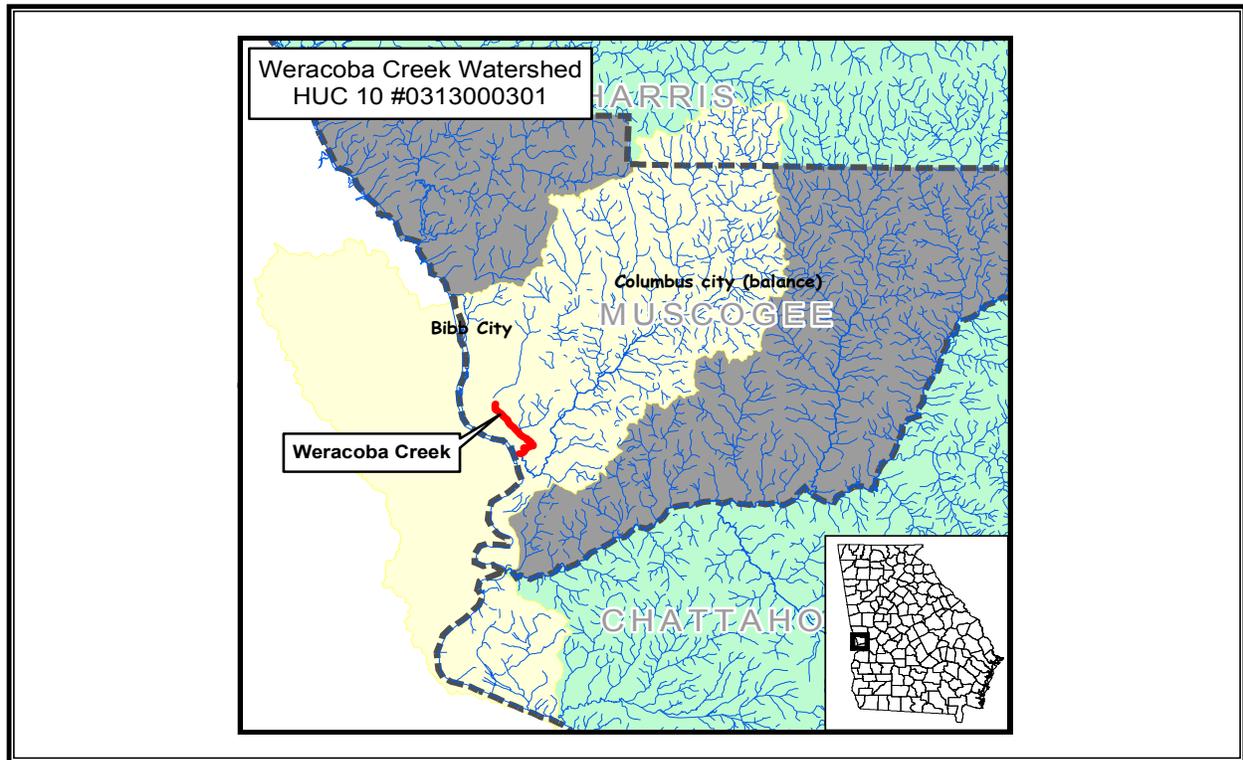


**STATE OF GEORGIA  
TMDL IMPLEMENTATION PLAN**

**WERACOBA CREEK  
(Fecal Coliform)**

Prepared by  
The Georgia Department of Natural Resources  
Environmental Protection Division  
Atlanta, GA

TMDL Implementation Plans are platforms for establishing a course of actions to restore the quality of impaired water bodies in a watershed. They are intended as a continuing process that may be revised as new conditions and information warrant. Procedures will be developed to track and evaluate the implementation of the management practices and activities identified in the plans. Once restored, appropriate management practices and activities will be continued to maintain the water bodies. The overall goal of the Plan is to define a set of actions that will help achieve water quality standards in the state of Georgia. This plan was originally prepared as an implementation inventory by the Lower Chattahoochee RDC with a Section 604(b) Grant. TMDL load allocation information has been updated to reflect the approved TMDL.



Impaired Waterbody*	Impaired Stream Location	River Basin	Miles/Area Impacted	Partially Supporting/ Not Supporting
Weracoba Creek	Columbus	Chattahoochee	6	Not Supporting

## **Weracoba Creek TMDL Implementation Plan**

Weracoba Creek, located in Muscogee County, Georgia, is approximately 7 miles long with a watershed area of approximately 5,119 acres. The creek is highly channelized and approximately 1/2 mile of Weracoba Creek flows below grade. It is a tributary of Bull Creek which is the major drainage basin in Muscogee County.

The southerly-most six (6) miles of Weracoba Creek are listed on the State of Georgia's Section 303(d) list for exceeding fecal coliform limits. Weracoba Creek is classified for "Fishing" use for water quality purposes and data collected by the City of Columbus in 1992/93 indicated the creek is not supporting its designated use.

### **General Land Use in the Watershed**

Weracoba Creek's watershed is highly developed with urban and suburban land uses. Some of Columbus' first suburbs are located within the watershed. One of these suburbs is on the National Register of Historic Places and includes Weracoba (Lakebottom) Park. Several other areas in the watershed are eligible for listing on the National Register. Land uses consist of a mix of residential uses (low and medium density single family and multi-family), a wide range of commercial uses in several areas of the watershed, and industrial uses located primarily in the southern portion of the watershed. A large portion of the City's Enterprise Zone is located in the Weracoba Creek watershed. There is very little undeveloped land in the watershed and the undeveloped areas are relatively insignificant in size. All property in the watershed is served by sanitary sewer.

### **Monitoring**

The City of Columbus is currently collecting quality data on a number of creeks within the City. The City submitted sampling data to Georgia EPD in August 2001.

The city has recently installed a water quality monitoring station on Weracoba Creek at Wynnton Road as a part of its 319(h) grant to demonstrate heavy transportation BMP's and to develop a watershed action plan for this type of land use within this creek.

The Columbus Water Works has conducted two years of physical, biological and water chemistry monitoring as a part of its watershed studies. This data has been used to calibrate the EPA BASINS model and set priorities for watershed management. A network of long-term permanent monitoring stations and data management system is planned for implementation to protect drinking water sources and to monitor watershed progress. One of these stations is planned for Weracoba Creek.

### **Potential Fecal Coliform Loading Sources**

The majority of fecal coliform pollution within the watershed is from urban runoff including animal contributions. The public environmental infrastructure (sewers and drainage systems), if not properly managed and maintained, can sometimes be a potential source of bacteria (please see attached letter from Columbus Water Works regarding this issue). The City is currently investigating and designing improvements to its wet weather drainage systems in the lower part of Weracoba Creek that will minimize flooding and reduce the potential of the bacteria contributions from its environmental infrastructure.

### **Existing and Potential Regulatory and Voluntary Actions**

As is indicated in the attached TMDL Implementation Plan template, there are currently 16 regulatory and voluntary measures in place in Muscogee County that are related to addressing water quality issues. Two additional measures are recommended that could be implemented to further address water quality in Muscogee County. One of the additional measures is the adoption of the Georgia Stormwater Manual once it is completed (tentatively scheduled for early 2002) which should have a positive impact on water quality.

The Columbus Water Works has completed a \$95 million program to control pollutants from its combined sewer system. These facilities were subsequently tested and monitored for five years and were demonstrated to meet and exceed water quality requirements of the receiving streams.

The City of Columbus has implemented two projects within the Weracoba watershed to reduce stormwater pollutants. These Best Management Practices (BMPs) include a structure at the METRA bus station and a demonstration project to test alternative technologies at the City's auto maintenance yard. Findings from this project are anticipated to help Columbus map out cost effective strategies for heavy transportation and highly impervious land uses.

In addition the Columbus Water Works initiated a two year monitoring and modeling study and management framework to assess and protect water quality and drinking water watersheds. This program is in its final stages. Recommendations include a permanent monitoring network and data management system and adaptive watershed demonstration projects. The calibrated BASINS model results from this study will be used to request the delisting of Weracoba and other creeks.

The City has fostered a number of environmental education projects involving both youth and adult stewardship programs. The Oxbow Meadows Environmental Learning Center is at the center of many of these activities. Environmental programs and stewardship

groups include RiverKids Network, Adopt-A-Stream, Help the Hooch, and the Boy and Girl Scouts of America.

**Disclaimer**

This narrative and the attached documentation has not been adopted by the local governing body. Lower Chattahoochee RDC staff has worked with City of Columbus and Columbus Water Works staff to develop the TMDL Implementation Plan template and documentation, but until such time that measures are adopted by the City Council, the Implementation Plan and supporting documentation should be considered advisory only.

STATE OF GEORGIA

TMDL IMPLEMENTATION PLAN FOR: Weracoba Creek Fecal Coliform RIVER BASIN: Chattahoochee

(STREAM) (PARAMETER) PLAN DATE:

Prepared by: <u>Perdita Holtz, AICP</u>  <u>Lower Chattahoochee</u> Regional Development Center Address: <u>1428 2<sup>nd</sup> Avenue</u> City: <u>Columbus</u> State: <u>GA</u> Zip: <u>31902</u> e-mail: <u>plannerlcrdc@mindspring.com</u> Date Submitted to EPD: <u>9/28/01</u>		Or Prepared By:  Address: _____ City: _____ State: _____ Zip: _____ e-mail: _____ Date Submitted to EPD: _____	
General Information		Significant Stakeholders	
Obtain this information from the TMDL document or other information. When completed, this document will be a self-contained report independent of the TMDL document.		Identify local governments, agricultural organizations or significant land holders, commercial forestry organizations, businesses and industries, and local organizations including environmental groups with a major interest in this water body.	
TMDL ID (to be entered by EPD)	CHT0000037	Name/Organization	Please see attached sheets
Water body name	Weracoba Creek	Address	
HUC basin name	Chattahoochee	City	State Zip
HUC number	03130003	Phone	e-mail
Primary county	Muscogee	Name/Organization	
Secondary county	NA	Address	
Primary RDC	Lower Chattahoochee	City	State Zip
Secondary RDC	NA	Phone	e-mail
Water body location	West-central/southern portion of Muscogee County	Name/Organization	
		Address	
Miles or area impacted	6 miles	City	State Zip
Parameter addressed in plan	Fecal coliform	Phone	e-mail
Water use classification	Fishing	Name/Organization	
Degree of impairment	Partially supporting use <input type="checkbox"/>	Address	
	Not supporting use <input checked="" type="checkbox"/>	City	State Zip
Date TMDL approved by EPD	February 2003	Phone	e-mail
Impairment due to	Point sources <input type="checkbox"/>	Name/Organization	
	Nonpoint sources <input checked="" type="checkbox"/>	Address	
	Both <input type="checkbox"/>	City	State Zip
<b>Point source-Form A; Nonpoint source-Form B; Both-Form A+B+C</b>		Phone	e-mail

If more, add to comments on last page.

FORM B

SUMMARY OF ALLOCATION MODEL RESULTS FROM TMDL DOCUMENT (existing load, target TMDL, and needed reduction)

EXISTING LOAD	TARGET TMDL	NEEDED REDUCTION
5.64E+11 (counts/30days)	8.60E+10 (counts/30days)	85%

I. IDENTIFY **NONPOINT SOURCE** CATEGORIES AND SUBCATEGORIES OR INDIVIDUAL SOURCES WHICH MUST BE CONTROLLED TO IMPLEMENT LOAD ALLOCATIONS:

List major nonpoint sources contributing to impairment including those identified in TMDL document.

SOURCE	DESCRIPTION OF CONTRIBUTION TO IMPAIRMENT	RECOMMENDED LOAD REDUCTION (FROM TMDL)
Urban runoff	Pollutants from developed areas are washed into the stream	Not specific to this source
Wildlife	Animal life within the watershed	This should be considered natural "background" levels.
Environmental Infrastructure	Inspection, maintenance and management of environmental infrastructure is required to prevent this potential point source contributor to fecal coliform loading. <i>(Please see attached letter from Columbus Water Works regarding this issue).</i>	Not specific to this source

II. DESCRIBE ANY REGULATORY OR VOLUNTARY ACTIONS INCLUDING MANAGEMENT MEASURES OR OTHER CONTROLS BY GOVERNMENTS OR INDIVIDUALS THAT SPECIFICALLY APPLY TO THE POLLUTANT AND THE WATERBODY FOR WHICH THE TMDL WAS WRITTEN, THAT WILL BE ACCOMPLISHED THROUGH RELIABLE AND EFFECTIVE DELIVERY MECHANISMS, AND THAT WILL HELP ACHIEVE THE LOAD ALLOCATIONS IN THE TMDL:

Existing or required regulatory actions

<b>RESPONSIBLE GOVERNMENT, ORGANIZATION OR ENTITY</b>	<b>NAME OF REGULATION/ORDINANCE</b>	<b>DESCRIPTION</b>	<b>ENACTED OR PROJECTED DATE (mm/yy)</b>	<b>STATUS</b>
Georgia DNR EPD	Chattahoochee River Basin Management Plan	Plan to protect, enhance, and restore the waters of the Chattahoochee River Basin by monitoring, regulating, allocating, and managing land uses in the river basin	1997	Ongoing
City of Columbus	Stormwater Management Ordinance	Ordinance designed to manage stormwater. The ordinance regulates the municipal separate storm sewer system; requires developers to implement stormwater management measures; and specifies maintenance, inspections, and ownership of stormwater management facilities.	April, 1997	Active
City of Columbus	Floodplain Ordinance	Regulates development in flood hazard areas.	March, 1992	Active
City of Columbus	Soil Erosion and Sedimentation Control Ordinance	Protects water quality through sedimentation and erosion control by establishing BMPs and regulating land-disturbing activities.	Updated May, 2001	Active
City of Columbus	Buffering, Screening and Landscaping Ordinance	Enacts minimum standards for buffering, screening, and landscaping between different land uses. One of the results is that the amount of impervious surfaces in developments is lessened.	Updated 1999	Active
City of Columbus	Stormwater Design Manual	Establishes guidelines and policies for the design and construction of stormwater management systems.	July, 1999	Active

City of Columbus	Wetland Protection Ordinance	Establishes boundaries around wetlands within the city and limits types and density of development to protect water quality and habitats in these areas.	February, 2000	Active
City of Columbus	Ground Water Recharge Area Ordinance	Establishes requirements to manage land uses within significant groundwater recharge areas.	February, 2000	Active
City of Columbus	Water Supply Watershed Ordinance	Establishes requirements to ensure the protection of Columbus' drinking water supply.	February, 2000	Active
Columbus Water Works	Sanitary Sewer and Sewage Disposal Ordinance	Regulates the use of public sewers, including the discharge of industrial waste into the public sewer system.	Last Update: September, 1998	Active
City of Columbus and Columbus Water Works	Monitoring water courses	The City and Water Works regularly monitor streams and creeks within Muscogee County to assess water quality issues.	City started in 5/93. Water Works has been monitoring for much longer.	Active
City of Columbus	Annual reporting of the City's Storm Water Management Program under the NPDES permit	The City files an annual report with DNR which details Storm Water Management Program activities.	1996	Active

Existing voluntary actions

<b>RESPONSIBLE ORGANIZATION OR ENTITY</b>	<b>NAME OF ACTION</b>	<b>DESCRIPTION</b>	<b>ENACTED OR PROJECTED DATE (mm/yy)</b>	<b>STATUS</b>
City of Columbus and Columbus Water Works	Monitoring water courses	City has expanded the monitoring program. City is monitoring water quality more than ever before.	2000	Active
City of Columbus and Columbus Water Works	Public Education	A public education program about water and water quality issues is an ongoing activity.	1995	Ongoing

City of Columbus	Storm Water BMP Demonstration for Various Pollutant Removals at the Municipal Auto Maintenance Yard	The controls include a combination of high rate processes intended to perform a number of functions including coalesce colloidal particles, chelate metals, adsorb oil and grease, settle heavy flocs, screen buoyant materials and filter out fine particulates and adsorb soluble pollutants from wet weather discharges. Processes to be tested include charge-specific passive polymer addition followed by the CDS Technologies solids separation and screening unit with various adsorbents followed by a compressed media filter. Another system may include a solids separation tank such as a Grit King, followed by a multi-media filter for adsorption and filtration (Stormwater Management, Inc.). The two side-by-side facilities will be implemented and monitored to determine technology performance and O&M requirements. The project is an integral element of a larger Weracoba Creek watershed Action Plan that will calibrate and use the EPA BASINS model to determine total watershed loads and assess load reductions if the proposed BMP's are implemented for similar land use throughout the watershed.	2001	Ongoing
City of Columbus	Storm Water Oil & Grit Separator for METRA Transit Authority	City recently purchased and installed a storm water treatment system (Oil & Grit Separator) at the METRA Transfer Station located on Linwood Boulevard. The unit intercepts and treats the oil and fuel-contaminated storm water runoff generated on the six-acre site that drains into Horseshoe Branch (a tributary of Weracoba Creek) removing Hydrocarbon and Solids loadings from the watershed. The City of Columbus' Storm Water Management Division will be evaluating this unit in the near future in order to	2001	Installed

		determine its effectiveness in removing pollutant loads and O&M costs.		
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Additional recommended regulatory or other measures which should be implemented to reduce the loads of the TMDL parameter

ENTITY/ORGANIZATION RESPONSIBLE	NAME OF PROPOSED REGULATION/ORDINANCE/ OTHER	DESCRIPTION	ENACTED OR PROJECTED DATE (mm/yy)	STATUS
City of Columbus	Georgia Stormwater Management Manual	The City intends to adopt the Georgia Stormwater Manual once the final draft is completed. The Manual is a collection of recommended BMPs to be used to address stormwater.	Tentative Projected Date is early 2002	Active
Citizens of Muscogee County	Adopt-A-Stream program	A Georgia DNR, EPD, program designed to raise public awareness about water quality	TBA	TBA

III. SCHEDULE FOR IMPLEMENTING MANAGEMENT MEASURES OR OTHER CONTROL ACTIONS:

These must be implemented as expeditiously as practicable within five years of when the implementation plan is accepted by EPD.

IMPLEMENTATION ACTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Form stakeholders group	X				
Organize implementation work with stakeholders and local officials to identify remedial measures and potential funding sources	X				
Identify sources of TMDL parameter <i>(this action has been completed as part of this document)</i>	X				
Develop management programs to control runoff including identification and implementation of BMPs (Phase I):					
Agriculture	NA				
Forestry	NA				
Urban	X	X			
Mining	NA				
Organize and implement education and outreach programs <i>(this action is currently an ongoing action as an activity related to the City's NPDES permit)</i>	X	X	X	X	X
Detect and eliminate illicit discharges <i>(this action is currently an ongoing action as an activity related to the City's NPDES permit)</i>	X	X	X	X	X
Evaluate additional management controls needed			X	X	X
Monitor and evaluate results			X	X	X
Reassess TMDL allocations				X	X
Provide periodic status reports on implementation of remedial activities	X	X	X	X	X
If needed, begin process for Phase II (next 5 years) and subsequent phases					X

IV. PROJECTED ATTAINMENT DATE AND BASIS FOR THAT PROJECTION:

The projected attainment date is 10 years from acceptance of the implementation plan by EPD.

V. MEASURABLE MILESTONES:

- Number of management controls and activities already implemented 16
- Number of management controls and activities proposed in five-year work program 2

- Number of management controls and activities actually implemented in five-year work period \_\_\_\_\_(to be completed after 5 years)
- Stream sampled to identify areas of concern See monitoring plan
- Other \_\_\_\_\_
- Other \_\_\_\_\_

VI. MONITORING PLAN:

Monitoring data that placed stream on 303(d) list will be provided if requested.

Describe previous or current sampling activities or other surveys to detect sources or to measure effectiveness of management measures or other controls.

ORGANIZATION	TIME FRAME	PARAMETERS	PURPOSE	STATUS
City of Columbus and Columbus Water Works	Ongoing since 1990	Broad spectrum of elements/pollutants	Reporting for permit purposes and general baseline knowledge	Ongoing and Active
Columbus Water Works	1999	Broad spectrum of elements/pollutants and aquatic biology	Sampling for Watershed Assessment Study	Watershed Assessment draft should be available in October 2001

Describe any planned or proposed sampling activities or other surveys. (Scheduled EPD sampling can be found in the Basin Planning document.)

ORGANIZATION	TIME FRAME	PARAMETERS	PURPOSE	STATUS
EPD	2004 or 2005	All elements/pollutants normally tested	basin planning - individual water bodies have not yet been chosen	Scheduled
City of Columbus and Columbus Water Works	Ongoing	Broad spectrum of elements/pollutants and aquatic biology	Permit reporting and general knowledge, watershed assessment, drinking water protection, and management framework.	Active

Columbus Water Works Permanent Watershed Monitoring and Data Management Network	2002 or 2003	Physical, Chemical and Biological	Drinking Water and Water Quality Assessment, Protection and Progress Monitoring	Planned pending funding
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VII. CRITERIA TO DETERMINE WHETHER SUBSTANTIAL PROGRESS IS BEING MADE:

- % concentration or load change (monitoring program)
- Categorical change in classification of the stream (delisting the stream is the goal)
- Regulatory controls or activities installed (ordinances, laws)
- Best management practices installed (agricultural, forestry, urban)

COMMENTS

The Columbus Water Works, on behalf of the City of Columbus, has initiated a Delisting Request for this stream. This document will utilize the two years of watershed monitoring data and calibrated BASINS model to justify the delisting request. The document will also provide updates to this TMDL template and the overall watershed management framework and long-term monitoring network that is being recommended for the Columbus area.

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

**Weracoba Creek Watershed (Muscogee County)**  
**Property Owners of Parcels 5 acres or more in size**

St. Francis Hospital  
P.O. Box 7000  
Columbus, GA 31995

Moorhead Investment Co.  
P.O. Box 12446  
Atlanta, GA 30355

Lummus Corporation  
P.O. Box 4259  
Savannah, GA 31407-4259

Interstate Bakeries Corp.  
P.O. Box 419627  
Kansas City, MO 64141-6627

Linda & Roger Brown  
P.O. Box 157  
Midland, GA 31820

Watkins Terminals Inc.  
P.O. Box 1738  
Atlanta, GA 30301-1738

Housing Authority of Columbus  
P.O. Box 630  
Columbus, GA 31902

American Legion of Georgia  
3361 North Lumpkin Rd.  
Columbus, GA 31903

Davis Broadcasting Inc.  
2203 Wynnton Rd.  
Columbus, GA 31906

Fountain City Chapter 56  
P.O. Box 3560  
Columbus, GA 31903

Dan M. Snavely Jr.  
1133 4<sup>th</sup> St.  
Columbus, GA 31901

JT Milligan  
3745 C US Hwy 80 West  
Phenix City, AL 36870

City of Columbus  
P.O. Box 1340  
Columbus, GA 31902

Spelman-Hung Capital LLC  
1415 Dartmouth Rd.  
Columbus, GA 31904

East Porterdale Cemetery  
P.O. Box 1340  
Columbus, GA 31902

Sunstates Refrigerated Service Inc.  
600 Andrews Rd.  
Columbus, GA 31906

State of Georgia  
318 10<sup>th</sup> Ave.  
Columbus, GA 31901

Robian Holdings Inc.  
532 Andrews Rd.  
Columbus, GA 31906

Jackson Stonewall Investment Co.  
P.O. Box 2547  
Columbus, GA 31902

Vista Estates LLC  
2109 Springdale Dr.  
Columbus, GA 31906

Muscogee County School District  
1200 Bradley Dr.  
Columbus, GA 31901

Southern Region Industrial Realty  
C/o Norfolk Southern  
110 SE Franklin Rd.  
Roanoke, VA 24042-0028

Country Club of Columbus  
P.O. Box 1339  
Columbus, GA 31993

## Weracoba Creek TMDL Implementation Plan Stakeholders

Mayor Bobby Peters  
City of Columbus  
P.O. Box 1340  
Columbus, GA 31902

Carmen Cavezza  
City Manager  
City of Columbus  
P.O. Box 1340  
Columbus, GA 31902

Michael Burgess  
Stormwater Division Chief  
City of Columbus  
P.O. Box 1340  
Columbus, GA 31902

Billy Turner  
Columbus Water Works  
P.O. Box 1600  
Columbus, GA 31902

Guy Sims  
Muscogee County School District  
1200 Bradley Drive  
Columbus, GA 31906

Dr. Zsolt Koppanyi  
Columbus Health Dept.  
2100 Comer Ave.  
Columbus, GA 31901

Mike Gaymon  
Greater Columbus Chamber of  
Commerce  
P.O. Box 1200  
Columbus, GA 31902-1200

Richard Smith  
County Extension Agent  
P.O. Box 1340  
Columbus, GA 31902

Skip Teaster  
Valley Partnership  
P.O. Box 1200  
Columbus, GA 31902-1200

Jack McClung  
USDA-NRCS  
P.O. Box 628  
Hamilton, GA 31811

Russell Tanning  
GA Soil & Water Conservation  
Commission  
2700 Palmyra Rd.  
Albany, GA 31707

Robert Hughes  
Georgia Forestry Commission  
243 US Hwy 19 N  
Americus, GA 31709

Lewis Fokes  
USDA-NRCS  
111 Baker St.  
Buena Vista, GA 31803

Jim Phillips  
Chattahoochee Riverkeeper  
P.O. Box 1492  
Columbus, GA 31902

Susan Kleto  
Trees Columbus, Inc.  
P.O. Box 1531  
Columbus, GA 31902

Gloria Weston-Smart  
Keep Columbus Beautiful Commission  
685 Front Ave.  
Columbus, GA 31901