by local governments and are outlined in the 2004 White Oak Creek TMDL implementation plan in tables 5, 6 and 7. Wildlife is considered a moderate source of fecal coliform bacteria affecting this entire TMDL segment. Leaking or failing septic tank systems are considered a small source affecting sporadic areas of the White Oak Creek TMDL segment. Another moderate source contributing to elevated fecal coliform levels in the White Oak Creek TMDL segment is the backup of the Chattahoochee River into White Oak Creek.

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 effected, the stream miles effected, 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	Animal wastes	Entire Reach	Moderate	Nonpoint source - pets and wildlife
Fecal Coliform	Septic tank systems	Sporadically throughout the segment	Small	Leaking / runoff from failing septic tank systems, including faulty drain fields
Fecal Coliform	Urban Runoff	Limited	Negligible	Nonpoint source / stormwater runoff
Fecal Coliform	Illicit connections	Limited	Negligible	Improper connections of sanitary sewer flows to the storm drain system
	No Sanitary sewers in this TMDL stream segment watershed			

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.

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	kshahlaee@gaswcc.org
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	
NRCS	678 South Cobb Drive, Suite 150	Marietta	GA	30060	770-792-0594	
Fulton County Cooperative Extension Service	141 Pryor St., Suite 1031	Atlanta	GA	30303	404-730-7000	
Metropolitan North Georgia Water Planning District	40 Courtland Street, NE	Atlanta	GA	30303	404-463-3260	

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)
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
Reduction in habitat through development	Fulton County	Refer to Fulton County Watershed Protection Plan (June 2002)	Private Development	Ongoing	1808	Moderate

TMDL Implementation Plan for White Oak Creek
HUC 10 #: 0313000203

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
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

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
Fecal Coliform	Fulton County	Current	2001		Refer to Fulton County Watershed Protection Plan (June 2002)

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
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
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
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

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

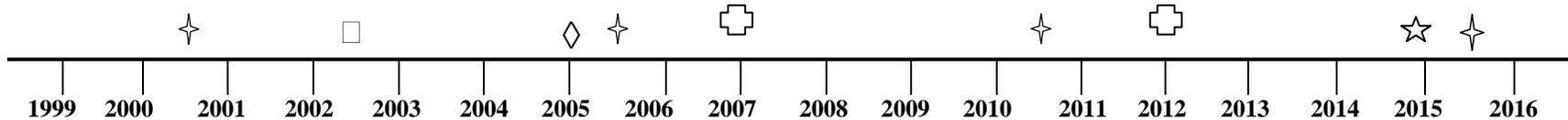
to attain water quality standards. Comment on the effectiveness of the management measure, how much support the measure was given by the community, what was learned, how the measure might be improved in the future, and any other observations made. This table can be "pulled out" of this template and used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

Table 8. MILESTONES

MANAGEMENT MEASURE	RESPONSIBLE ORGANIZATIONS	STATUS		COMMENT
		PROPOSED	INSTALLED	
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)
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

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 ☆

Prepared By:	Matt Harper		
Agency:	Atlanta Regional Commission		
Address:	40 Courtland Street, NE		
City:	Atlanta	ST:	GA ZIP: 30303
E-mail:	mharper@atlantaregional.com		
Date Submitted to EPD:	August 30, 2004	Revision:	#1

The preparation of this report was financed in part through a grant from the U.S. Environmental Protection Agency under the provisions of Section 106 or Section 604(b) of the Federal Water Pollution Control Act, as amended.

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
Alice Champagne / Upper Chattahoochee Riverkeeper	916 Joseph Lowery Blvd	Atlanta	GA	30318	404-352-9828	achampagne@ucriverkeeper.org
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 Crescent 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 Ajy / 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

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
White Oak Creek TMDL Segment
(Fulton County)
In the
Chattahoochee River Basin
July 2004

Visual Field Survey
For
White Oak Creek TMDL Segment
(Fulton County)
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

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

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1.0 INTRODUCTION

1.1 Location

White Oak Creek is located in the southern portion of the Atlanta Metropolitan region in South Fulton County. As shown in Figure 1, the White Oak Creek watershed extends from South Fulton County southwest into the northern edge of Coweta County. While the watershed covers land in both Fulton and Coweta Counties, the majority of the watershed and the entire TMDL segment are located in Fulton County. The TMDL segment begins approximately 6625 ft. upstream of the bridge crossing on Campbellton Redwine Road, which is the only road crossing on the White Oak Creek TMDL segment.

1.2 Watershed Description

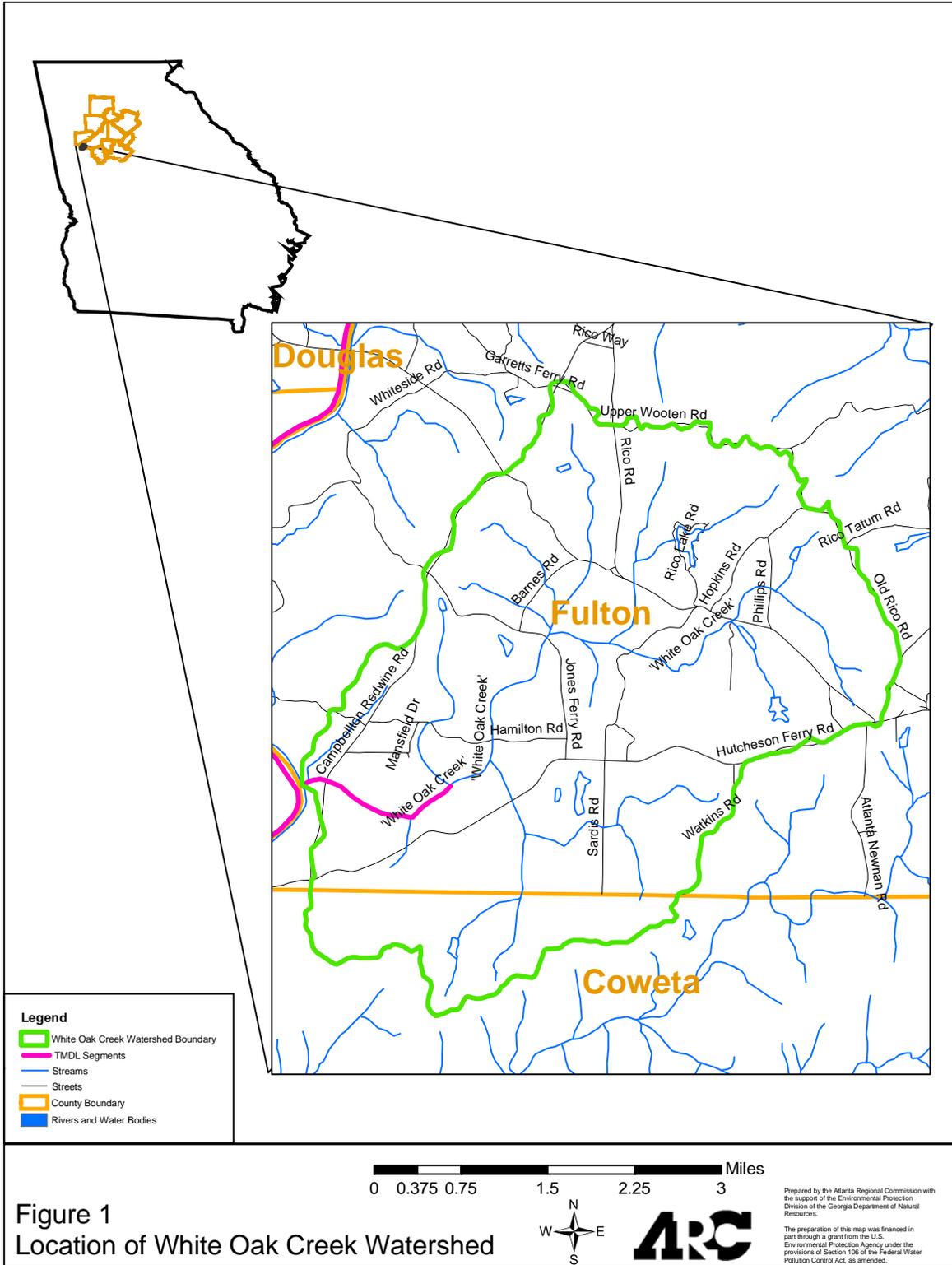
The White Oak Creek Watershed is comprised of 10604 acres of land within Fulton County. The White Oak Creek Watershed is located within HUC 10 – 0313000203 and HUC 12 – 031300020312. Mapping of the watershed shows that land cover within the watershed is predominately forest that accounts for 66% of the area. The percentages of all land covers are presented below in Table 1. Table 2 outlines how ARC’s land cover categories have been 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	7011.61	66.12%	40, 171, 172, 173
Agricultural Lands	2267.05	21.38%	21, 22, 23, 24
Low-Density Residential	727.23	6.86%	111
Water/Wetland	598.34	5.64%	51, 53, 60
Total Acres	10604.23	100.00%	

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 Mineds	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



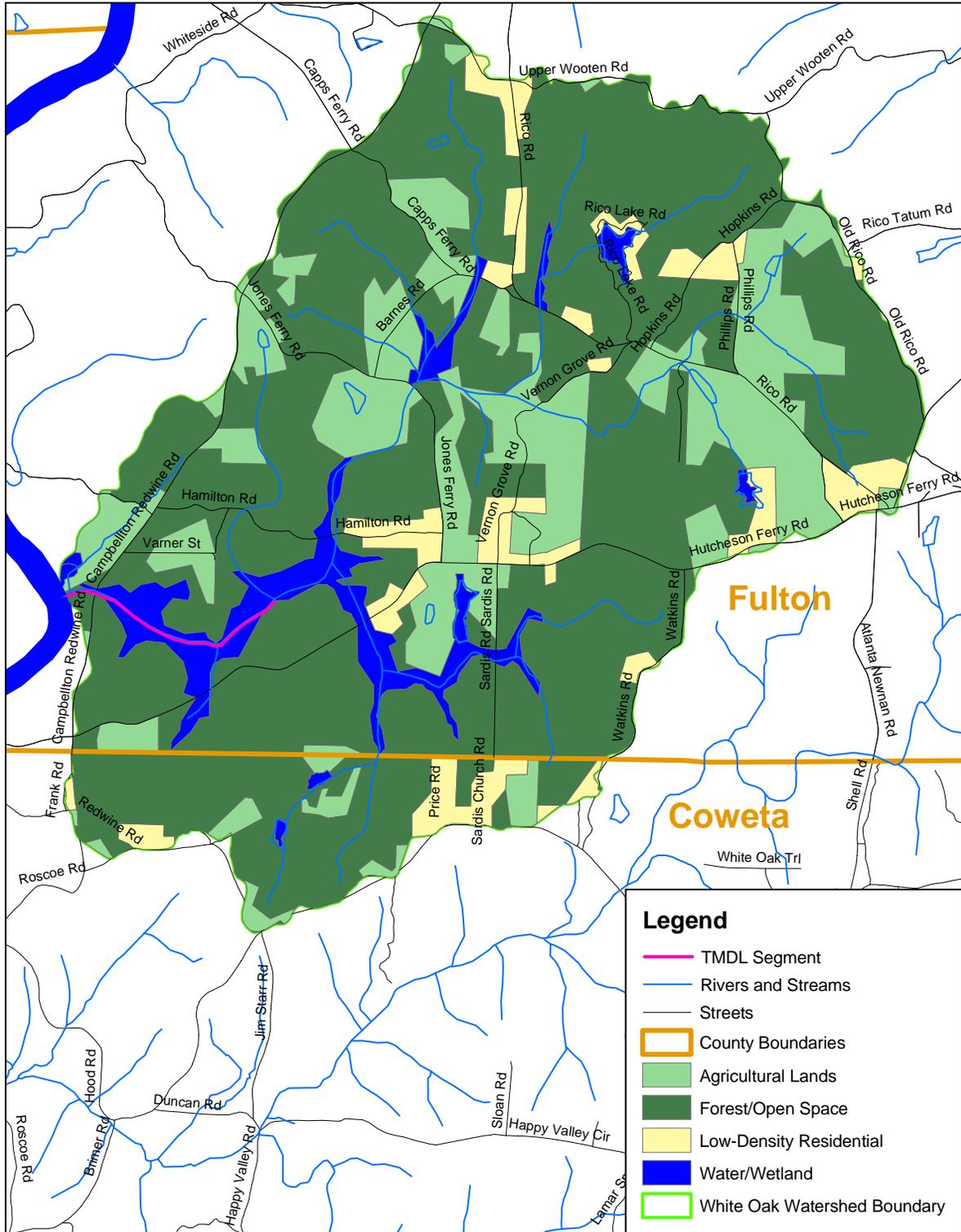


Figure 2
ARC 2001 Land Cover for
White Oak Creek Watershed



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.

2.0 METHODOLOGY

Using guidance documents provided by the state, a field assessment of the watershed was conducted. The initial step was a windshield survey of the watershed area adjacent to the White Oak Creek TMDL segment. Following completion of the windshield survey, a foot survey of the stream segment was performed where access permitted. The purpose of the visual field survey was to identify and observe possible sources of pollution. Observations were documented and captured in photographs of the stream channel and its surroundings.

3.0 FIELD FINDINGS

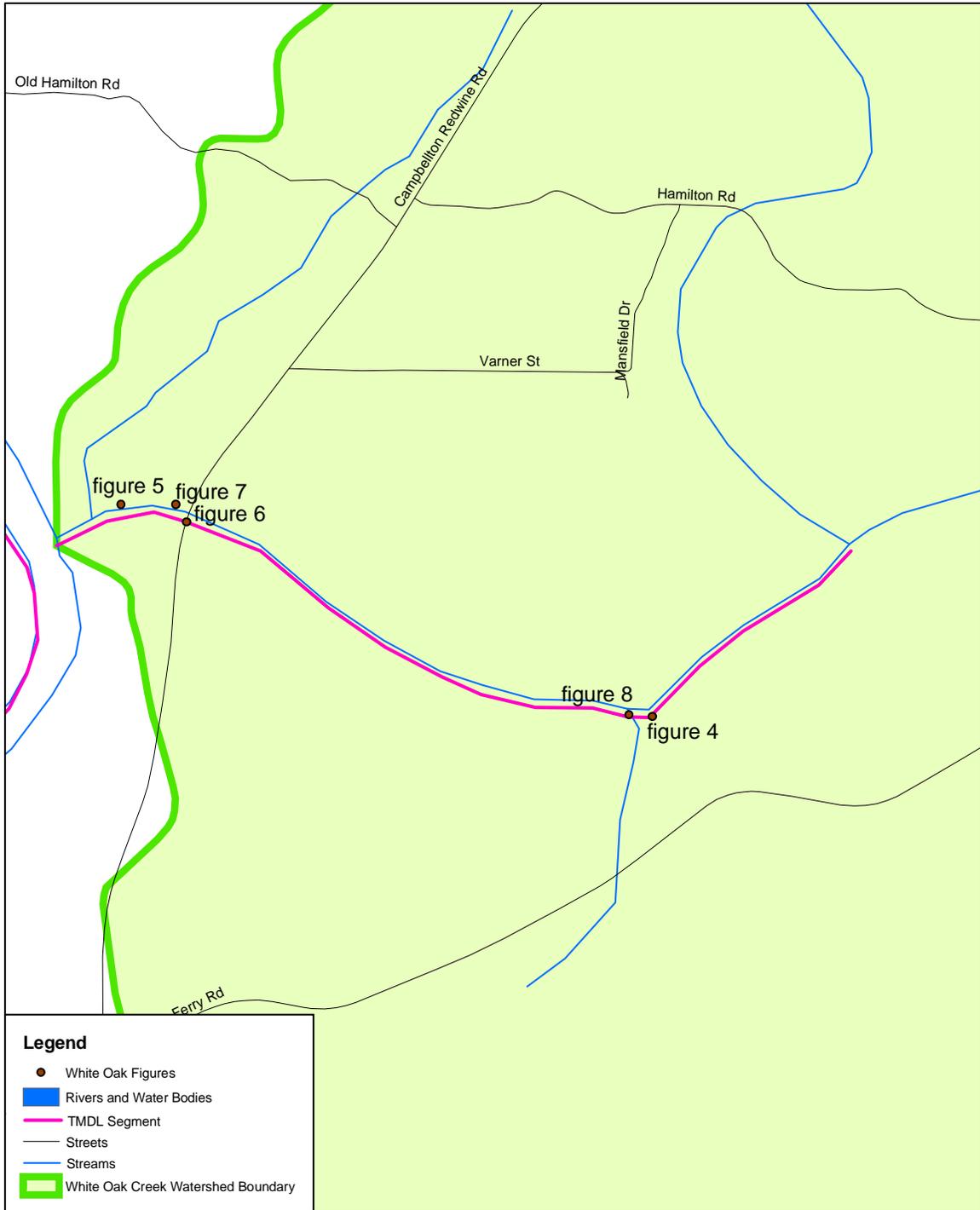
3.1 General Characteristics

The field findings discussed here are the results of the visual survey performed largely on foot throughout the designated 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 3.

The White Oak Creek TMDL segment is bordered by a vegetative buffer that is moderately wooded with occasional areas of thick brush. The rural character of the watershed is reflected in the lack of development adjacent to the stream. General stream character is shown in Figures 4 and 5. Figure 4 is an example of the stream's appearance in the upstream portion, while Figure 5 shows downstream areas close to the confluence with the Chattahoochee. Downstream of the Campbellton Redwine Road bridge, the stream has very low to no flow and exhibits backwater characteristics. Throughout the White Oak Creek TMDL segment there is evidence of high water that likely occurs due to backups from the Chattahoochee River (Figure 6).

There are frequent areas of erosion within the stream channel as shown in Figure 7. There is occasional large litter in the streambed and significant small litter on the stream banks at the Campbellton Redwine Road crossing. Throughout the segment the water often appeared cloudy and somewhat opaque. Approximately 3375 feet from the beginning of the TMDL segment, a tributary stream flows into White Oak Creek from the south. At the confluence of these two streams there was a plume of sediment and an apparently manmade drainage ditch flowing into the stream (Figure 8).

Potential sources affecting the overall health of the White Oak Creek TMDL segment are discussed in the Point Source and Non-point Source sections.



Legend

- White Oak Figures
- Rivers and Water Bodies
- TMDL Segment
- Streets
- Streams
- White Oak Creek Watershed Boundary

Figure 3
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 106 of the Federal Water Pollution Control Act, as amended.

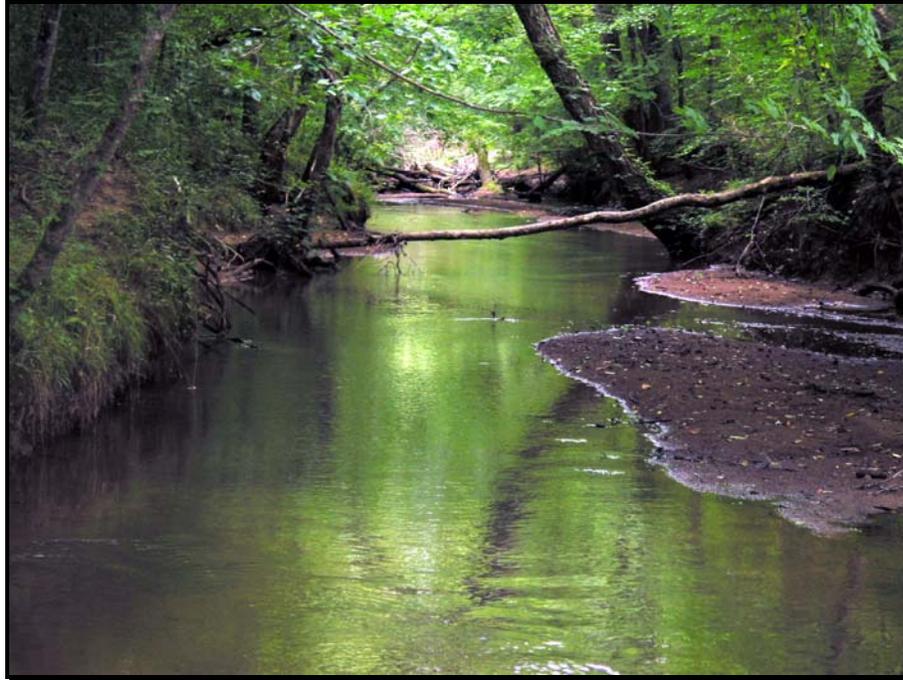


Figure 4. General stream appearance looking upstream from confluence with tributary



Figure 5. Stream channel near confluence with Chattahoochee (looking across)



Figure 6. Sediment covered rocks under Campbellton Redwine Road



**Figure 7. Erosion on right bank downstream of Campbellton Redwine Road
(looking downstream)**



Figure 8. Drainage ditch at confluence with tributary (looking upstream)

3.2 Point Sources

There are no permitted point source discharges in the White Oak Creek TMDL segment watershed.

3.3 Non-Point Sources

The White Oak Creek TMDL segment watershed is largely undeveloped, and any developed areas are served only by septic systems. Evidence of the presence of wildlife was observed frequently in the streambed as well as in areas adjacent to the stream. There were deer and raccoon tracks throughout the section.

Horse farms were common throughout the White Oak Creek TMDL segment watershed, but none were observed directly adjacent to the TMDL stream segment.

4.0 RANKS ASSIGNED TO POLLUTION SOURCES

Wildlife is considered a moderate source of fecal coliform bacteria affecting this entire TMDL segment. Leaking or failing septic tank systems are considered a small source affecting sporadic areas of the White Oak Creek TMDL segment. Another moderate source contributing to elevated fecal coliform levels in the White Oak Creek TMDL segment is the backup of the Chattahoochee River into White Oak Creek.

5.0 SUMMARY OF FINDINGS

There are no permitted point source discharges in the White Oak Creek watershed. The field survey and background investigation identified non-point sources such as wildlife and urban runoff. Additionally, field observations showed evidence that the Chattahoochee River often backs up White Oak Creek to the bridge at Highway 70 (Campbellton Redwine Road on Figure 1). The sampling point for the state data on fecal coliform levels in White Oak Creek was the Highway 70 bridge. The content of the samples on the day they were collected may have been affected by such a back-up from the Chattahoochee River. Proposed management practices to address fecal coliform have been provided by local governments and are outlined in the 2004 White Oak Creek TMDL implementation plan in tables 5, 6 and 7.

6.0 STAKEHOLDER INVOLVEMENT

Local government staff was informed of the date fieldwork would occur. Results have been made available and discussed with local government staff.

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