

Willacoochee River Watershed

Ben Hill, Berrien, Irwin, Atkinson, and Coffee Counties

City of Fitzgerald

HUC 10 # 0311020205

TMDL Implementation Plan

The Willacoochee River Watershed is located within the Hydrologic Unit Code (HUC) # 0311020205. This includes Ben Hill, Berrien, Irwin, Atkinson, and Coffee Counties as well as the City of Fitzgerald. Within this watershed are Turkey Branch and the Willacoochee River. The segment of Turkey Branch, from the headwaters to the Willacoochee River downstream Fitzgerald, is listed on the 303(d)/305(b) list for low dissolved oxygen (DO) and Fecal Coliform (FC). Two segments of the Willacoochee River (1) from SR 158 to the Alapaha River and (2) Turkey Branch, upstream SR 90 and U.S. Hwy 319 north of Ocilla to SR 90, S.E. of Ocilla, have been listed on the 303(d)/305(b) list for low dissolved oxygen (DO). Since Turkey Branch and the Willacoochee River are located in primarily forested or agricultural lands, the main cause for the low DO can be contributed to naturally occurring causes, organic matter in the streams, and run-off causing nutrient build-up. Other sources that may cause the low DO and FC are animal waste, failing septic tanks, and improper methods of trash collection and disposal, and industrial discharges. South Georgia has also been under drought conditions for the past four to six years causing extremely low flow levels in Turkey Branch and the Willacoochee River.

In 2000, a Total Maximum Daily Load (TMDL) was prepared for FC on Turkey Branch, in 2001, a TMDL was prepared for DO on the two segments of the Willacoochee River, and in 2002, a TMDL was prepared for DO on Turkey Branch. A TMDL outlines the amount of pollutants a stream can have and still be classified as healthy. For Turkey Branch, the TMDL states that 8 miles are impaired and not supporting the use classification of fishing. It requires for FC a 77% load reduction for Turkey Branch and for DO a 25% (point source) and 57% (non-point) reduction to fully support the fishing classification. The TMDL states that the 11-mile segment of the Willacoochee River (1) is partially supporting the use classification of fishing and for DO a 38% load reduction is required to fully support the fishing classification. The TMDL states, for the Willacoochee River (2), that 13 miles are impaired and partially supporting the use classification of fishing. It requires a 38% load reduction for DO to fully support the fishing classification in the Willacoochee River (2).

When developing this plan, professional organizations, such as the University of Georgia Extension Service and the Natural Resource Conservation Service (NRCS) were used to gather information about the stream and identify stakeholders. Local residents were used to gather information about the stream segment since stakeholder input was a critical element in developing this plan. A survey form was designed and distributed so that stakeholders had the option to participate in addressing their concerns privately.

The action plan consists of voluntary practices businesses and individuals can do at home and at work to reduce the amount of pollutants coming from nonpoint sources. The management measures are measures that are currently in place such as land development regulations as well as best management practices (BMPs) for agriculture and forestry. These management measures will ensure proper development of land around Turkey Branch and the Willacoochee River, thus controlling the amount of pollutants entering the streams. A few examples of the regulatory measures are NPDES Permits, Well and Septic Ordinances, Zoning Ordinances, Local Wetlands Policy Ordinances and some voluntary measures are nutrient management plans, soil erosion control, and conservation easements.

One of the key elements of these implementation plans are the monitoring plans, in particular, water quality testing. It is important to continue monitoring Turkey Branch and the Willacoochee River to determine if the water quality is improving and the management measures are working. The water quality testing will also determine if the action plans are working or needs to be revised. Currently, there are monitoring plans being done at National Environmentally Sound Production Agriculture Laboratory (NESPAL). NESPAL studies streams in the entire Suwannee Basin, however, the most extensive monitoring programs and studies are on the Little River watershed. This work is in conjunction with the USDA-ARS Southeast Watershed Laboratory.

“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 EPD has set the final project date as 2012 and we feel that the 10 years from the acceptance of the TMDL Implementation Plan is an appropriate timeframe to achieve and maintain a healthier water quality for the Suwannee River Basin.

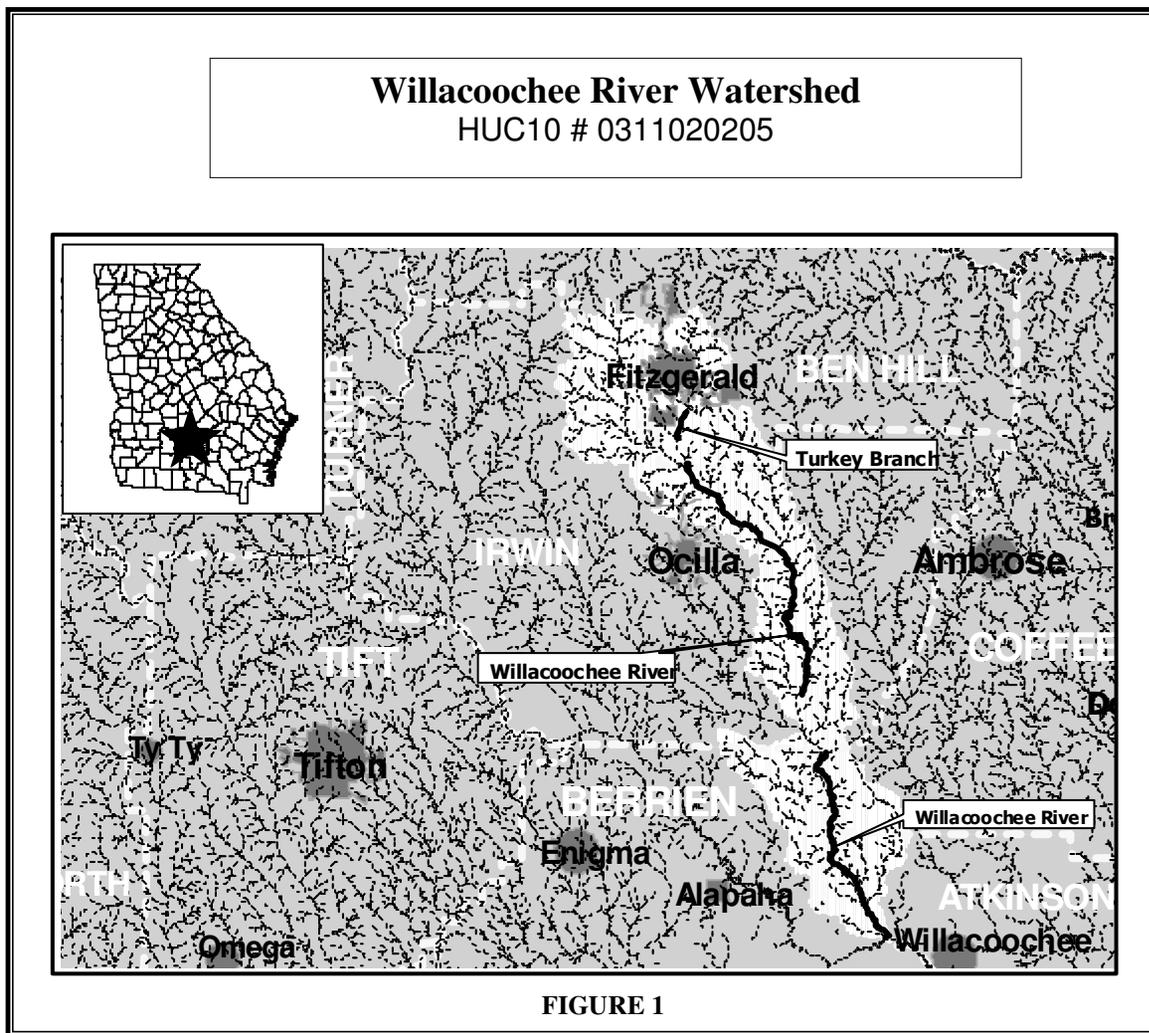
STATE OF GEORGIA
TMDL IMPLEMENTATION PLAN
WATERSHED APPROACH

SUWANNEE RIVER BASIN

Local Watershed Governments
 South Georgia RDC
 Ben Hill County
 Berrien County
 Irwin County
 City of Fitzgerald

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. **With input from appropriate stakeholder groups, a TMDL Implementation Plan has been developed for a cluster of impaired streams and the corresponding pollutants.** The impaired streams are located in the same sub-basin identified by a HUC10 code (Figure 1).

This Implementation Plan addresses an action plan, education/outreach activities, stakeholders, pollutant sources, and potential funding sources affecting the sub-basin. In addition, the Plan describes (a) regulatory and voluntary practices/control actions (*management measures*) to reduce target pollutants, (b) milestone schedules to show the development of the management measures (*measurable milestones*), (c) a monitoring plan to determine the efficiency of the management measures and measurable milestones, and (d) criteria to determine whether substantial progress is being made towards reducing pollutants in impaired 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. Following this section is information regarding individual segments.



Impaired Water body*	Impaired Stream Location	Impairment
1. Turkey Branch	Headwaters to Withlacochee River downstream Fitzgerald	Low DO, FC (The EPD has prepared separate Implementation Plans for Cd, Cu, Pb, Tox, Zn)
2. Willacoochee River	SR 158 to Alapaha River	Low DO
3. Willacoochee River	Turkey Branch, upstream SR90/U.S. Hwy. 319 N. of Ocilla to SR 90, S.E. of Ocilla	Low DO

*These Water body Numbers are referenced throughout the Implementation Plan.

Action Plan for Willacoochee River Watershed

Willacoochee River Watershed
HUC10 # 0311020205

POLLUTANT:	SOURCE:	EFFECT:	WHAT CAN I DO?	
			At Home: Community, School	At Work: Business, Government
<input checked="" type="checkbox"/> Dissolved Oxygen (DO) <input checked="" type="checkbox"/> Fecal Coliform (FC) <input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Metals <input type="checkbox"/> Fish Consumption Guidelines (FCG) <input type="checkbox"/> Other (Please List)	<input checked="" type="checkbox"/> Industrial <input checked="" type="checkbox"/> Urban <input checked="" type="checkbox"/> Agriculture <input checked="" type="checkbox"/> Forestry <input checked="" type="checkbox"/> Residential <input checked="" type="checkbox"/> Other (Please List)	<input checked="" type="checkbox"/> Habitat <input checked="" type="checkbox"/> Recreation <input type="checkbox"/> Drinking Water <input checked="" type="checkbox"/> Aesthetics <input type="checkbox"/> Other (Please List)	<p>Lawn and Garden Care: Ways to reduce the water demands on landscape:</p> <ul style="list-style-type: none"> • Reduce the size of watered areas in your yard; i.e. Use pine straw or beds of drought-tolerant plants such as English Ivy, Liriope, Blue Rug or Prince of Wales • Place 3-5 inches of mulch on the soil surface around flowers, shrubs, and trees to reduce evaporative water loss from the soil • Place 2-3 sheets thick of newspaper on the soil surface, moisten it, and then place the mulch on top. The newspaper will add a barrier to prevent water loss and will also enrich the soil when it decomposes • Target irrigation to plants that show signs of moisture stress • Use a water hose instead of a sprinkler to water plants that need water • Sweep areas clean instead of washing them off with a water hose • Remove and dispose of any pet waste so that it will not be washed away into a water source; i.e., flush it down the toilet, bury it in the yard, compost pile, or put it in the trash. <p>Home Care:</p> <ul style="list-style-type: none"> • Do not use toilets for anything other than their intended use. • Check septic tanks for leaks <p>Trash Pickup:</p> <ul style="list-style-type: none"> • Visually inspect containers and report damage or leaks • Keep container secure at all times • Ensure that trash is picked up on a regular schedule <p>Household Cleaners:</p> <ul style="list-style-type: none"> • Follow storage and disposal instructions of household chemicals which are usually located on the back of the product • Follow directions on usage of chemicals • Control and cleanup spills according to instruction of manufacturer 	<p>Landscaping: Ensure that contracted lawn services adhere to:</p> <ul style="list-style-type: none"> • Reduce the size of watered areas in your yard; i.e. Use pine straw or beds of drought-tolerant plants such as English Ivy, Liriope, Blue Rug or Prince of Wales • Select appropriate plants for a water-use landscape; i.e. Turf grass and ornamental plants: certain ones are drought tolerant while others require regular irrigation • Follow directions on usage of chemical and fertilizers <p>Agricultural:</p> <ul style="list-style-type: none"> • Use Best Management Practices (BMP's) for agricultural such as: tree or grass buffers, cover crops, contour farming and terraces, strip and/or no till, nutrient management, pest management, irrigation water management, pasture management, treated lagoons, catchment ponds, fences that minimize cattle or wildlife from defecating directly in the water, and agriculture waste management <p>Forestry:</p> <ul style="list-style-type: none"> • Use Best Management Practices (BMP's) for forestry to minimize erosion and stream sedimentation from forestry practices such as: timber harvesting, chemical treatments, controlled burning, and streamside management <p>Commercial Chemical Cleaners:</p> <ul style="list-style-type: none"> • Follow storage and disposal instructions of commercial chemicals • Correct usage of chemicals <p>Automotive Care:</p> <ul style="list-style-type: none"> • Regular maintenance of fleet vehicles, check for leaks and the proper disposal of fluids at approved locations <p>Trash Pickup:</p> <ul style="list-style-type: none"> • Visually inspect containers and report damage or leaks • Keep container secure at all times • Ensure that trash is picked up on a regular schedule

Action Plan for Willacoochee River Watershed

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POLLUTANT:	SOURCE:	EFFECT:	WHAT CAN I DO?	
			At Home: Community, School	At Work: Business, Government
			<p>Automotive Care:</p> <ul style="list-style-type: none"> Regular maintenance, check for leaks and the proper disposal of fluids at approved locations <p>Outdoor Groups:</p> <ul style="list-style-type: none"> Practice 'Leave No Trace' habits and hygiene when hiking, camping or any outdoor activities, i.e., dig small holes, away from water sources, to place human and pet waste and then cover up to minimize the number of flies, other disease-carrying insects, and rodents. When boating or traveling, dispose of holding tank and portable toilet wastes properly - at boat pump out and dump stations. <p>Spill/Discharge Control and Cleanup:</p> <ul style="list-style-type: none"> Control and cleanup spills according to instruction of manufacturer <p>Miscellaneous:</p> <ul style="list-style-type: none"> Repair any faucets / pipes that may leak <p>Conservation:</p> <ul style="list-style-type: none"> Find alternatives to using less water 	<p>Sewer Management:</p> <ul style="list-style-type: none"> Routine visual inspections and reports leaks if any noted <p>Municipal Sewage Treatment Plants:</p> <ul style="list-style-type: none"> Follow all applicable regulations as they pertain. There are state and federal requirements that they must follow. Municipalities are subject to strict waste control technology requirements. The requirements, imposed under the federal Clean Water Act, have resulted in significant reductions in pollution from municipalities and other industrial polluters. In addition, human waste (i.e. municipal sludge) must be extensively treated and disinfected before it can be applied to the land. Municipal sewage treatment plants are required to use the best available technologies to treat their waste to reduce water pollution. <p>Conservation:</p> <ul style="list-style-type: none"> Find alternatives to using less water

INFORMATION/EDUCATION/OUTREACH ACTIVITIES

An education/outreach component will be used to enhance public understanding of and participation in implementing the TMDL Implementation Plan.

List of all previous and planned information/education/outreach activities.

Responsible Organization Or Entity	Description	Impacted Water bodies*	Target Audience	Anticipated Dates (MM/YY)
US Fish and Wildlife	The U.S. Fish and Wildlife Service is the principal Federal agency responsible for conserving, protecting and enhancing fish, wildlife and plants and their habitats for the continuing benefit of the American people. The US Fish and Wildlife has numerous activities that relate to water quality, fish, sedimentation and many more that are available on their website.	1, 2, 3	Everyone	Current
National Environmentally Sound Production Agriculture Laboratory (NESPAL)	Research and education efforts to build a better environment for agriculture and rural America	1, 2, 3	Agriculture and rural America	Current
National Environmentally Sound Production Agriculture Laboratory (NESPAL)	319 (h) grant to study dissolved oxygen	1, 2, 3	River Basins in the Southern Coastal Plain, Georgia	Grant applied
Upper Suwannee River Watershed Initiative (USRWI)	Non-Point organizations charged with education / outreach / water related activities within the Suwannee River Basin	1, 2, 3	Established organizations / clubs / citizens of the Suwannee River Basin	Will depend on group interests and funding sources
Seven Rivers Resource Conservation & Development	Non-Profit agency who's goal for environmental protection is to improve the water quality and quantity and preservation of the natural resources in the region	2	Local government officials / citizens / agricultural organizations	Current
South Georgia RDC	The SGRDC offers technical assistance with development regulations	1, 2, 3	Local government officials / Developers	In-progress
South Georgia RDC	To help assist with educational outreach to our local governmental jurisdictions, i.e. City, county and interested individuals	1, 2, 3	Local government officials / citizens	Current
Georgia Adopt-A-Stream	The SGRDC would like to see each school district team up with Georgia Adopt-A-Stream and commit to adopting a stream or streams within their county	1, 2, 3	Established organizations / clubs and/or those interested	Will depend on group interests and funding sources
South Georgia RDC / Ben Hill, Berrien and Irwin County School Districts	The SGRDC would help Ben Hill, Berrien and Irwin County School Districts target a group or club of interested students, educate them on the water issues that they are faced with, and to encourage them to participate in water monitoring	1, 2, 3	Established organizations / clubs and/or those interested	Will depend on group interests and funding sources
South Georgia RDC / Georgia Department of Community Affairs	Facilitate and educate outreach on water resource related activities, i.e. Water Resource Tool Kit and Water First Program	1, 2, 3	Local government officials / citizens	Current

Georgia Cooperative Extension Services, Ben Hill, Berrien, and Irwin Counties	To provide timely, unbiased research-based information to the public as it relates to agricultural and family consumer science. To improve the quality of the life for all communities in the State of Georgia. The County Extension Agent's duty is to deliver new information and technology from the University of Georgia's Coastal Plain Research Center to the community.	1, 2, 3	Everyone	Current
Natural Resource Conservation Service (NRCS), Ben Hill, Berrien, and Irwin Counties	The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment.	1, 2, 3	Everyone	Current
University of Georgia 4-H Club, Ben Hill, Berrien, and Irwin Counties	The mission of Georgia 4-H is to assist youth in acquiring knowledge, developing life skills, and forming attitudes that will enable them to become self-directing, productive and contributing members of society. This mission is accomplished, through "hands on" learning experiences, focused on agricultural and environmental issues, agriculture awareness, leadership, communication skills, foods and nutrition, health, energy conservation, and citizenship.	1, 2, 3	Students and youth	Current
Georgia Forestry Commission	Conduct forestry Best Management Practices educational training at Master Timber Harvester and continuing logger education programs, civic programs, and landowner meetings.	1, 2, 3	Foresters, timber buyers and loggers, site preparation contractors, landowners	Continuous

STAKEHOLDERS

EPD encourages public involvement and the active participation of stakeholders in the process of improving water quality. Stakeholders can provide valuable information and data regarding their community and the impaired water bodies and can provide insight and/or implement management measures.

List of local governments, agricultural organizations or significant landholders, commercial forestry organizations, businesses and industries, and local organizations including environmental groups and individuals with a major interest in this watershed.

Name/Organization	Address	City	State	Zip	Phone	E-Mail
Hon. Larry Davis, Chairman, Ben Hill County	402-A East Pine Street	Fitzgerald	GA	31750		
Hon. Gerald Thompson, Mayor, City of Fitzgerald	P.O. Box 425	Fitzgerald	GA	31750		
Henry Tyson, Fitzgerald City Administrator	Municipal Building	Fitzgerald	GA	31794		

Jack Bryant, Ben Hill County Administrator	401 East Central Avenue	Fitzgerald	GA	31750		
Wayne Lancaster, Supervisor Water and Sewer Services, City of Fitzgerald	P.O. Drawer F	Fitzgerald	GA	31750		
Mary Leidner- NRCS District Conservationist	Tifton Service Center 1468 Carpenter Road S	Tifton	GA	31794	(229) 382- 4776	
Tim Hall- Ben Hill County Extension Coordinator	406 West Palm Street	Fitzgerald	GA	31750	(229) 426- 5175	
Charlene Lankford- Ben Hill County Soil Con Tech	124 W Central Ave	Fitzgerald	GA	31750	(229) 423- 2041	
Berrien County Farm Service Agency	124 W Central Ave	Fitzgerald	GA	31750	(229) 423- 2041	
Hon. Gregg McClellan, Chairman, Berrien County	P.O. Box 446	Nashville	GA	31639	(229) 686- 5421	
Hon. James Boone, Mayor, City of Alapaha	P.O. Box 34	Alapaha	GA	31622	(229) 532- 7475	
Hon. Cecil Giddens, Mayor, City of Enigma	P.O. Box 98	Enigma	GA	31749	(229) 533- 4185	
Hon. Carl Camon, Mayor, City of Ray City	P.O. Box 128	Ray City	GA	31645	(229) 455- 2501	
Hon. Thomas Parr, Mayor, City of Nashville	P.O. Box 495	Nashville	GA	31639	(229) 686- 5527	
Dr. Van Whaler, Berrien County Administrator	P.O. Box 446	Nashville	GA	31639	(229) 686- 5421	
Jerry Griner, Street and Sanitation Superintendent, City of Nashville	P.O. Box 495	Nashville	GA	31639	(229) 686- 5527	
Hal Simpson -NRCS District Conservationist	516-A County Farm Road	Nashville	GA	31639	(229) 686- 2363	
Forrest Connelly- Berrien County Extension Coordinator	516-A County Farm Road	Nashville	GA	31639	(229) 686- 5431	
Berrien County Farm Service Agency	Nashville Service Center 516-A County Farm Road Suite 3	Nashville	GA	31639	(229) 686- 2363	
Berrien County 4-H	516-A County Farm Road Suite 1	Nashville	GA	31639	(229) 686- 5431	
Al Browning	P.O. Box 5023	Nashville	GA	31639	(229) 686- 2821	Labfarm1@yahoo.com
Bill Darsey	111 West Main Street	Lakeland	GA	31635	(229) 482- 2495	
Gerald Peele	Rt. 1 Box 489	Lenox	GA	31637		
Sammy Hall	Rt. 1 Box 1310	Nashville	GA	31639	(229) 686- 2378	

Hon. Edwin Davis, Chairman, Atkinson County	P.O. Box 518	Pearson	GA	31642	(912) 422- 3391	jatco@planttel.net
Hon. Jim Mills, Mayor, City of Willacoochee	P.O. Box 508	Willacoochee	GA	31650	(912) 534- 5152	pbrown@willacoochee.com
Hon. Armond Morris, Chairman, Irwin County	207 S. Irwin Avenue	Ocilla	GA	31774	(229) 468- 9441	
Hon. Lamar Royal, Mayor, City of Ocilla	P.O. Box 626	Ocilla	GA	31774	(229) 468-5141	
South Georgia RDC	327 W. Savannah Avenue	Valdosta	GA	31601	(229) 333- 5277	
Gibbs Wilson- Irwin County Extension Coordinator	107 West Fourth Street	Ocilla	GA	31774	(229) 468- 7409	
Roy Joiner- Irwin County Soil Con Tech	107 West Fourth Street	Ocilla	GA	31774	(229) 468- 5936	
Georgia Farm Services Agency	Federal Building Room 102 355 East Hancock Avenue	Athens	GA	30601	(706) 546- 2266	
Irwin County Farm Service Agency	401 Cherry Street	Ocilla	GA	31774	(229) 468- 7491	
Bobby Mathis- Georgia Forestry Commission	3011 US HWY 84 E	Valdosta	GA	31606	(229) 333- 7817	bmathis@gfc.state.ga.us
National Environmentally Sound Production Agriculture Laboratory (NESPAL)	P.O. Box 748	Tifton	GA	31794	(229) 386- 7274	scrow@tifton.cpes.peachnet.edu
Todd Young- Rotary Club	Irwin Farm Bureau PO Box 127	Ocilla	GA	31774		
Irwin County 4-H	107 W. 4 th Street	Ocilla	GA	31774		
John Morgan	P.O. Box 28	Mystic	GA	31769		
Ira Paulk	184 Frank Ch. Rd.	Ocilla	GA	31774		
Howell Taylor	169 Lakeside Drive	Fitzgerald	GA	31750		
Harry Mixon	P.O. Box 145	Ocilla	GA	31774		
Gary Tankersley	227 Old Whitley Crossing	Fitzgerald	GA	31750		
H. Richard Murphy	P.O. Box 512	Ocilla	GA	31774		
Kenneth Sutton	209 W. 3 rd Street	Ocilla	GA	31774		
Scott Carver	463 Alapaha HWY	Ocilla	GA	31774		
Chris Paulk	1055 Satilla Road	Wray	GA	31798		
Jacob Paulk	1786 Satilla Road	Wray	GA	31798		
J.W. Paulk	1778 Satilla Road	Wray	GA	31798		
Jay Roberts	767 Brushy Creek Road	Ocilla	GA	31774		
Clint Owens	210 Sherman Street	Fitzgerald	GA	31750		
Gussie Hengson	801 South Druri Avenue	Ocilla	GA	31774		
Walter Portier	374 Magnolia Road	Ocilla	GA	31774		
Norman Brantley	444 Pinetta Road	Ocilla	GA	31774		

Georgia Forestry Commission	P.O. Box 819	Macon	GA	31202	478-751-3485
Georgia Forestry Association	500 Pinnacle Court, Ste. 505	Norcross	GA	30071	770-416-7621
Southeastern Wood Producers	P.O. Box 9	Hilliard	FL	32046	904-845-7133
Allen Conger	195 Whitewater Road	Fitzgerald	GA	31750	(229) 423- 8901
Wayne Lancaster, Fitzgerald Water, Light and Bond	116 N. Johnson Street	Fitzgerald	GA	31750	(229) 426- 5400
Chip Dorminy, ABCD Farms	248 Lincoln Avenue	Fitzgerald	GA	31750	(229) 423- 4496
Milton Hoggins	709 Ocilla Hwy	Fitzgerald	GA	31750	(229) 423- 7360
Tim Kegebein, Dorminy Bros. Land & Cattle Co.	P.O. Box 870	Fitzgerald	GA	31750	(229) 423- 1159
Clayton Jay Jr., Forward Fitzgerald	101 E. Pine Street	Fitzgerald	GA	31750	(229) 423- 2027
Thurman Griffin	267 Evergreen Road	Fitzgerald	GA	31750	(229) 423- 4694
Fred Smith, Fitzgerald/Ben Hill Development Authority	444 Little County Road	Wray	GA	31798	(229) 359- 3003
Varney Cauley	203 Rhine Road	Fitzgerald	GA	31750	(229) 423- 3278
Kathy Davis	401 Preston Drive	Fitzgerald	GA	31750	
Cam Jordon, City of Fitzgerald	116 N. Johnson Street	Fitzgerald	GA	31750	camjordan@mcms.com

WATER BODIES/STREAMS COVERED IN THIS PLAN:

These impaired streams are located in the same sub-basin identified by a HUC10 code. Most of the information contained in this section comes from the 303(d) list and has been completed by employees of the EPD Water Protection Branch. Data that placed stream on 303(d) list will be provided upon request.

Water body Name #1	Location	Miles/Area Impacted	Use Classification	Partially Supporting/ Not Supporting (PS/NS)
Turkey Branch	Headwaters to Withlacoochee River downstream Fitzgerald	8 miles	Fishing	Not Supporting
Primary County	Secondary County	Second RDC		Source (Point/ Non-point)
Ben Hill				Non-point Point (Municipal Sewage Treatment Plant)

Pollutants	Water Quality Standards (WQS)	Required Reduction	TMDL ID	Date TMDL Established
Fecal Coliform	1,000 per 100 ml (geometric mean Nov-April) 200 per 100 ml (geometric mean May-Oct)	77%		June 2000
Low Dissolved Oxygen	5mg/l (daily average) 4 mg/l (minimum) 0.871 mg/l (EPA WQS)	25% point source 57% non-point source		June 2002

Water body Name #2	Location	Miles/Area Impacted	Use Classification	Partially Supporting/ Not Supporting (PS/NS)
Willacoochee River	SR 158 to Alapaha River	11 miles	Fishing	Partially Supporting
Primary County	Secondary County	Second RDC		Source (Point/ Non-point)
Berrien	Atkinson, Coffee	Southeast Georgia		NP

Pollutants	Water Quality Standards (WQS)	Required Reduction	TMDL ID	Date TMDL Established
Low Dissolved Oxygen	5mg/l (daily average) 4 mg/l (minimum) 3.868 mg/l (EPA WQS)	38%		December 2001

Water body Name #3	Location	Miles/Area Impacted	Use Classification	Partially Supporting/ Not Supporting (PS/NS)
Willacoochee River	Turkey Branch, upstream SR90/U.S. Hwy. 319 N. of Ocilla to SR 90, S.E. of Ocilla	13 miles	Fishing	Partially Supporting
Primary County	Secondary County	Second RDC		Source (Point/ Non-point)
Irwin				NP

Pollutants	Water Quality Standards (WQS)	Required Reduction	TMDL ID	Date TMDL Established
Low Dissolved Oxygen	5mg/l (daily average) 4 mg/l (minimum) 4.489 mg/l (EPA WQS)	38%		December 2001

POTENTIAL POLLUTANT SOURCES

It is important to recognize the potential source(s) causing water quality impairment. Each source must be controlled to comply with target TMDL/Load Allocations for each pollutant. Included is a description of how the sources contribute to the impairment and the water body that is impaired.

List of major non-point source categories and sub-categories or individual sources (Urban Runoff, Agriculture, Forestry, Municipal Sewage Treatment Plant)

Pollutant	Potential Sources of Pollutants	Description of Contribution To Impairment	Impacted Water bodies*
Low Dissolved Oxygen	Natural	Stream below critical conditions: High temperatures and low flow contribute to low levels of dissolved oxygen in the stream	1, 2, 3
Low Dissolved Oxygen / Fecal Coliform	Manufacturing / Industrial discharges	Manufacturing / Industrial runoff that is washed away into nearby water sources, i.e. Chemical runoff or thermal discharge and waste materials.	1
Low Dissolved Oxygen / Fecal Coliform	Urban Development Runoff	Urban runoff from the City of Fitzgerald that is washed away into nearby water sources, i.e. Chemical runoff from lawns, improper removal of trash, organic material such as leaves and yard trimmings, storm water runoff, fluids from parking areas, roads, and sediment erosion.	1
Low Dissolved Oxygen	Rural Development Runoff	Runoff that is washed away into nearby water sources, i.e. Chemical runoff from lawns, improper removal of trash, organic material such as leaves and yard trimmings, storm water runoff, fluids from parking areas, roads, sediment erosion, and chemicals	2, 3
Low Dissolved Oxygen / Fecal Coliform	Failing septic tanks	Effluent leakage due to overflowing sewage systems and leaking collection lines	1, 2, 3
Low Dissolved Oxygen / Fecal Coliform	Animal waste	Animal waste that is deposited and then not properly removed or no lagoon is in place and is then washed into water bodies	1, 2, 3
Low Dissolved Oxygen / Fecal Coliform	Organic matter	Organic matter runoff from wetlands / forest accumulates and then builds up when not properly secured or disposed and direct / lateral leaf litter	1, 2, 3
Low Dissolved Oxygen / Fecal Coliform	Agriculture runoff	Pesticides / Fertilizer runoff causes nutrient build-up in water bodies	1, 2, 3
Low Dissolved Oxygen / Fecal Coliform	Improper methods of trash collection and disposal	Spillage and incorrect disposal of substances into the water bodies or on the surface that is washed into drainage systems or water bodies	1, 2, 3
Low Dissolved Oxygen / Fecal Coliform	Silviculture	Possible introduction of sediment from normal practices and stream crossings when BMPs are not followed. Possible cause of decline in available oxygen resulting from removal of over story trees w/in SMZ resulting in increase in stream temperatures. Leaving logging debris in streams. Possible introduction of nitrogen and phosphorous from fertilization practices.	1, 2, 3
Fecal Coliform	Water Pollution Control Plant (WPCP)	The Fitzgerald C.A. Newcomer WPCP discharge into Turkey Branch. The discharge must meet water quality standards.	1

MANAGEMENT MEASURES, MEASURABLE MILESTONES AND SCHEDULE

(i.e. Local codes and ordinances, Erosion and Sedimentation Control, Storm Water Management, Local water resource monitoring)

The following table lists management measures that have been or will be implemented to achieve water quality standards and the load reductions established in the TMDL. The management measures, including regulatory or voluntary actions or other controls by governments or individuals, specifically apply to the pollutant and the waterbody for which the TMDL was written. A description is provided of how these management measures are/will be accomplished through reliable and effective delivery mechanisms, and how these management measures are/will help achieve the target TMDL. Included is the source of the pollutant, anticipated/past effectiveness of the management measure (very effective, somewhat effective, not effective), the current status (i.e. enforced, in-progress, planning), and measurable milestones and schedule. Milestones are used to measure progress in attaining water quality standards and to determine whether management measures are being implemented.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
NPDES Permit # GA0047236	GAEPD	Permit for Fitzgerald C.A. Newcomer WPCP to discharge into Turkey Branch. The discharge must meet water quality standards.	6/15/99	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
FC, Low DO	Fitzgerald C.A. Newcomer WPCP	1	Very effective

Measurable Milestones	Schedule		Comments
	Start	End	

Refer to permit for milestones

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Georgia Erosion and Sediment Control Act (O.C.G.A 12-7-1)	GAEPD	Provides permitting by local governing authorities for land disturbing activities.	1975 2000 (amended)	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low DO		1, 2, 3	

Measurable Milestones	Schedule		Comments
	Start	End	

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Well and Septic Ordinances	Ben Hill County	Onsite permit process for well and septic tanks.		Enforced	Regulatory
	City of Fitzgerald			Enforced	Regulatory
	Berrien County			Enforced	Regulatory
	Irwin County			Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Septic systems	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Continued compliance with well / septic installation / repair / maintenance. Any public service site is tested on a routine basis to maintain a healthy site. Inspections on private services are checked on a complaint basis only.		Continuous	

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Building Codes	Ben Hill County	Building codes initiate site plan procedures for all forms of land development. This indirectly reduces increased levels of DO in streams, i.e. building front, side, and rear setbacks and voluntary conservation easements on privately owned property. An example of a nonstructural BMP is sediment controls and slope gradient measures.		Enforced	Regulatory
	City of Fitzgerald			Enforced	Regulatory
	Berrien County		1999	Enforced	Regulatory
	Irwin County		1999	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Permit required for construction.		Continuous	SGRDC assists with the administration of this code.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Land Subdivision Ordinance	Ben Hill County	Land Subdivision Ordinances initiate plan review for proposed subdivision. This typically includes sedimentation and water control measures. The lot size of land plays an important role in the amount of runoff that comes from urban and rural areas, i.e. storm water runoff, septic tank leaks or overflow, and erosion controls.	2000	Pending	Regulatory
	City of Fitzgerald			Enforced	Regulatory
	Berrien County		2001	Enforced	Regulatory
	Irwin County		2000	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Urban/Rural Runoff	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Periodic reassessment of effectiveness of ordinance. The ordinances are updated on a periodic basis as developments progress. This is done to prevent overgrowth of developments.	Continuous		SGRDC assists with the administration of this code.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Zoning Ordinance	Ben Hill County	To divide an area into zones or sections reserved for different purposes such as residence, business, and manufacturing to best suit the growth and land uses, also to help with the protection of sensitive areas such as water sources. Promotion of the proper location, height, stories, and size of open spaces along with the density and land uses.	2000	Pending	Regulatory
	City of Fitzgerald			Pending	Regulatory
	Berrien County		2002	Enforced	Regulatory
	Irwin County		2000	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Urban/Rural Runoff	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Periodic reassessment of effectiveness of ordinance.	Continuous		SGRDC assists with the administration of this code.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Groundwater Recharge Area Development ordinance	Ben Hill County	Georgia Planning Act Part V: Environmental Criteria.	2001	Enforced	Regulatory
	Berrien County		2001	Enforced	Regulatory
	Irwin County	This ordinance regulates development of areas designated as high pollution susceptibility due to their location in the regional landscape. A BMP for groundwater protection is sand filters such as vegetation or sand to filter and settle pollutants.	2000	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Urban/Rural Runoff and illegal dumping of trash	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Ongoing protection of sensitive land open for development.	Continuous		SGRDC assists with the administration of this code. Groundwater Recharge areas area very sensitive to pollution and directly effect the quality of all water sources that are related to them.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Local Wetlands Policy Ordinance	Ben Hill County	Georgia Planning Act Part V: Environmental Criteria.	2001	Enforced	Regulatory
	Berrien County		2001	Enforced	Regulatory
	Irwin County	This ordinance regulates development of areas designated as wetlands as defined by the U.S. Army Corps of Engineers as jurisdictional wetlands.	2000	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Urban/Rural Runoff and illegal dumping of trash	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Ongoing protection of sensitive land not open for development.	Continuous		SGRDC assists with the administration of this code.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Protected River Corridor Plan Ordinance	Ben Hill County	Georgia Planning Act Part V: Environmental Criteria.	2001	Enforced	Regulatory
	Berrien County		2001	Enforced	Regulatory
	Irwin County	This ordinance regulates development of areas designated as protected river corridors as they related to development and disturbance of land along protected river corridors.	2000	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Urban/Rural Runoff and illegal dumping of trash	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Ongoing protection of sensitive land open for development along identified river corridors.	Continuous		SGRDC assists with the administration of this code.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Floodplain Management Ordinance	Ben Hill County	100 year / 500 year flood levels are shown on FEMA flood maps		Enforced	Regulatory
	City of Fitzgerald			Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff	1	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
N/A	Continuous		SGRDC assists with the administration of this code

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Local Soil & Sedimentation Ordinance	Ben Hill County	Regulation of BMP's for development Erosion and Sedimentation Control Act (GESA). Requires permits for "land disturbing activities" and requires buffers to be maintained between the land disturbing activity and waters of the state.		Enforced	Regulatory
	City of Fitzgerald			Enforced	Regulatory
	Berrien County			Enforced	Regulatory
	Irwin County			Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Continued enforcement of ordinance will ensure less sedimentation in water bodies.	Continuous		SGRDC assists with the administration of this code.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Suwannee River Basin Management Plan	Georgia Department of Natural Resources	Detailed management plans for the Suwannee River Basin. The purpose of the plan is to develop and implement a basin-planning program to protect, enhance and restore the waters for the State of Georgia, which will provide for effective monitoring, allocation, use, regulation, and management of water resources.	Final draft pending approval March 2002	Pending State approval	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Various Sources	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
1. Implement Monitoring Plan and Compile Detailed Information/Data.	2003-	2004	
2. Analyze and Evaluate Detailed Information, Update Basin Assessment and Priority Issues List, Develop Strategies for Priority Issues, and Stakeholder meeting.	2004-	2005	
3. Continue to Develop Strategies for Priority Issues and Prepare and Update Draft River Basin Plan.	2005-	2006	
4. Agency and Public Review and Hearings, Finalize River Basin Plan, Implement River Basin Plan, and Stakeholder meeting.	2006-	2007	
5. Continue to Implement River Basin Plan and Stakeholder meeting.	2007-	Continuous	

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Establish the Natural Range of Dissolved Oxygen Levels in Streams of the South Georgia Coastal Plain	Georgia DNR-EPD	An extensive stream-monitoring program to establish the DO range naturally occurring during critical stream flow conditions in the South Georgia Coastal Plain.	Spring 2003	Grant Applied Conditionally approved per revisions of proposal	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Naturally Occurring	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Three years of bi-weekly water quality and hydrologic parameter monitoring at a maximum of 60 locations. Annual characterization of study stream morphology; semiannual long term BOD; semiannual benthic and periphyton respiration by respirometer. Evaluation and characterization of study watersheds to establish the dynamics affecting DO in each watershed.	Expected start, Spring 2003;	Expected end, Spring 2006	Piscola Creek watershed monitoring data collected in the past four years show that in summer months 8 highly enriched streams in the midst of intensive livestock and row-crop production have much higher DO values than a comparison “reference” stream. These and other data collected by UGA and USDA-ARS scientists have lead the hypothesis that a combination of high summer-time temperatures, low flows, and high loads of organic carbon contributed by riparian vegetation contribute to naturally low DO levels in unimpacted Coastal Plain streams. A proposal to establish an extensive stream-monitoring program to establish the natural range of DO at critical flow conditions has been submitted to Georgia DNR-EPD administered U.S. Environmental Protection Agency’s Clean Water Act Section 319(h) Grant Program.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Georgia Forestry Commission	State of Georgia	A set of guidelines to better protect Georgia's streams and other water bodies from forestry non-point source pollution (primarily erosion and sedimentation).	Ongoing	Ongoing	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Forestry Runoff	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Some Best Management Practices (BMP's) for forestry to minimize erosion and stream sedimentation from forestry practices are: timber harvesting, chemical treatments, controlled burning, and streamside management. In 1998, 98% of the 43,906 acres that were evaluated were in compliance with the BMP's. In 1992, the stream compliance was 95.5%. The goal is to meet 100% compliance with each BMP.	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Federal Clean Water Act Section 404	EPA (situations involving forestry are normally referred to the GFC to determine compliance with this regulation)	Requires normal ongoing agricultural and silvicultural practice to adhere to BMPs and 15 baseline provisions for road construction and maintenance in and across waters of the US including lakes, rivers, perennial and intermittent streams, wetlands, sloughs in order to qualify for the exemption from the permitting process.	June 6, 1988	Current	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Sediment from dredge or fill activities	Agriculture and silviculture	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
GFC can report status on accomplishments or complaints investigated involving this act to the RDC as needed.	Continuous		EPA identifies silviculture as the lowest contribution source of non-point pollution

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Memo to the Field: Application of BMPs to mechanical silvicultural site preparation activities for the establishment of pine plantations in the Southeast	EPA/ US Army Corps of Engineers - (cases normally referred to GFC to make initial determination)	Identifies certain bottomland hardwood wetlands that should be subject to permitting if converting to pine plantations.	November 1995	Current	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Biota, habitat	silviculture	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
GFC can provide status reports as needed	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Federal Farm Bill (Swamp buster)	US Department of Agriculture Natural Resource Conservation Service	Prohibits landowners participating in federal price support programs from converting forested wetlands to agriculture		Current	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Biota (habitat)	Agriculture	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Status reports can be provided as needed	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Georgia Water Quality Control Act (OCGA 12-5-20)	GA DNR EPD	Makes it unlawful to discharge excessive pollutants (sediments, nutrients, pesticides, animal waste, etc.) into waters of the State in amounts harmful to public health, safety, or welfare, or to animals, birds, or aquatic life or the physical destruction of stream habitats.	1964	Current	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Sediments, nutrients, pesticides, and habitat	Silviculture	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
GFC investigates and mediates silvicultural complaints on behalf of EPD. Unresolved complaints are turned over to EPD for enforcement. Status reports can be provided to RDC as needed.	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
GA Growth Planning Act (OCGA 12-2-8)	GA DNR, Department of Community Affairs, and local units of government	Authorized GA DNR to develop minimum planning standards and procedures that local jurisdictions could adopt and enforce pertaining to the protection of river corridors, mountaintops, water supply watersheds/reservoirs, groundwater recharge areas, and wetlands. Silvicultural activities may be exempted from permitting requirements provided the activity complies with BMPs	1991	Local jurisdictions have to adopt ordinances to address these areas	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Biota, habitat, sediment	Silviculture	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
GFC can determine applicability and BMP implementation for local units of government.	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Farm Bill 2002	Natural Resources Conservation Service (NRCS)	The Farm Security and Rural Investment Act of 2002 is landmark legislation for conservation funding and for focusing on environmental issues. The conservation provisions will assist farmers and ranchers in meeting environmental challenges on their land. This legislation simplifies existing programs and creates new programs to address high priority environmental and production goals. The 2002 Farm Bill enhances the long-term quality of our environment and conservation of our natural resources.	2002	Current	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Various Sources	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
N/A	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Farm Services Agency	State of Georgia / Local FSA	Stabilizing farm income, helping farmers conserve land and water resources, providing credit to new or disadvantaged farmers and ranchers, and helping farm operations recover from the effects of disaster are the missions of the U.S. Department of Agriculture's Farm Service Agency (FSA).	Ongoing	Ongoing	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Agriculture Runoff	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	

The 1996 Act removed the link between income support payments and farm prices by providing for a one-time sign-up for a Production Flexibility Contract whereby producers receive seven annual fixed but declining production flexibility contract payments through 2002. This program, entitled the Agricultural Market Transition Act (AMTA), reflects FSA's direction over the next seven years whereby farm commodity prices will be largely determined by market factors, rather than government subsidies and production controls. To receive payments and loans on program commodities, producers must have entered into a 7-year contract by August 1, 1996. More than 98 percent of the eligible acres enrolled. Program commodities include wheat, corn, sorghum, barley, oats, upland cotton, and rice. The contract requires producers to comply with existing conservation plans for the farm, wetland provisions, and planting flexibility provisions, as well as to keep the land in agricultural use. Except for fruits and vegetables, any commodity or crop may be planted on contract acreage on a farm.

Continuous

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Conservation Reserve Program (CRP)	United States Department of Agriculture (USDA)	The Conservation Reserve Program (CRP) provides technical and financial assistance to eligible farmers and ranchers to address soil, water, and related natural resource concerns on their lands in an environmentally beneficial and cost-effective manner. The program provides assistance to farmers and ranchers in complying with Federal, State, and tribal environmental laws, and encourages environmental enhancement. The program is funded through the Commodity Credit Corporation (CCC). The Conservation Reserve Program reduces soil erosion, protects the Nation's ability to produce food and fiber, reduces sedimentation in streams and lakes, improves water quality, establishes wildlife habitat, and enhances forest and wetland resources. It encourages farmers to convert highly erodible cropland or other environmentally sensitive acreage to vegetative cover, such as tame or native grasses, wildlife plantings, trees, filter strips, or riparian buffers. Farmers receive an annual rental payment for the term of the multi-year contract. Cost sharing is provided to establish the vegetative cover practices.		Current	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Various Sources	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
CRP is administered by the Farm Service Agency, with NRCS providing technical land eligibility determinations, Environmental Benefit Index Scoring, and conservation planning.	Continuous		Utilized in this region due to high amount of farm production.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Environmental Quality Incentives Program (EQIP)	United States Department of Agriculture (USDA)	The Environmental Quality Incentives Program (EQIP) was reauthorized in the Farm Security and Rural Investment Act of 2002 (Farm Bill) to provide a voluntary conservation program for farmers and ranchers that promotes agricultural production and environmental quality as compatible national goals. EQIP offers financial and technical help to assist eligible participants install or implement structural and management practices on eligible agricultural land.		Current	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Various Sources	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
EQIP offers contracts with a minimum term that ends one year after the implementation of the last scheduled practices and a maximum term of ten years. These contracts provide incentive payments and cost-shares to implement conservation practices. Persons who are engaged in livestock or agricultural production on eligible land may participate in the EQIP program. EQIP activities are carried out according to an environmental quality incentives program plan of operations developed in conjunction with the producer that identifies the appropriate conservation practice or practices to address the resource concerns. The practices are subject to NRCS technical standards adapted for local conditions. The local conservation district approves the plan.	Continuous		NRCS EQIP Funds and provide for cross fencing, paddock development, rotational grazing, and nutrient and pest management. It helps to provide healthier pastures and more efficient use of grasses.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Manure Management Plan	Individual	A manure management plan can help provide the most use of the nutrients in manure while protecting the water quality, and meeting manure-handling requirements.	Ongoing	Ongoing	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Manure	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Keeping records of manure applications and continuous soil samples.	Continuous		Utilized in this region due to high amount of farm production.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Nutrient Management Program	7 Rivers RC & D, NRCS, and University of Georgia Extension Agent	Encourages and educates farmers on the correct usage and amount of fertilizers to maintain high yield and to lessen the impact of nitrates and phosphates to waterways.	1991	In-progress	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Nitrates and Phosphates Runoff	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Reduction in the measured amount of DO in impacted waterways.	Continuous		Utilized in this region due to high amount of farm production.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Pesticides Management Program	7 Rivers RC & D, NRCS, and University of Georgia Extension Agent	Encourages and educates farmers on the correct usage and amount of pesticides to reduce the impact of pesticides in the waterways.	1991	In-progress	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Pesticides Runoff	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Reduction in the measured amount of DO in impacted waterways.	Continuous		Utilized in this region due to high amount of farm production.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Soil Testing	University of Georgia Cooperative Extension Services and Individual	Soil samples are taken to determine what nutrients are needed for any agricultural or silvicultural use. This reduces or avoids any unnecessary applications of fertilizers, herbicides, pesticides, etc. so to minimize harmful runoff.		Current	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Nitrates, Phosphates, Pesticides Runoff	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Soil samples are taken on a regular basis.	Continuous		Utilized in this region due to high amount of farm production.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Georgia Rules and Regulation for Water Quality Control (391-3-6)	GA DNR EPD	Makes it unlawful to discharge excessive pollutants (sediments, nutrients, pesticides, animal waste, etc.) into waters of the state in amounts harmful to public health, safety, or welfare, or to animals, birds, or aquatic life or the physical destruction of stream habitats.	1964 Revised June 2002	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Industry/Non-industry Runoff	1, 2, 3	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Compliance with rules and various permits issued under rules.	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
South Georgia Multi-Jurisdictional Solid Waste Management Plan	Ben Hill County	10 Counties participate and currently seek to coordinate solid waste management activities throughout the South Georgia Region and to cooperate in the activities of local Comprehensive Plans. The prime focus here is the collection and disposal of waste in a manner, which prevents pollution of surface and sub-service water resources.	1992	In-progress	Voluntary
	Berrien County		1992	In-progress	Voluntary
	Irwin County		1992	In-progress	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Solid Waste	1, 2, 3	Effective

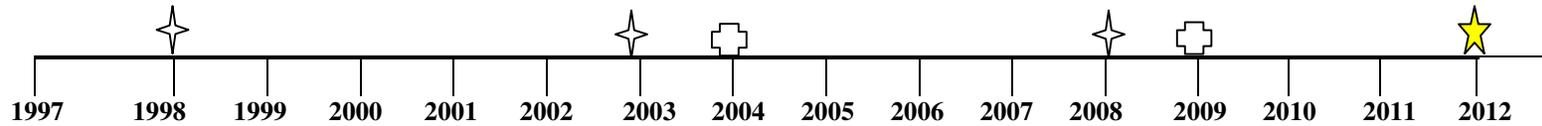
Measurable Milestones	Schedule		Comments
	Start	End	
This management measure is currently being updated.	Continuous		N/A

POTENTIAL FUNDING SOURCES The identification and discussion of dedicated funding is important in determining the economic feasibility of the above-mentioned management measures.

Funding Source	Responsible Authority	Status	Anticipated Funding Amount	Impacted Waterbodies*
319 (h) Grant	EPD/State of Georgia	Must Apply	Unknown	1, 2, 3
Greenspace Funds	Georgia Department of Natural Resources	Must Apply	Unknown	1, 2, 3
Conservation Reserve Program	USDA	Must Apply	Unknown	1, 2, 3
Environmental Quality Incentive Program (EQIP)	Natural Resources Conservation Service	Must Apply	Unknown	1, 2, 3
Wildlife Habitat Incentive Program	Natural Resources Conservation Service	Must Apply	Unknown	1, 2, 3
Urban Resources Partnership (URP)	Forest Service, the Natural Resources Conservation Service, the National Park Service, the Environmental Protection Agency, and the Department of Housing and Urban Development	Must Apply	Unknown	1, 2, 3
Toxics Grant	Jessie Smith Noyes Foundation	Must Apply	Unknown	1, 2, 3
Sustainable Agriculture Grant	Jessie Smith Noyes Foundation	Must Apply	Unknown	1, 2, 3
Sustainable Communities Grant	Jessie Smith Noyes Foundation	Must Apply	Unknown	1, 2, 3
Progressive Fund	The Fund for Southern Communities	Must Apply	Unknown	1, 2, 3
Brownfields Assessment Demonstration Pilots	EPA Office of Solid Waste and Emergency Response	Must Apply	Unknown	1, 2, 3
Pollution Prevention Grants	EPA Office of Pollution Prevention and Toxics	Must Apply	Unknown	1, 2, 3
DCA Educational Outreach	Department of Community Affairs	Must Apply	Unknown	1, 2, 3

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 EPD.



- EPD Monitoring
- Evaluate TMDL & Attainment Date
- Project Attainment

MONITORING PLAN

The purpose of this monitoring plan is to determine the effectiveness of the target TMDL and the management measures being implemented to meet water quality standards. List of previous, current or planned/proposed sampling activities or other surveys. (Monitoring data that placed stream on 303(d) list will be provided if requested.)

Name Of Regulation / Ordinance Or Management Measure	Organization	Impacted Waterbodies*	Pollutants	Purpose/Description	Time Frame		Status (Previous, Current, Proposed)
					Start	End	
NPDES Permit # GA0047236	GAEPD	1	FC, DO	Refer to Permit for Monitoring Details			Current
Willacoochee River Restoration	University of Georgia (UGA)	1, 2, 3	Low Dissolved Oxygen	A water quality and watershed restoration project helping citizens improve and protect their water resources	2002	2005	Current
Water Quality Monitoring	Georgia Adopt-A-Stream	1, 2, 3	Low Dissolved Oxygen / Fecal Coliform	To help educate and improve/or maintain a streams quality	TBA	TBA	Proposed
Water Quality Testing	USGS	1, 2, 3	Low Dissolved Oxygen / Fecal Coliform	Assess Water Quality	N/A	Continuous	Current
Scrap Tire Management Program	Local government	1, 2, 3	Low Dissolved Oxygen / Fecal Coliform	To reduce the illegal dumping of scrap tires, reduction in solid waste, and other environmental issues by hiring an enforcement / education officer to respond and monitor	TBA	TBA	Proposed
Water Quality Testing	Local / County Governments	1, 2, 3	Low Dissolved Oxygen / Fecal Coliform	Local testing to ensure quality on impaired streams as they relate to effluent discharge	N/A	Continuous	Ongoing

Name Of Regulation / Ordinance Or Management Measure	Organization	Impacted Waterbodies*	Pollutants	Purpose/Description	Time Frame		Status (Previous, Current, Proposed)
					Start	End	
Monitoring Program	National Environmentally Sound Production Agriculture Laboratory (NESPAL) and USDA-ARS Southeast Watershed Laboratory	1, 2, 3	Low Dissolved Oxygen / Fecal Coliform	To study the water quality of the entire Suwannee Basin	N/A	N/A	Current
Monitoring Program	National Environmentally Sound Production Agriculture Laboratory (NESPAL)	1, 2, 3	Low Dissolved Oxygen	319 (h) grant to study dissolved oxygen	2003	2006	Grant applied
Forest Water Quality Program	Georgia Forestry Commission (GFC)	1, 2, 3	Low Dissolved Oxygen, Biota	BMP Education Complaint Investigation BMP Monitoring monthly Assurance Exams	N/A	N/A	Current Current Proposed

CRITERIA TO DETERMINE WHETHER SUBSTANTIAL PROGRESS IS BEING MADE

The following set of criteria will be used to determine whether any substantial progress is being made towards reducing pollutants in impaired waterbodies and attaining water quality standards. Discussion on each criteria is recorded in the space provided. Additional relevant criteria are presented in comments.

Percent of concentration or load change (monitoring program) _____

If monitoring results show that it is unlikely that the TMDL will be adequate to meet water quality standards, revision of the TMDL may be necessary.

- 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

On behalf of the stakeholders of the Suwannee River Basin, the South Georgia RDC suggest further studies on each of the streams that have been listed on the 303(d) list since there have been numerous concerns about when the samples were taken and the number of samples taken from each stream. We also feel that the natural range of dissolved oxygen levels in the streams of the South Georgia Coastal Plains need to be further studied and established specifically for this region. Until the standard is developed, there are currently several organizations that have been involved with monitoring studies related to this region and their data could be used to help develop a proper standard for this region.

Attached are photos of Turkey Branch: Taken East and West of Hwy 129.

Attached are photos of the Willacoochee River, segment #1: Taken North and South of Hwy 158

Attached are photos of the Willacoochee River, segment #2: Taken East and West of Hwy 129 and North and South of Hwy 90.



Turkey Branch along Hwy 129.



Turkey Branch East side along Hwy 129.



Turkey Branch West side along Hwy 129.



Willacoochee River North side along Hwy 158.



Willacoochee River North side along Hwy 158.



Willacoochee River North side along Hwy 158.



Willacoochee River South side along Hwy 158.



Willacoochee River South side of Hwy 158.



Willacoochee River along Hwy 129.



Willacoochee River East side along Hwy 129.



Willacoochee River East side along Hwy 129.



Willacoochee River East side along Hwy 129.



Willacoochee River South side along Hwy 129.



Willacoochee River North side along Hwy 90.



Willacoochee River North side along Hwy 90.



Willacoochee River North side along Hwy 90.



Willacoochee River North side along Hwy 90.



Willacoochee River North side along Hwy 90.



Willacoochee River South side along Hwy 90.



Willacoochee River South side along Hwy 90.

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Date Submitted to EPD: November 15, 2002

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**Environmental Protection Division of the Department of Natural Resources,
State of Georgia.**

TOGETHER WE CAN MAKE A DIFFERENCE!

ATTACHMENT A:
STREAM APPROACH

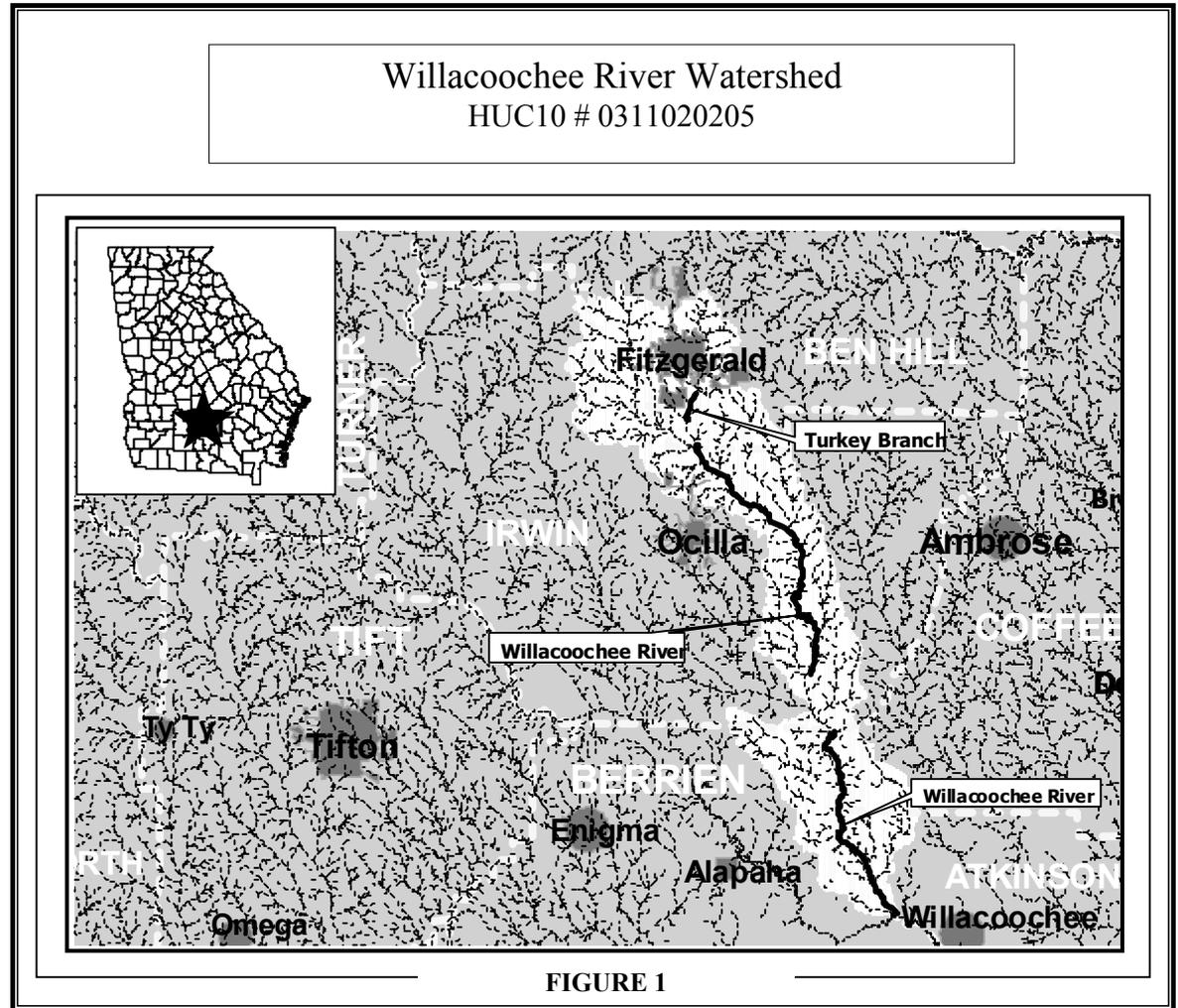
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**STATE OF GEORGIA
TMDL IMPLEMENTATION PLAN
SUWANNEE RIVER BASIN**

STREAM APPROACH

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. **With input from appropriate stakeholder groups, a TMDL Implementation Plan has been developed for a cluster of impaired streams and the corresponding pollutants.** The impaired streams are located in the same sub-basin identified by a HUC10 code (Figure 1).

This portion of the Implementation Plan addresses individual waterbodies and the corresponding pollutant sources, stakeholders, education/outreach activities, and potential funding sources. In addition, the Plan describes (a) regulatory and voluntary practices/control actions (*management measures*) to reduce target pollutants, (b) milestone schedules to show the development of the management measures on reducing target pollutants (*measurable milestones*), and (c) a monitoring plan to determine the efficiency of the management measures and measurable. 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.



Impaired Water body*	Location	Impairment
1. Turkey Branch	Headwaters to Willacoochee River downstream Fitzgerald	Low DO, FC (The EPD has prepared separate Implementation Plans for Cd, Cu, Pb, Tox, Zn)
2. Willacoochee River	SR 158 to Alapaha River	Low DO
3. Willacoochee River	Turkey Branch, upstream SR90/U.S. Hwy. 319 N. of Ocilla to SR 90, S.E. of Ocilla	Low DO

*These Water body Numbers are referenced throughout the implementation plan.

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1. Turkey Branch

NAME	LOCATION	MILES/AREA IMPACTED	CLASSIFICATION	PARTIALLY SUPPORTING/ NON SUPPORTING (PS/NS)
Turkey Branch	Headwaters to Willacoochee River downstream Fitzgerald	8 miles	Fishing	Not Supporting
PRIMARY COUNTY	SECONDARY COUNTY	SECOND RDC	SOURCE (POINT/NON-POINT)	
Ben Hill			Nonpoint Point (Municipal Sewage Treatment Plant)	

POLLUTANTS	WATER QUALITY STANDARDS (WQS)	REQUIRED REDUCTION	TMDL ID #	DATE TMDL ESTABLISHED
Fecal Coliform	1,000 per 100 ml (geometric mean Nov-April) 200 per 100 ml (geometric mean May-Oct)	77%		June 2000
Low Dissolved Oxygen	5mg/l (daily average) 4 mg/l (minimum) 0.871 mg/l (EPA WQS)	25% point source 57% nonpoint source		June 2002

SIGNIFICANT STAKEHOLDERS

Name/Organization	Address	City	State	Zip	Phone	E-mail
Hon. Larry Davis, Chairman, Ben Hill County	402-A East Pine Street	Fitzgerald	GA	31750		
Hon. Gerald Thompson, Mayor, City of Fitzgerald	P.O. Box 425	Fitzgerald	GA	31750		
Henry Tyson, Fitzgerald City Administrator	Municipal Building	Fitzgerald	GA	31794		
Jack Bryant, Ben Hill County Administrator	401 East Central Avenue	Fitzgerald	GA	31750		
Wayne Lancaster, Supervisor Water and Sewer Services, City of Fitzgerald	P.O. Drawer F	Fitzgerald	GA	31750		
South Georgia RDC	327 W. Savannah Ave.	Valdosta	GA	31601	(229) 333- 5277	sgrdc@sgrdc.com
Mary Leidner- NRCS District Conservationist	Tifton Service Center 1468 Carpenter Road S	Tifton	GA	31794	(229) 382- 4776	
Tim Hall- Ben Hill County Extension Coordinator	406 West Palm Street	Fitzgerald	GA	31750	(229) 426- 5175	

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Name/Organization	Address	City	State	Zip	Phone	E-mail
Charlene Lankford- Ben Hill County Soil Con Tech	124 W Central Ave	Fitzgerald	GA	31750	(229) 423- 2041	
Bobby Mathis- Georgia Forestry Commission	3011 US HWY 84 E	Valdosta	GA	31606	(229) 333-7817	bmathis@gfc.state.ga.us
Georgia Farm Services Agency	Federal Building Room 102 355 East Hancock Avenue	Athens	GA	30601	(706) 546- 2266	
Berrien County Farm Service Agency	124 W Central Ave	Fitzgerald	GA	31750	(229) 423- 2041	
National Environmentally Sound Production Agriculture Laboratory (NESPAL)	P.O. Box 748	Tifton	GA	31794	(229) 386- 7274	scrow@tifton.cpes.peachnet.edu
Georgia Forestry Commission	P.O. Box 819	Macon	GA	31202	(478) 751-3485	
Georgia Forestry Association	500 Pinnacle Court, Ste. 505	Norcross	GA	30071	(770) 416-7621	
Southeastern Wood Producers	P.O. Box 9	Hilliard	FL	32046	(904) 845-7133	
Allen Conger	195 Whitewater Road	Fitzgerald	GA	31750	(229) 423- 8901	
Wayne Lancaster, Fitzgerald Water, Light and Bond	116 N. Johnson Street	Fitzgerald	GA	31750	(229) 426- 5400	
Chip Dorminy, ABCD Farms	248 Lincoln Avenue	Fitzgerald	GA	31750	(229) 423- 4496	
Milton Hoggins	709 Ocilla Hwy	Fitzgerald	GA	31750	(229) 423- 7360	
Tim Kegebein, Dorminy Bros. Land & Cattle Co.	P.O. Box 870	Fitzgerald	GA	31750	(229) 423- 1159	
Clayton Jay Jr., Forward Fitzgerald	101 E. Pine Street	Fitzgerald	GA	31750	(229) 423- 2027	
Thurman Griffin	267 Evergreen Road	Fitzgerald	GA	31750	(229) 423- 4694	
Fred Smith, Fitzgerald/Ben Hill Development Authority	444 Little County Road	Wray	GA	31798	(229) 359- 3003	
Varney Cauley	203 Rhine Road	Fitzgerald	GA	31750	(229) 423- 3278	
Kathy Davis	401 Preston Drive	Fitzgerald	GA	31750		
Cam Jordon, City of Fitzgerald	116 N. Johnson Street	Fitzgerald	GA	31750		camjordan@mcms.com

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EDUCATION/OUTREACH ACTIVITIES

Responsible Organization or Entity	Description	Target Audience	Anticipated Dates (MM/YY)
US Fish and Wildlife	The U.S. Fish and Wildlife Service is the principal Federal agency responsible for conserving, protecting and enhancing fish, wildlife and plants and their habitats for the continuing benefit of the American people. The US Fish and Wildlife has numerous activities that relate to water quality, fish, sedimentation and many more that are available on their website.	Everyone	Current
National Environmentally Sound Production Agriculture Laboratory (NESPAL)	Research and education efforts to build a better environment for agriculture and rural America	Agriculture and rural America	Current
National Environmentally Sound Production Agriculture Laboratory (NESPAL)	319 (h) grant to study dissolved oxygen	River Basins in the Southern Coastal Plain, Georgia	Grant applied
Upper Suwannee River Watershed Initiative (USRWI)	Non-Point organizations charged with education / outreach / water related activities within the Suwannee River Basin	Established organizations / clubs / citizens of the Suwannee River Basin	Will depend on group interests and funding sources
South Georgia RDC	The SGRDC offers technical assistance with development regulations	Local government officials / Developers	In-progress
South Georgia RDC	To help assist with educational outreach to our local governmental jurisdictions, i.e. City, county and interested individuals	Local government officials / citizens	Current
Georgia Adopt-A-Stream	The SGRDC would like to see each school district team up with Georgia Adopt-A-Stream and commit to adopting a stream or streams within their county	Established organizations / clubs and/or those interested	Will depend on group interests and funding sources
South Georgia RDC / Ben Hill County School District	The SGRDC would help Ben Hill County School District target a group or club of interested students, educate them on the water issues that they are faced with, and to encourage them to participate in water monitoring	Established organizations / clubs and/or those interested	Will depend on group interests and funding sources

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South Georgia RDC / Georgia Department of Community Affairs	Facilitate and educate outreach on water resource related activities, i.e. Water Resource Tool Kit and Water First Program	Local government officials / citizens	Current
University of Georgia 4-H Club, Ben Hill County	The mission of Georgia 4-H is to assist youth in acquiring knowledge, developing life skills, and forming attitudes that will enable them to become self-directing, productive and contributing members of society. This mission is accomplished, through "hands on" learning experiences, focused on agricultural and environmental issues, agriculture awareness, leadership, communication skills, foods and nutrition, health, energy conservation, and citizenship.	Students and youth	Current
Georgia Cooperative Extension Services, Ben Hill County	To provide timely, unbiased research-based information to the public as it relates to agricultural and family consumer science. To improve the quality of the life for all communities in the State of Georgia. The County Extension Agent's duty is to deliver new information and technology from the University of Georgia's Coastal Plain Research Center to the community.	Everyone	Current
Natural Resource Conservation Service (NRCS), Ben Hill County	The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment.	Everyone	Current
Georgia Forestry Commission	Conduct forestry Best Management Practices educational training at Master Timber Harvester and continuing logger education programs, civic programs, and landowner meetings.	Foresters, timber buyers and loggers, site preparation contractors, landowners	Continuous

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POTENTIAL POLLUTANT SOURCES

Pollutant	Potential Source	Description of Contribution to Impairment
Low Dissolved Oxygen	Natural	Stream below critical conditions: High temperatures and low flow contribute to low levels of dissolved oxygen in the stream
Low Dissolved Oxygen / Fecal Coliform	Urban / Rural Development Runoff	Urban runoff from the City of Fitzgerald and including rural runoff that is washed away into nearby water sources, i.e. Chemical runoff from lawns, improper removal of trash, organic material such as leaves and yard trimmings, storm water runoff, fluids from parking areas, roads, and sediment erosion.
Low Dissolved Oxygen / Fecal Coliform	Failing septic tanks	Effluent leakage due to overflowing sewage systems and leaking collection lines
Low Dissolved Oxygen / Fecal Coliform	Animal waste	Animal waste that is deposited and then not properly removed or no lagoon is in place and is then washed into water bodies
Low Dissolved Oxygen / Fecal Coliform	Organic matter	Organic matter runoff from wetlands / forest accumulates and then builds up when not properly secured or disposed and direct / lateral leaf litter
Low Dissolved Oxygen / Fecal Coliform	Agriculture runoff	Pesticides / Fertilizer runoff causes nutrient build-up in water bodies
Low Dissolved Oxygen / Fecal Coliform	Improper methods of trash collection and disposal	Spillage and incorrect disposal of substances into the water bodies or on the surface that is washed into drainage systems or water bodies
Low Dissolved Oxygen	Silviculture	Possible introduction of sediment from normal practices and stream crossings when BMP's are not followed. Possible cause of decline in available oxygen resulting from removal of over story trees w/in SMZ resulting in increase in stream temperatures. Leaving logging debris in streams. Possible introduction of nitrogen and phosphorous from fertilization practices.
Fecal Coliform	Water Pollution Control Plant (WPCP)	The Fitzgerald C.A. Newcomer WPCP discharge into Turkey Branch. The discharge must meet water quality standards.

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MANAGEMENT MEASURES, RESPONSIBLE PARTIES, AND MEASURABLE MILESTONES

Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status (In-progress, Planning, Enforced)	Regulatory/ Voluntary
NPDES Permit # GA0047236	GAEPD	Permit for Fitzgerald C.A. Newcomer WPCP to discharge into Turkey Branch. The discharge must meet water quality standards.	6/15/99	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Fitzgerald C.A. Newcomer WPCP	Very effective

Measurable Milestones	Schedule		Comments
	Start	End	
See permit for milestones			

Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status (In-progress, Planning, Enforced)	Regulatory/ Voluntary
Well and Septic Ordinances	Ben Hill County City of Fitzgerald	Onsite permit process for well and septic tanks.		Enforced Enforced	Regulatory Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Septic systems	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Continued compliance with well / septic installation / repair / maintenance. Any public service site is tested on a routine basis to maintain a healthy site. Inspections on private services are checked on a complaint basis only.			Continuous

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status (In-progress, Planning, Enforced)	Regulatory/ Voluntary
Building Codes	Ben Hill County City of Fitzgerald	Building codes initiate site plan procedures for all forms of land development. This indirectly reduces increased levels of DO in streams, i.e. building front, side, and rear setbacks and voluntary conservation easements on privately owned property. An example of a nonstructural BMP is sediment controls and slope gradient measures.		Enforced Enforced	Regulatory Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Permit required for construction.	Continuous		SGRDC assists with the administration of this code.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status (In-progress, Planning, Enforced)	Regulatory/ Voluntary
Land Subdivision Ordinance	Ben Hill County City of Fitzgerald	Land Subdivision Ordinances initiate plan review for proposed subdivision. This typically includes sedimentation and water control measures. The lot size of land plays an important role in the amount of runoff that comes from urban and rural areas, i.e. storm water runoff, septic tank leaks or overflow, and erosion controls.	2000	Pending Enforced	Regulatory Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Urban/Rural Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Periodic reassessment of effectiveness of ordinance. The ordinances are updated on a periodic basis as developments progress. This is done to prevent overgrowth of developments.	Continuous		SGRDC assists with the administration of this code.

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/Voluntary
Zoning Ordinance	Ben Hill County City of Fitzgerald	To divide an area into zones or sections reserved for different purposes such as residence, business, and manufacturing to best suit the growth and land uses, also to help with the protection of sensitive areas such as water sources. Promotion of the proper location, height, stories, and size of open spaces along with the density and land uses.	2000	Pending Enforced	Regulatory Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Urban/Rural Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Periodic reassessment of effectiveness of ordinance.	Continuous		SGRDC assists with the administration of this code.

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/Voluntary
Groundwater Recharge Area Development ordinance	Ben Hill County	Georgia Planning Act Part V: Environmental Criteria. This ordinance regulates development of areas designated as high pollution susceptibility due to their location in the regional landscape. A BMP for groundwater protection is sand filters such as vegetation or sand to filter and settle pollutants.	2001	Proposed	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Urban/Rural Runoff and illegal dumping of trash	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Ongoing protection of sensitive land open for development.	Continuous		SGRDC assists with the administration of this code. Groundwater Recharge areas area very sensitive to pollution and directly effect the quality of all water sources that are related to them.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/Voluntary
Local Wetlands Policy Ordinance	Ben Hill County	Georgia Planning Act Part V: Environmental Criteria. This ordinance regulates development of areas designated as wetlands as defined by the U.S. Army Corps of Engineers as jurisdictional wetlands.	2001	Proposed	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Urban/Rural Runoff and illegal dumping of trash	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Ongoing protection of sensitive land not open for development.	Continuous		SGRDC assists with the administration of this code.

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/Voluntary
Protected River Corridor Plan Ordinance	Ben Hill County	Georgia Planning Act Part V: Environmental Criteria. This ordinance regulates development of areas designated as protected river corridors as they related to development and disturbance of land along protected river corridors.	2001	Proposed	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Urban/Rural Runoff and illegal dumping of trash	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Ongoing protection of sensitive land open for development along identified river corridors.	Continuous		SGRDC assists with the administration of this code.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/Voluntary
Floodplain Management Ordinance	Ben Hill County City of Fitzgerald	100 year / 500 year flood levels are shown on FEMA flood maps		Enforced Enforced	Regulatory Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
N/A	Continuous		SGRDC assists with the administration of this code

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status (In-progress, Planning, Enforced)	Regulatory/ Voluntary
Local Soil & Sedimentation Ordinance	Ben Hill County City of Fitzgerald	Regulation of BMP's for development Erosion and Sedimentation Control Act (GESA). Requires permits for "land disturbing activities" and requires buffers to be maintained between the land disturbing activity and waters of the state.		Enforced Enforced	Regulatory Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Continued enforcement of ordinance will ensure less sedimentation in water bodies.	Continuous		SGRDC assists with the administration of this code.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status (In-progress, Planning, Enforced)	Regulatory/ Voluntary
Storm water Detention / Retention Standards		An ordinance that regulates the runoff of storm water off of a developed property			

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Urban/Rural Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
N/A	Continuous		SGRDC assists with the administration of this code

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status (In-progress, Planning, Enforced)	Regulatory/ Voluntary
Suwannee River Basin Management Plan	Georgia Department of Natural Resources	Detailed management plans for the Suwannee River Basin. The purpose of the plan is to develop and implement a basin-planning program to protect, enhance and restore the waters for the State of Georgia, which will provide for effective monitoring, allocation, use, regulation, and management of water resources.	Final draft pending approval March 2002	Pending State approval	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Various Sources	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
1. Implement Monitoring Plan and Compile Detailed Information/Data.	2003-	2004	
2. Analyze and Evaluate Detailed Information, Update Basin Assessment and Priority Issues List, Develop Strategies for Priority Issues, and Stakeholder meeting.	2004-	2005	
3. Continue to Develop Strategies for Priority Issues and Prepare and Update Draft River Basin Plan.	2005-	2006	
4. Agency and Public Review and Hearings, Finalize River Basin Plan, Implement River Basin Plan, and Stakeholder meeting.	2006-	2007	
5. Continue to Implement River Basin Plan and Stakeholder meeting.	2007-	Continuous	

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/ Voluntary
Establish the Natural Range of Dissolved Oxygen Levels in Streams of the South Georgia Coastal Plain	Georgia DNR-EPD	An extensive stream-monitoring program to establish the DO range naturally occurring during critical stream flow conditions in the South Georgia Coastal Plain.	Spring 2003	Grant Applied Conditionally approved per revisions of proposal	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Naturally Occurring	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Three years of bi-weekly water quality and hydrologic parameter monitoring at a maximum of 60 locations. Annual characterization of study stream morphology; semiannual long term BOD; semiannual benthic and periphyton respiration by respirometer. Evaluation and characterization of study watersheds to establish the dynamics affecting DO in each watershed.	Expected Spring 2006	start, 2003; end, Spring 2006	Piscola Creek watershed monitoring data collected in the past four years show that in summer months 8 highly enriched streams in the midst of intensive livestock and row-crop production have much higher DO values than a comparison “reference” stream. These and other data collected by UGA and USDA-ARS scientists have lead the hypothesis that a combination of high summer-time temperatures, low flows, and high loads of organic carbon contributed by riparian vegetation contribute to naturally low DO levels in unimpacted Coastal Plain streams. A proposal to establish an extensive stream-monitoring program to establish the natural range of DO at critical flow conditions has been submitted to Georgia DNR-EPD administered U.S. Environmental Protection Agency’s Clean Water Act Section 319(h) Grant Program.

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status (In-progress, Planning, Enforced)	Regulatory/ Voluntary
Georgia Forestry Commission	State of Georgia	A set of guidelines to better protect Georgia's streams and other water bodies from forestry non-point source pollution (primarily erosion and sedimentation).	Ongoing	Ongoing	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Forestry Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Some Best Management Practices (BMP's) for forestry to minimize erosion and stream sedimentation from forestry practices are: timber harvesting, chemical treatments, controlled burning, and streamside management. In 1998, 98% of the 43,906 acres that were evaluated were in compliance with the BMP's. In 1992, the stream compliance was 95.5%. The goal is to meet 100% compliance with each BMP.	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Federal Clean Water Act Section 404	EPA (situations involving forestry are normally referred to the GFC to determine compliance with this regulation)	Requires normal ongoing agricultural and silvicultural practice to adhere to BMP's and 15 baseline provisions for road construction and maintenance in and across waters of the US including lakes, rivers, perennial and intermittent streams, wetlands, sloughs in order to qualify for the exemption from the permitting process.	June 6, 1988	Current	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Sediment from dredge or fill activities	Agriculture and silviculture	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
GFC can report status on accomplishments or complaints investigated involving this act to the RDC as needed.	Continuous		EPA identifies silviculture as the lowest contribution source of non-point pollution

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Memo to the Field: Application of BMP's to mechanical silvicultural site preparation activities for the establishment of pine plantations in the Southeast	EPA/ US Army Corps of Engineers - (cases normally referred to GFC to make initial determination)	Identifies certain bottomland hardwood wetlands that should be subject to permitting if converting to pine plantations.	November 1995	Current	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Biota, habitat	Silviculture	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
GFC can provide status reports as needed	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Federal Farm Bill (Swamp buster)	US Department of Agriculture Natural Resource Conservation Service	Prohibits landowners participating in federal price support programs from converting forested wetlands to agriculture		Current	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Biota (habitat)	Agriculture	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Status reports can be provided as needed	Continuous		

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Georgia Water Quality Control Act (OCGA 12-5-20)	GA DNR EPD	Makes it unlawful to discharge excessive pollutants (sediments, nutrients, pesticides, animal waste, etc.) into waters of the State in amounts harmful to public health, safety, or welfare, or to animals, birds, or aquatic life or the physical destruction of stream habitats.	1964	Current	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Sediments, nutrients, pesticides, and habitat	Silviculture	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
GFC investigates and mediates silvicultural complaints on behalf of EPD. Unresolved complaints are turned over to EPD for enforcement. Status reports can be provided to RDC as needed.	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
GA Growth Planning Act (OCGA 12-2-8)	GA DNR, Department of Community Affairs, and local units of government	Authorized GA DNR to develop minimum planning standards and procedures that local jurisdictions could adopt and enforce pertaining to the protection of river corridors, mountaintops, water supply watersheds/reservoirs, groundwater recharge areas, and wetlands. Silvicultural activities may be exempted from permitting requirements provided the activity complies with BMP's	1991	Local jurisdictions have to adopt ordinances to address these areas	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Biota, habitat, sediment	Silviculture	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
GFC can determine applicability and BMP implementation for local units of government.	Continuous		

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Farm Bill 2002	Natural Resources Conservation Service (NRCS)	The Farm Security and Rural Investment Act of 2002 is landmark legislation for conservation funding and for focusing on environmental issues. The conservation provisions will assist farmers and ranchers in meeting environmental challenges on their land. This legislation simplifies existing programs and creates new programs to address high priority environmental and production goals. The 2002 Farm Bill enhances the long-term quality of our environment and conservation of our natural resources.	2002	Current	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Various Sources	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
N/A	Continuous		

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Farm Services Agency	State of Georgia / Local FSA	Stabilizing farm income, helping farmers conserve land and water resources, providing credit to new or disadvantaged farmers and ranchers, and helping farm operations recover from the effects of disaster are the missions of the U.S. Department of Agriculture's Farm Service Agency (FSA).	Ongoing	Ongoing	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Agriculture Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
The 1996 Act removed the link between income support payments and farm prices by providing for a one-time sign-up for a Production Flexibility Contract whereby producers receive seven annual fixed but declining production flexibility contract payments through 2002. This program, entitled the Agricultural Market Transition Act (AMTA), reflects FSA's direction over the next seven years whereby farm commodity prices will be largely determined by market factors, rather than government subsidies and production controls. To receive payments and loans on program commodities, producers must have entered into a 7-year contract by August 1, 1996. More than 98 percent of the eligible acres enrolled. Program commodities include wheat, corn, sorghum, barley, oats, upland cotton, and rice. The contract requires producers to comply with existing conservation plans for the farm, wetland provisions, and planting flexibility provisions, as well as to keep the land in agricultural use. Except for fruits and vegetables, any commodity or crop may be planted on contract acreage on a farm.	Continuous		

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Regulation/Ordinance or Management Measure	Reserve	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Conservation Program (CRP)	Reserve	United States Department of Agriculture (USDA)	The Conservation Reserve Program (CRP) provides technical and financial assistance to eligible farmers and ranchers to address soil, water, and related natural resource concerns on their lands in an environmentally beneficial and cost-effective manner. The program provides assistance to farmers and ranchers in complying with Federal, State, and tribal environmental laws, and encourages environmental enhancement. The program is funded through the Commodity Credit Corporation (CCC). The Conservation Reserve Program reduces soil erosion, protects the Nation's ability to produce food and fiber, reduces sedimentation in streams and lakes, improves water quality, establishes wildlife habitat, and enhances forest and wetland resources. It encourages farmers to convert highly erodible cropland or other environmentally sensitive acreage to vegetative cover, such as tame or native grasses, wildlife plantings, trees, filter strips, or riparian buffers. Farmers receive an annual rental payment for the term of the multi-year contract. Cost sharing is provided to establish the vegetative cover practices.		Current	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Various Sources	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
CRP is administered by the Farm Service Agency, with NRCS providing technical land eligibility determinations, Environmental Benefit Index Scoring, and conservation planning.	Continuous		Utilized in this region due to high amount of farm production.

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Environmental Quality Incentives Program (EQIP)	United States Department of Agriculture (USDA)	The Environmental Quality Incentives Program (EQIP) was reauthorized in the Farm Security and Rural Investment Act of 2002 (Farm Bill) to provide a voluntary conservation program for farmers and ranchers that promotes agricultural production and environmental quality as compatible national goals. EQIP offers financial and technical help to assist eligible participants install or implement structural and management practices on eligible agricultural land.		Current	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Various Sources	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
EQIP offers contracts with a minimum term that ends one year after the implementation of the last scheduled practices and a maximum term of ten years. These contracts provide incentive payments and cost-shares to implement conservation practices. Persons who are engaged in livestock or agricultural production on eligible land may participate in the EQIP program. EQIP activities are carried out according to an environmental quality incentives program plan of operations developed in conjunction with the producer that identifies the appropriate conservation practice or practices to address the resource concerns. The practices are subject to NRCS technical standards adapted for local conditions. The local conservation district approves the plan.	Continuous		NRCS EQIP Funds and provide for cross fencing, paddock development, rotational grazing, and nutrient and pest management. It helps to provide healthier pastures and more efficient use of grasses.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Manure Management Plan	Individual	A manure management plan can help provide the most use of the nutrients in manure while protecting the water quality, and meeting manure-handling requirements.	Ongoing	Ongoing	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Manure	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Keeping records of manure applications and continuous soil samples.	Continuous		Utilized in this region due to high amount of farm production.

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Nutrient Management Program	7 Rivers RC & D, NRCS, and University of Georgia Extension Agent	Encourages and educates farmers on the correct usage and amount of fertilizers to maintain high yield and to lessen the impact of nitrates and phosphates to waterways.	1991	In-progress	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Nitrates and Phosphates Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Reduction in the measured amount of DO in impacted waterways.	Continuous		Utilized in this region due to high amount of farm production.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Pesticides Management Program	7 Rivers RC & D, NRCS, and University of Georgia Extension Agent	Encourages and educates farmers on the correct usage and amount of pesticides to reduce the impact of pesticides in the waterways.	1991	In-progress	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Pesticides Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Reduction in the measured amount of DO in impacted waterways.	Continuous		Utilized in this region due to high amount of farm production.

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Soil Testing	University of Georgia Cooperative Extension Services and Individual	Soil samples are taken to determine what nutrients are needed for any agricultural or silvicultural use. This reduces or avoids any unnecessary applications of fertilizers, herbicides, pesticides, etc. so to minimize harmful runoff.		Current	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Nitrates, Phosphates, Pesticides Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Soil samples are taken on a regular basis.	Continuous		Utilized in this region due to high amount of farm production.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Georgia Rules and Regulation for Water Quality Control (391-3-6)	GA DNR EPD	Makes it unlawful to discharge excessive pollutants (sediments, nutrients, pesticides, animal waste, etc.) into waters of the state in amounts harmful to public health, safety, or welfare, or to animals, birds, or aquatic life or the physical destruction of stream habitats.	1964 Revised June 2002	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Industry/Non-industry Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Compliance with rules and various permits issued under rules.	Continuous		

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
South Georgia Multi-Jurisdictional Solid Waste Management Plan	Berrien County	10 Counties participate and currently seek to coordinate solid waste management activities throughout the South Georgia Region and to cooperate in the activities of local Comprehensive Plans. The prime focus here is the collection and disposal of waste in a manner, which prevents pollution of surface and sub-service water resources.	1992	In-progress	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Solid Waste	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
This management measure is currently being updated.	Continuous	N/A	

POTENTIAL FUNDING SOURCES

Source	Responsible Authority	Status	Anticipated Funding Amount
319 (h) Grant	EPD/State of Georgia	Must Apply	Unknown
Greenspace Funds	Georgia Department of Natural Resources	Must Apply	Unknown
Conservation Reserve Program	USDA	Must Apply	Unknown
Environmental Quality Incentive Program (EQIP)	Natural Resources Conservation Service	Must Apply	Unknown
Wildlife Habitat Incentive Program	Natural Resources Conservation Service	Must Apply	Unknown
Urban Resources Partnership (URP)	Forest Service, the Natural Resources Conservation Service, the National Park Service, the Environmental Protection Agency, and the Department of Housing and Urban Development	Must Apply	Unknown
Toxics Grant	Jessie Smith Noyes Foundation	Must Apply	Unknown
Sustainable Agriculture Grant	Jessie Smith Noyes Foundation	Must Apply	Unknown
Sustainable Communities Grant	Jessie Smith Noyes Foundation	Must Apply	Unknown
Progressive Fund	The Fund for Southern Communities	Must Apply	Unknown
Brownfields Assessment Demonstration Pilots	EPA Office of Solid Waste and Emergency Response	Must Apply	Unknown
Pollution Prevention Grants	EPA Office of Pollution Prevention and Toxics	Must Apply	Unknown
DCA Educational Outreach	Department of Community Affairs	Must Apply	Unknown

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MONITORING PLAN

Organization	Pollutants	Purpose/Description	Time Frame		Status:
			Start	End	(Previous, Current, Proposed)
NPDES Permit # GA0047236	FC, Low DO	Refer to Permit for Monitoring Details			Current
Georgia Adopt-A-Stream Water Quality Monitoring	Low Dissolved Oxygen / Fecal Coliform	To help educate and improve/or maintain a streams quality	TBA	TBA	Proposed
USGS Water Quality Testing	Low Dissolved Oxygen / Fecal Coliform	Assess Water Quality	N/A	Continuous	Current
Local government Scrap Tire Management Program	Low Dissolved Oxygen / Fecal Coliform	To reduce the illegal dumping of scrap tires, reduction in solid waste, and other environmental issues by hiring an enforcement / education officer to respond and monitor	TBA	TBA	Proposed
Local / County Governments Water Quality Testing	Low Dissolved Oxygen / Fecal Coliform	Local testing to ensure quality on impaired streams as they relate to effluent discharge	N/A	Continuous	Ongoing
National Environmentally Sound Production Agriculture Laboratory (NESPAL) and USDA-ARS Southeast Watershed Laboratory Monitoring Program	Low Dissolved Oxygen / Fecal Coliform	To study the water quality of the entire Suwannee Basin	N/A	N/A	Current
National Environmentally Sound Production Agriculture Laboratory (NESPAL) Monitoring Program	Low Dissolved Oxygen	319 (h) grant to study dissolved oxygen	2003	2006	Grant applied
Willacoochee River Restoration University of Georgia (UGA)	Low Dissolved Oxygen / Fecal Coliform	A water quality and watershed restoration project helping citizens improve and protect their water resources	2002	2005	Current
Georgia Forestry Commission (GFC) Forest Water Quality Program	Low Dissolved Oxygen, Biota	BMP Education Complaint Investigation BMP Monitoring monthly Assurance Exams	N/A	N/A	Current Current Proposed

COMMENTS: On behalf of the stakeholders of the Suwannee River Basin, the South Georgia RDC suggest further studies on each of the streams that have been listed on the 303(d) list since there have been numerous concerns about when the samples were taken and the number of samples taken from each stream. We also feel that the natural range of dissolved oxygen levels in the streams of the South Georgia Coastal Plains need to be further studied and established specifically for this region. Until the standard is developed, there are currently several organizations that have been involved with monitoring studies related to this region and their data could be used to help develop a proper standard for this region. Attached are photos of Turkey Branch: Taken East and West of Hwy 129.

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Turkey Branch along Hwy 129.



Turkey Branch East side along Hwy 129.

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Turkey Branch West side along Hwy 129.

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2. Willacoochee River

NAME	LOCATION	MILES/AREA IMPACTED	CLASSIFICATION	PARTIALLY SUPPORTING/ NON SUPPORTING (PS/NS)
Willacoochee River	SR 158 to Alapaha River	11 miles	Fishing	Partially Supporting
PRIMARY COUNTY	SECONDARY COUNTY	SECOND RDC	SOURCE (POINT/NON-POINT)	
Berrien	Atkinson, Coffee		Non-point	

POLLUTANTS	WATER QUALITY STANDARDS (WQS)	REQUIRED REDUCTION	TMDL ID #	DATE TMDL ESTABLISHED
Low Dissolved Oxygen	5mg/l (daily average) 4 mg/l (minimum) 3.868 mg/l (EPA WQS)	38%		December 2001

SIGNIFICANT STAKEHOLDERS

Name/Organization	Address	City	State	Zip	Phone	E-mail
Hon. Gregg McClellan, Chairman, Berrien County	P.O. Box 446	Nashville	GA	31639	(229) 686- 5421	
Hon. James Boone, Mayor, City of Alapaha	P.O. Box 34	Alapaha	GA	31622	(229) 532- 7475	
Hon. Cecil Giddens, Mayor, City of Enigma	P.O. Box 98	Enigma	GA	31749	(229) 533- 4185	
Hon. Carl Camon, Mayor, City of Ray City	P.O. Box 128	Ray City	GA	31645	(229) 455- 2501	
Hon. Thomas Parr, Mayor, City of Nashville	P.O. Box 495	Nashville	GA	31639	(229) 686- 5527	
Dr. Van Whaler, Berrien County Administrator	P.O. Box 446	Nashville	GA	31639	(229) 686- 5421	
Jerry Griner, Street and Sanitation Superintendent, City of Nashville	P.O. Box 495	Nashville	GA	31639	(229) 686- 5527	

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Name/Organization	Address	City	State	Zip	Phone	E-mail
South Georgia RDC	327 W. Savannah Ave.	Valdosta	GA	31601	(229) 333- 5277	sgrdc@sgrdc.com
Hal Simpson -NRCS District Conservationist	516-A County Farm Road	Nashville	GA	31639	(229) 686- 2363	
Forrest Connelly- Berrien County Extension Coordinator	516-A County Farm Road	Nashville	GA	31639	(229) 686- 5431	
Bobby Mathis- Georgia Forestry Commission	3011 US HWY 84 E	Valdosta	GA	31606	(229) 333- 7817	bmathis@gfc.state.ga.us
Georgia Farm Services Agency	Federal Building Room 102 355 East Hancock Avenue	Athens	GA	30601	(706) 546- 2266	
Berrien County Farm Service Agency	Nashville Service Center 516-A County Farm Road Suite 3	Nashville	GA	31639	(229) 686- 2363	
National Environmentally Sound Production Agriculture Laboratory (NESPAL)	P.O. Box 748	Tifton	GA	31794	(229) 386- 7274	scrow@tifton.cpes.peachnet.edu
Berrien County 4-H	516-A County Farm Road Suite 1	Nashville	GA	31639	(229) 686- 5431	
Al Browning	P.O. Box 5023	Nashville	GA	31639	(229) 686- 2821	Labfarm1@yahoo.com
Bill Darsey	111 West Main Street	Lakeland	GA	31635	(229) 482- 2495	
Gerald Peele	Rt. 1 Box 489	Lenox	GA	31637		
Sammy Hall	Rt. 1 Box 1310	Nashville	GA	31639	(229) 686- 2378	
Hon. Edwin Davis, Chairman, Atkinson County	P.O. Box 518	Pearson	GA	31642	(912) 422- 3391	jjatco@planttel.net
Hon. Jim Mills, Mayor, City of Willacoochee	P.O. Box 508	Willacoochee	GA	31650	(912) 534- 5152	pbrown@willacoochee.com
Georgia Forestry Commission	P.O. Box 819	Macon	GA	31202	(478) 751-3485	
Georgia Forestry Association	500 Pinnacle Court, Ste. 505	Norcross	GA	30071	(770) 416-7621	
Southeastern Wood Producers	P.O. Box 9	Hilliard	FL	32046	(904) 845-7133	

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EDUCATION/OUTREACH ACTIVITIES

Responsible Organization or Entity	Description	Target Audience	Anticipated Dates (MM/YY)
US Fish and Wildlife	The U.S. Fish and Wildlife Service is the principal Federal agency responsible for conserving, protecting and enhancing fish, wildlife and plants and their habitats for the continuing benefit of the American people. The US Fish and Wildlife has numerous activities that relate to water quality, fish, sedimentation and many more that are available on their website.	Everyone	Current
National Environmentally Sound Production Agriculture Laboratory (NESPAL)	Research and education efforts to build a better environment for agriculture and rural America	Agriculture and rural America	Current
National Environmentally Sound Production Agriculture Laboratory (NESPAL)	319 (h) grant to study dissolved oxygen	River Basins in the Southern Coastal Plain, Georgia	Grant applied
Upper Suwannee River Watershed Initiative (USRWI)	Non-Point organizations charged with education / outreach / water related activities within the Suwannee River Basin	Established organizations / clubs / citizens of the Suwannee River Basin	Will depend on group interests and funding sources
Seven Rivers Resource Conservation & Development	Non-Profit agency who's goal for environmental protection is to improve the water quality and quantity and preservation of the natural resources in the region	Local government officials / citizens / agricultural organizations	Current
South Georgia RDC	The SGRDC offers technical assistance with development regulations	Local government officials / Developers	In-progress
South Georgia RDC	To help assist with educational outreach to our local governmental jurisdictions, i.e. City, county and interested individuals	Local government officials / citizens	Current
Georgia Adopt-A-Stream	The SGRDC would like to see each school district team up with Georgia Adopt-A-Stream and commit to adopting a stream or streams within their county	Established organizations / clubs and/or those interested	Will depend on group interests and funding sources
South Georgia RDC / Berrien County School District	The SGRDC would help Berrien County School District target a group or club of interested students, educate them on the water issues that they are faced with, and to encourage them to participate in water monitoring	Established organizations / clubs and/or those interested	Will depend on group interests and funding sources
South Georgia RDC / Georgia Department of Community Affairs	Facilitate and educate outreach on water resource related activities, i.e. Water Resource Tool Kit and Water First Program	Local government officials / citizens	Current

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University of Georgia 4-H Club, Berrien County	The mission of Georgia 4-H is to assist youth in acquiring knowledge, developing life skills, and forming attitudes that will enable them to become self-directing, productive and contributing members of society. This mission is accomplished, through "hands on" learning experiences, focused on agricultural and environmental issues, agriculture awareness, leadership, communication skills, foods and nutrition, health, energy conservation, and citizenship.	Students and youth	Current
Georgia Cooperative Extension Services, Berrien County	To provide timely, unbiased research-based information to the public as it relates to agricultural and family consumer science. To improve the quality of the life for all communities in the State of Georgia. The County Extension Agent's duty is to deliver new information and technology from the University of Georgia's Coastal Plain Research Center to the community.	Everyone	Current
Natural Resource Conservation Service (NRCS), Berrien County	The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment.	Everyone	Current
Georgia Forestry Commission	Conduct forestry Best Management Practices educational training at Master Timber Harvester and continuing logger education programs, civic programs, and landowner meetings.	Foresters, timber buyers and loggers, site preparation contractors, landowners	Continuous

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POTENTIAL POLLUTANT SOURCES

Pollutant	Potential Source	Description of Contribution to Impairment
Low Dissolved Oxygen	Natural	Stream below critical conditions: High temperatures and low flow contribute to low levels of dissolved oxygen in the stream
Low Dissolved Oxygen	Rural Development Runoff	Rural runoff that is washed away into nearby water sources, i.e. Chemical runoff from lawns, improper removal of trash, organic material such as leaves and yard trimmings, storm water runoff, fluids from parking areas, roads, and sediment erosion.
Low Dissolved Oxygen	Failing septic tanks	Effluent leakage due to overflowing sewage systems and leaking collection lines
Low Dissolved Oxygen	Animal waste	Animal waste that is deposited and then not properly removed or no lagoon is in place and is then washed into water bodies
Low Dissolved Oxygen	Organic matter	Organic matter runoff from wetlands / forest accumulates and then builds up when not properly secured or disposed and direct / lateral leaf litter
Low Dissolved Oxygen	Agriculture runoff	Pesticides / Fertilizer runoff causes nutrient build-up in water bodies
Low Dissolved Oxygen	Improper methods of trash collection and disposal	Spillage and incorrect disposal of substances into the water bodies or on the surface that is washed into drainage systems or water bodies
Low Dissolved Oxygen	Silviculture	Possible introduction of sediment from normal practices and stream crossings when BMP's are not followed. Possible cause of decline in available oxygen resulting from removal of over story trees w/in SMZ resulting in increase in stream temperatures. Leaving logging debris in streams. Possible introduction of nitrogen and phosphorous from fertilization practices.

MANAGEMENT MEASURES, RESPONSIBLE PARTIES, AND MEASURABLE MILESTONES

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status (In-progress, Planning, Enforced)	Regulatory/ Voluntary
Georgia Erosion and Sediment Control Act (O.C.G.A 12-7-1)	GAEPD	Provides permitting by local governing authorities for land disturbing activities.	1975 2000 (amended)	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low DO		

Measurable Milestones	Schedule		Comments
	Start	End	

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Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/ Voluntary
Well and Septic Ordinances	Berrien County	Onsite permit process for well and septic tanks.		Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Septic systems	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Continued compliance with well / septic installation / repair / maintenance. Any public service site is tested on a routine basis to maintain a healthy site. Inspections on private services are checked on a complaint basis only.	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/ Voluntary
Building Codes	Berrien County	Building codes initiate site plan procedures for all forms of land development. This indirectly reduces increased levels of DO in streams, i.e. building front, side, and rear setbacks and voluntary conservation easements on privately owned property. An example of a nonstructural BMP is sediment controls and slope gradient measures.	1999	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Permit required for construction.	Continuous		SGRDC assists with the administration of this code.

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status (In-progress, Planning, Enforced)	Regulatory/ Voluntary
Land Subdivision Ordinance	Berrien County	Land Subdivision Ordinances initiate plan review for proposed subdivision. This typically includes sedimentation and water control measures. The lot size of land plays an important role in the amount of runoff that comes from urban and rural areas, i.e. storm water runoff, septic tank leaks or overflow, and erosion controls.	2001	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Periodic reassessment of effectiveness of ordinance. The ordinances are updated on a periodic basis as developments progress. This is done to prevent overgrowth of developments.	Continuous		SGRDC assists with the administration of this code.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status (In-progress, Planning, Enforced)	Regulatory/ Voluntary
Zoning Ordinance	Berrien County	To divide an area into zones or sections reserved for different purposes such as residence, business, and manufacturing to best suit the growth and land uses, also to help with the protection of sensitive areas such as water sources. Promotion of the proper location, height, stories, and size of open spaces along with the density and land uses.	2002	Pending	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Periodic reassessment of effectiveness of ordinance.	Continuous		SGRDC assists with the administration of this code.

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/Voluntary
Groundwater Recharge Area Development ordinance	Berrien County	Georgia Planning Act Part V: Environmental Criteria. This ordinance regulates development of areas designated as high pollution susceptibility due to their location in the regional landscape. A BMP for groundwater protection is sand filters such as vegetation or sand to filter and settle pollutants.	2001	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff and illegal dumping of trash	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Ongoing protection of sensitive land open for development.	Continuous		SGRDC assists with the administration of this code. Groundwater Recharge areas area very sensitive to pollution and directly effect the quality of all water sources that are related to them.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/Voluntary
Local Wetlands Policy Ordinance	Berrien County	Georgia Planning Act Part V: Environmental Criteria. This ordinance regulates development of areas designated as wetlands as defined by the U.S. Army Corps of Engineers as jurisdictional wetlands.	2001	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff and illegal dumping of trash	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Ongoing protection of sensitive land not open for development.	Continuous		SGRDC assists with the administration of this code.

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/ Voluntary
Protected River Corridor Plan Ordinance	Berrien County	Georgia Planning Act Part V: Environmental Criteria. This ordinance regulates development of areas designated as protected river corridors as they related to development and disturbance of land along protected river corridors.	2001	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff and illegal dumping of trash	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Ongoing protection of sensitive land open for development along identified river corridors.	Continuous		SGRDC assists with the administration of this code.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/ Voluntary
Local Soil & Sedimentation Ordinance	Berrien County	Regulation of BMP's for development Erosion and Sedimentation Control Act (GESA). Requires permits for "land disturbing activities" and requires buffers to be maintained between the land disturbing activity and waters of the state.		Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Continued enforcement of ordinance will ensure less sedimentation in water bodies.	Continuous		SGRDC assists with the administration of this code.

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status (In-progress, Planning, Enforced)	Regulatory/ Voluntary
Suwannee River Basin Management Plan	Georgia Department of Natural Resources	Detailed management plans for the Suwannee River Basin. The purpose of the plan is to develop and implement a basin-planning program to protect, enhance and restore the waters for the State of Georgia, which will provide for effective monitoring, allocation, use, regulation, and management of water resources.	Final draft pending approval March 2002	Pending State approval	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Various Sources	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
1. Implement Monitoring Plan and Compile Detailed Information/Data.	2003-	2004	
2. Analyze and Evaluate Detailed Information, Update Basin Assessment and Priority Issues List, Develop Strategies for Priority Issues, and Stakeholder meeting.	2004-	2005	
3. Continue to Develop Strategies for Priority Issues and Prepare and Update Draft River Basin Plan.	2005-	2006	
4. Agency and Public Review and Hearings, Finalize River Basin Plan, Implement River Basin Plan, and Stakeholder meeting.	2006-	2007	
5. Continue to Implement River Basin Plan and Stakeholder meeting.	2007-	Continuous	

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/ Voluntary
Establish the Natural Range of Dissolved Oxygen Levels in Streams of the South Georgia Coastal Plain	Georgia DNR-EPD	An extensive stream-monitoring program to establish the DO range naturally occurring during critical stream flow conditions in the South Georgia Coastal Plain.	Spring 2003	Grant Applied Conditionally approved per revisions of proposal	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Naturally Occurring	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Three years of bi-weekly water quality and hydrologic parameter monitoring at a maximum of 60 locations. Annual characterization of study stream morphology; semiannual long term BOD; semiannual benthic and periphyton respiration by respirometer. Evaluation and characterization of study watersheds to establish the dynamics affecting DO in each watershed.	Expected Spring 2006	start, 2003; end, Spring 2006	Piscola Creek watershed monitoring data collected in the past four years show that in summer months 8 highly enriched streams in the midst of intensive livestock and row-crop production have much higher DO values than a comparison “reference” stream. These and other data collected by UGA and USDA-ARS scientists have lead the hypothesis that a combination of high summer-time temperatures, low flows, and high loads of organic carbon contributed by riparian vegetation contribute to naturally low DO levels in unimpacted Coastal Plain streams. A proposal to establish an extensive stream-monitoring program to establish the natural range of DO at critical flow conditions has been submitted to Georgia DNR-EPD administered U.S. Environmental Protection Agency’s Clean Water Act Section 319(h) Grant Program.

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status (In-progress, Planning, Enforced)	Regulatory/ Voluntary
Georgia Forestry Commission	State of Georgia	A set of guidelines to better protect Georgia's streams and other water bodies from forestry non-point source pollution (primarily erosion and sedimentation).	Ongoing	Ongoing	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Forestry Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Some Best Management Practices (BMP's) for forestry to minimize erosion and stream sedimentation from forestry practices are: timber harvesting, chemical treatments, controlled burning, and streamside management. In 1998, 98% of the 43,906 acres that were evaluated were in compliance with the BMP's. In 1992, the stream compliance was 95.5%. The goal is to meet 100% compliance with each BMP.	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Federal Clean Water Act Section 404	EPA (situations involving forestry are normally referred to the GFC to determine compliance with this regulation)	Requires normal ongoing agricultural and silvicultural practice to adhere to BMP's and 15 baseline provisions for road construction and maintenance in and across waters of the US including lakes, rivers, perennial and intermittent streams, wetlands, sloughs in order to qualify for the exemption from the permitting process.	June 6, 1988	Current	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Sediment from dredge or fill activities	Agriculture and silviculture	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
GFC can report status on accomplishments or complaints investigated involving this act to the RDC as needed.	Continuous		EPA identifies silviculture as the lowest contribution source of non-point pollution

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Memo to the Field: Application of BMP's to mechanical silvicultural site preparation activities for the establishment of pine plantations in the Southeast	EPA/ US Army Corps of Engineers - (cases normally referred to GFC to make initial determination)	Identifies certain bottomland hardwood wetlands that should be subject to permitting if converting to pine plantations.	November 1995	Current	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Biota, habitat	Silviculture	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
GFC can provide status reports as needed	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Federal Farm Bill (Swamp buster)	US Department of Agriculture Natural Resource Conservation Service	Prohibits landowners participating in federal price support programs from converting forested wetlands to agriculture		Current	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Biota (habitat)	Agriculture	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Status reports can be provided as needed	Continuous		

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Georgia Water Quality Control Act (OCGA 12-5-20)	GA DNR EPD	Makes it unlawful to discharge excessive pollutants (sediments, nutrients, pesticides, animal waste, etc.) into waters of the State in amounts harmful to public health, safety, or welfare, or to animals, birds, or aquatic life or the physical destruction of stream habitats.	1964	Current	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Sediments, nutrients, pesticides, and habitat	Silviculture	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
GFC investigates and mediates silvicultural complaints on behalf of EPD. Unresolved complaints are turned over to EPD for enforcement. Status reports can be provided to RDC as needed.	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
GA Growth Planning Act (OCGA 12-2-8)	GA DNR, Department of Community Affairs, and local units of government	Authorized GA DNR to develop minimum planning standards and procedures that local jurisdictions could adopt and enforce pertaining to the protection of river corridors, mountaintops, water supply watersheds/reservoirs, groundwater recharge areas, and wetlands. Silvicultural activities may be exempted from permitting requirements provided the activity complies with BMP's	1991	Local jurisdictions have to adopt ordinances to address these areas	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Biota, habitat, sediment	Silviculture	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
GFC can determine applicability and BMP implementation for local units of government.	Continuous		

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Farm Bill 2002	Natural Resources Conservation Service (NRCS)	The Farm Security and Rural Investment Act of 2002 is landmark legislation for conservation funding and for focusing on environmental issues. The conservation provisions will assist farmers and ranchers in meeting environmental challenges on their land. This legislation simplifies existing programs and creates new programs to address high priority environmental and production goals. The 2002 Farm Bill enhances the long-term quality of our environment and conservation of our natural resources.	2002	Current	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Various Sources	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
N/A	Continuous		

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Farm Services Agency	State of Georgia / Local FSA	Stabilizing farm income, helping farmers conserve land and water resources, providing credit to new or disadvantaged farmers and ranchers, and helping farm operations recover from the effects of disaster are the missions of the U.S. Department of Agriculture's Farm Service Agency (FSA).	Ongoing	Ongoing	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Agriculture Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	

The 1996 Act removed the link between income support payments and farm prices by providing for a one-time sign-up for a Production Flexibility Contract whereby producers receive seven annual fixed but declining production flexibility contract payments through 2002. This program, entitled the Agricultural Market Transition Act (AMTA), reflects FSA's direction over the next seven years whereby farm commodity prices will be largely determined by market factors, rather than government subsidies and production controls. To receive payments and loans on program commodities, producers must have entered into a 7-year contract by August 1, 1996. More than 98 percent of the eligible acres enrolled. Program commodities include wheat, corn, sorghum, barley, oats, upland cotton, and rice. The contract requires producers to comply with existing conservation plans for the farm, wetland provisions, and planting flexibility provisions, as well as to keep the land in agricultural use. Except for fruits and vegetables, any commodity or crop may be planted on contract acreage on a farm.

Continuous

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Conservation Reserve Program (CRP)	United States Department of Agriculture (USDA)	The Conservation Reserve Program (CRP) provides technical and financial assistance to eligible farmers and ranchers to address soil, water, and related natural resource concerns on their lands in an environmentally beneficial and cost-effective manner. The program provides assistance to farmers and ranchers in complying with Federal, State, and tribal environmental laws, and encourages environmental enhancement. The program is funded through the Commodity Credit Corporation (CCC). The Conservation Reserve Program reduces soil erosion, protects the Nation's ability to produce food and fiber, reduces sedimentation in streams and lakes, improves water quality, establishes wildlife habitat, and enhances forest and wetland resources. It encourages farmers to convert highly erodible cropland or other environmentally sensitive acreage to vegetative cover, such as tame or native grasses, wildlife plantings, trees, filter strips, or riparian buffers. Farmers receive an annual rental payment for the term of the multi-year contract. Cost sharing is provided to establish the vegetative cover practices.		Current	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Various Sources	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
CRP is administered by the Farm Service Agency, with NRCS providing technical land eligibility determinations, Environmental Benefit Index Scoring, and conservation planning.	Continuous		Utilized in this region due to high amount of farm production.

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Environmental Quality Incentives Program (EQIP)	United States Department of Agriculture (USDA)	The Environmental Quality Incentives Program (EQIP) was reauthorized in the Farm Security and Rural Investment Act of 2002 (Farm Bill) to provide a voluntary conservation program for farmers and ranchers that promotes agricultural production and environmental quality as compatible national goals. EQIP offers financial and technical help to assist eligible participants install or implement structural and management practices on eligible agricultural land.		Current	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Various Sources	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
EQIP offers contracts with a minimum term that ends one year after the implementation of the last scheduled practices and a maximum term of ten years. These contracts provide incentive payments and cost-shares to implement conservation practices. Persons who are engaged in livestock or agricultural production on eligible land may participate in the EQIP program. EQIP activities are carried out according to an environmental quality incentives program plan of operations developed in conjunction with the producer that identifies the appropriate conservation practice or practices to address the resource concerns. The practices are subject to NRCS technical standards adapted for local conditions. The local conservation district approves the plan.	Continuous		NRCS EQIP Funds and provide for cross fencing, paddock development, rotational grazing, and nutrient and pest management. It helps to provide healthier pastures and more efficient use of grasses.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Manure Management Plan	Individual	A manure management plan can help provide the most use of the nutrients in manure while protecting the water quality, and meeting manure-handling requirements.	Ongoing	Ongoing	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Manure	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Keeping records of manure applications and continuous soil samples.	Continuous		Utilized in this region due to high amount of farm production.

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Nutrient Management Program	7 Rivers RC & D, NRCS, and University of Georgia Extension Agent	Encourages and educates farmers on the correct usage and amount of fertilizers to maintain high yield and to lessen the impact of nitrates and phosphates to waterways.	1991	In-progress	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Nitrates and Phosphates Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Reduction in the measured amount of DO in impacted waterways.	Continuous		Utilized in this region due to high amount of farm production.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Pesticides Management Program	7 Rivers RC & D, NRCS, and University of Georgia Extension Agent	Encourages and educates farmers on the correct usage and amount of pesticides to reduce the impact of pesticides in the waterways.	1991	In-progress	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Pesticides Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Reduction in the measured amount of DO in impacted waterways.	Continuous		Utilized in this region due to high amount of farm production.

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Soil Testing	University of Georgia Cooperative Extension Services and Individual	Soil samples are taken to determine what nutrients are needed for any agricultural or silvicultural use. This reduces or avoids any unnecessary applications of fertilizers, herbicides, pesticides, etc. so to minimize harmful runoff.		Current	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Nitrates, Phosphates, Pesticides Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Soil samples are taken on a regular basis.	Continuous		Utilized in this region due to high amount of farm production.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Georgia Rules and Regulation for Water Quality Control (391-3-6)	GA DNR EPD	Makes it unlawful to discharge excessive pollutants (sediments, nutrients, pesticides, animal waste, etc.) into waters of the state in amounts harmful to public health, safety, or welfare, or to animals, birds, or aquatic life or the physical destruction of stream habitats.	1964 Revised June 2002	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Industry/Non-industry Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Compliance with rules and various permits issued under rules.	Continuous		

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
South Georgia Multi-Jurisdictional Solid Waste Management Plan	Berrien County	10 Counties participate and currently seek to coordinate solid waste management activities throughout the South Georgia Region and to cooperate in the activities of local Comprehensive Plans. The prime focus here is the collection and disposal of waste in a manner, which prevents pollution of surface and sub-service water resources.	1992	In-Progress	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Solid Waste	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
This management measure is currently being updated.	Continuous	N/A	

POTENTIAL FUNDING SOURCES

Source	Responsible Authority	Status	Anticipated Funding Amount
319 (h) Grant	EPD/State of Georgia	Must Apply	Unknown
Greenspace Funds	Georgia Department of Natural Resources	Must Apply	Unknown
Conservation Reserve Program	USDA	Must Apply	Unknown
Environmental Quality Incentive Program (EQIP)	Natural Resources Conservation Service	Must Apply	Unknown
Wildlife Habitat Incentive Program	Natural Resources Conservation Service	Must Apply	Unknown
Urban Resources Partnership (URP)	Forest Service, the Natural Resources Conservation Service, the National Park Service, the Environmental Protection Agency, and the Department of Housing and Urban Development	Must Apply	Unknown
Toxics Grant	Jessie Smith Noyes Foundation	Must Apply	Unknown
Sustainable Agriculture Grant	Jessie Smith Noyes Foundation	Must Apply	Unknown
Sustainable Communities Grant	Jessie Smith Noyes Foundation	Must Apply	Unknown
Progressive Fund	The Fund for Southern Communities	Must Apply	Unknown
Brownfields Assessment Demonstration Pilots	EPA Office of Solid Waste and Emergency Response	Must Apply	Unknown
Pollution Prevention Grants	EPA Office of Pollution Prevention and Toxics	Must Apply	Unknown
DCA Educational Outreach	Department of Community Affairs	Must Apply	Unknown

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MONITORING PLAN

Organization	Pollutants	Purpose/Description	Time Frame		Status: (Previous, Current, Proposed)
			Start	End	
Georgia Adopt-A-Stream Water Quality Monitoring	Low Dissolved Oxygen	To help educate and improve/or maintain a streams quality	TBA	TBA	Proposed
USGS Water Quality Testing	Low Dissolved Oxygen	Assess Water Quality	N/A	Continuous	Current
Local government Scrap Tire Management Program	Low Dissolved Oxygen	To reduce the illegal dumping of scrap tires, reduction in solid waste, and other environmental issues by hiring an enforcement / education officer to respond and monitor	TBA	TBA	Proposed
Local / County Governments Water Quality Testing	Low Dissolved Oxygen	Local testing to ensure quality on impaired streams as they relate to effluent discharge	N/A	Continuous	Ongoing
National Environmentally Sound Production Agriculture Laboratory (NESPAL) and USDA-ARS Southeast Watershed Laboratory Monitoring Program	Low Dissolved Oxygen	To study the water quality of the entire Suwannee Basin	N/A	N/A	Current
National Environmentally Sound Production Agriculture Laboratory (NESPAL) Monitoring Program	Low Dissolved Oxygen	319 (h) grant to study dissolved oxygen	2003	2006	Grant applied
Willacoochee River Restoration University of Georgia (UGA)	Low Dissolved Oxygen	A water quality and watershed restoration project helping citizens improve and protect their water resources	2002	2005	Current
Georgia Forestry Commission (GFC) Forest Water Quality Program	Low Dissolved Oxygen, Biota	BMP Education Complaint Investigation BMP Monitoring monthly Assurance Exams	N/A	N/A	Current Current Proposed

COMMENTS: On behalf of the stakeholders of the Suwannee River Basin, the South Georgia RDC suggest further studies on each of the streams that have been listed on the 303(d) list since there have been numerous concerns about when the samples were taken and the number of samples taken from each stream. We also feel that the natural range of dissolved oxygen levels in the streams of the South Georgia Coastal Plains need to be further studied and established specifically for this region. Until the standard is developed, there are currently several organizations that have been involved with monitoring studies related to this region and their data could be used to help develop a proper standard for this region. Attached are photos of the Willacoochee River, segment #1: Taken North and South of Hwy 158.

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Willacoochee River North side along Hwy 158.



Willacoochee River North side along Hwy 158.

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Willacoochee River North side along Hwy 158.



Willacoochee River South side along Hwy 158.

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Willacoochee River South side of Hwy 158.

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3. Willacoochee River

NAME	LOCATION	MILES/AREA IMPACTED	CLASSIFICATION	PARTIALLY SUPPORTING/ NON SUPPORTING (PS/NS)
Willacoochee River	Turkey Branch, upstream SR90/U.S. Hwy. 319 N. of Ocilla to SR 90, S.E. of Ocilla	13 miles	Fishing	Partially Supporting
PRIMARY COUNTY	SECONDARY COUNTY	SECOND RDC	SOURCE (POINT/NON-POINT)	
Irwin			Nonpoint	

POLLUTANTS	WATER QUALITY STANDARDS (WQS)	REQUIRED REDUCTION	TMDL ID #	DATE TMDL ESTABLISHED
Low Dissolved Oxygen	5mg/l (daily average) 4.489 mg/l (EPA WQS)	4 mg/l (minimum)		December 2001
		37%		

SIGNIFICANT STAKEHOLDERS

Name/Organization	Address	City	State	Zip	Phone	E-mail
Hon. Armond Morris, Chairman, Irwin County	207 S. Irwin Avenue	Ocilla	GA	31774	(229) 468- 9441	
Hon. Lamar Royal, Mayor, City of Ocilla	P.O. Box 626	Ocilla	GA	31774	(229) 468-5141	
South Georgia RDC	327 W. Savannah Avenue	Valdosta	GA	31601	(229) 333- 5277	
Mary Leidner- NRCS District Conservationist	Tifton Service Center 1468 Carpenter Road S	Tifton	GA	31794	(229) 382- 4776	
Gibbs Wilson- Irwin County Extension Coordinator	107 West Fourth Street	Ocilla	GA	31774	(229) 468- 7409	
Roy Joiner- Irwin County Soil Con Tech	107 West Fourth Street	Ocilla	GA	31774	(229) 468- 5936	
Georgia Farm Services Agency	Federal Building Room 102 355 East Hancock Avenue	Athens	GA	30601	(706) 546- 2266	
Irwin County Farm Service Agency	401 Cherry Street	Ocilla	GA	31774	(229) 468- 7491	
Bobby Mathis- Georgia Forestry Commission	3011 US HWY 84 E	Valdosta	GA	31606	(229) 333- 7817	bmathis@gfc.state.ga.us
National Environmentally Sound Production	P.O. Box 748	Tifton	GA	31794	(229) 386- 7274	scrow@tifton.cpes.peachnet.edu

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Name/Organization	Address	City	State	Zip	Phone	E-mail
Agriculture Laboratory (NESPAL)						
Todd Young- Rotary Club	Irwin Farm Bureau PO Box 127	Ocilla	GA	31774		
Irwin County 4-H	107 W. 4 th Street	Ocilla	GA	31774		
John Morgan	P.O. Box 28	Mystic	GA	31769		
Ira Paulk	184 Frank Ch. Rd.	Ocilla	GA	31774		
Howell Taylor	169 Lakeside Drive	Fitzgerald	GA	31750		
Harry Mixon	P.O. Box 145	Ocilla	GA	31774		
Gary Tankersley	227 Old Whitley Crossing	Fitzgerald	GA	31750		
H. Richard Murphy	P.O. Box 512	Ocilla	GA	31774		
Kenneth Sutton	209 W. 3 rd Street	Ocilla	GA	31774		
Scott Carver	463 Alapaha HWY	Ocilla	GA	31774		
Chris Paulk	1055 Satilla Road	Wray	GA	31798		
Jacob Paulk	1786 Satilla Road	Wray	GA	31798		
J.W. Paulk	1778 Satilla Road	Wray	GA	31798		
Jay Roberts	767 Brushy Creek Road	Ocilla	GA	31774		
Clint Owens	210 Sherman Street	Fitzgerald	GA	31750		
Gussie Hengson	801 South Druri Avenue	Ocilla	GA	31774		
Walter Portier	374 Magnolia Road	Ocilla	GA	31774		
Norman Brantley	444 Pinetta Road	Ocilla	GA	31774		
Georgia Forestry Commission	P.O. Box 819	Macon	GA	31202	(478) 751-3485	
Georgia Forestry Association	500 Pinnacle Court, Ste. 505	Norcross	GA	30071	(770) 416-7621	
Southeastern Wood Producers	P.O. Box 9	Hilliard	FL	32046	(904) 845-7133	

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EDUCATION/OUTREACH ACTIVITIES

Responsible Organization or Entity	Description	Target Audience	Anticipated Dates (MM/YY)
US Fish and Wildlife	The U.S. Fish and Wildlife Service is the principal Federal agency responsible for conserving, protecting and enhancing fish, wildlife and plants and their habitats for the continuing benefit of the American people. The US Fish and Wildlife has numerous activities that relate to water quality, fish, sedimentation and many more that are available on their website.	Everyone	Current
National Environmentally Sound Production Agriculture Laboratory (NESPAL)	Research and education efforts to build a better environment for agriculture and rural America	Agriculture and rural America	Current
National Environmentally Sound Production Agriculture Laboratory (NESPAL)	319 (h) grant to study dissolved oxygen	River Basins in the Southern Coastal Plain, Georgia	Grant applied
Upper Suwannee River Watershed Initiative (USRWI)	Non-Point organizations charged with education / outreach / water related activities within the Suwannee River Basin	Established organizations / clubs / citizens of the Suwannee River Basin	Will depend on group interests and funding sources
South Georgia RDC	The SGRDC offers technical assistance with development regulations	Local government officials / Developers	In-progress
South Georgia RDC	To help assist with educational outreach to our local governmental jurisdictions, i.e. City, county and interested individuals	Local government officials / citizens	Current
Georgia Adopt-A-Stream	The SGRDC would like to see each school district team up with Georgia Adopt-A-Stream and commit to adopting a stream or streams within their county	Established organizations / clubs and/or those interested	Will depend on group interests and funding sources
South Georgia RDC / Irwin County School District	The SGRDC would help the Irwin County School District target a group or club of interested students, educate them on the water issues that they are faced with, and to encourage them to participate in water monitoring	Established organizations / clubs	Will depend on group interests and funding sources

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South Georgia RDC / Georgia Department of Community Affairs	Facilitate and educate outreach on water resource related activities, i.e. Water Resource Tool Kit and Water First Program	Local government officials / citizens	Current
Georgia Cooperative Extension Services, Irwin County	To provide timely, unbiased research-based information to the public as it relates to agricultural and family consumer science. To improve the quality of the life for all communities in the State of Georgia. The County Extension Agent's duty is to deliver new information and technology from the University of Georgia's Coastal Plain Research Center to the community.	Everyone	Current
Natural Resource Conservation Service (NRCS), Irwin County	The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment.	Everyone	Current
University of Georgia 4-H Club, Irwin County	The mission of Georgia 4-H is to assist youth in acquiring knowledge, developing life skills, and forming attitudes that will enable them to become self-directing, productive and contributing members of society. This mission is accomplished, through "hands on" learning experiences, focused on agricultural and environmental issues, agriculture awareness, leadership, communication skills, foods and nutrition, health, energy conservation, and citizenship.	Students and youth	Current
Georgia Forestry Commission	Conduct forestry Best Management Practices educational training at Master Timber Harvester and continuing logger education programs, civic programs, and landowner meetings.	Foresters, timber buyers and loggers, site preparation contractors, landowners	Continuous

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POTENTIAL POLLUTANT SOURCES

Pollutant	Potential Source	Description of Contribution to Impairment
Low Dissolved Oxygen	Natural	Stream below critical conditions: High temperatures and low flow contribute to low levels of dissolved oxygen in the stream
Low Dissolved Oxygen	Rural runoff	Runoff that is washed away into nearby water sources, i.e. Chemical runoff from lawns, improper removal of trash, organic material such as leaves and yard trimmings, storm water runoff, fluids from parking areas, roads, sediment erosion, and chemicals
Low Dissolved Oxygen	Failing septic tanks	Effluent leakage due to overflowing sewage systems and leaking collection lines
Low Dissolved Oxygen	Animal waste	Animal waste that is deposited and then not properly removed or no lagoon is in place and is then washed into water bodies
Low Dissolved Oxygen	Organic matter	Organic matter runoff from wetlands / forest accumulates and then builds up when not properly secured or disposed and direct / lateral leaf litter
Low Dissolved Oxygen	Agriculture runoff	Pesticides / Fertilizer runoff causes nutrient build-up in water bodies
Low Dissolved Oxygen	Improper methods of trash collection and disposal	Spillage and incorrect disposal of substances into the water bodies or on the surface that is washed into drainage systems or water bodies
Low Dissolved Oxygen	Silviculture	Possible introduction of sediment from normal practices and stream crossings when BMP's are not followed. Possible cause of decline in available oxygen resulting from removal of over story trees w/in SMZ resulting in increase in stream temperatures. Leaving logging debris in streams. Possible introduction of nitrogen and phosphorous from fertilization practices.

MANAGEMENT MEASURES, RESPONSIBLE PARTIES, AND MEASURABLE MILESTONES

Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/ Voluntary
Georgia Erosion and Sediment Control Act (O.C.G.A 12-7-1)	GAEPD	Provides permitting by local governing authorities for land disturbing activities.	1975 2000 (amended)	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low DO		

Measurable Milestones	Schedule		Comments
	Start	End	

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Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/ Voluntary
Well and Septic Ordinances	Irwin County	Onsite permit process for well and septic tanks		Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Septic systems	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Continued compliance with well / septic installation / repair / maintenance. Any public service site is tested on a routine basis to maintain a healthy site. Inspections on private services are checked on a complaint basis only.	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/ Voluntary
Building Codes	Irwin County	Building codes initiate site plan procedures for all forms of land development. This indirectly reduces increased levels of DO in streams, i.e. building front, side, and rear setbacks and voluntary conservation easements on privately owned property. An example of a nonstructural BMP is sediment controls and slope gradient measures.	1999	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff	Effective

Measurable Milestones	Schedule	Comments
Permit required for construction.	Continuous	SGRDC assists with the administration of this code

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/ Voluntary
Land Subdivision Ordinance	Irwin County	Land Subdivision Ordinances initiate plan review for proposed subdivision. This typically includes sedimentation and water control measures. The lot size of land plays an important role in the amount of runoff that comes from urban and rural areas, i.e. storm water runoff, septic tank leaks or overflow, and erosion controls.	2000	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Periodic reassessment of effectiveness of ordinance. The ordinances are updated on a periodic basis as developments progress. This is done to prevent overgrowth of developments.	Continuous		SGRDC assists with the administration of this code.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/ Voluntary
Zoning Ordinance	Irwin County	To divide an area into zones or sections reserved for different purposes such as residence, business, and manufacturing to best suit the growth and land uses, also to help with the protection of sensitive areas such as water sources. Promotion of the proper location, height, stories, and size of open spaces along with the density and land uses.	2000	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Periodic reassessment of effectiveness of ordinance.	Continuous		SGRDC assists with the administration of this code.

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/Voluntary
Groundwater Recharge Area Development Ordinance	Irwin County	Georgia Planning Act Part V: Environmental Criteria. This ordinance regulates development of areas designated as high pollution susceptibility due to their location in the regional landscape. A BMP for groundwater protection is sand filters such as vegetation or sand to filter and settle pollutants.	2000	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff and illegal dumping of trash	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Ongoing protection of sensitive land open for development.	Continuous		SGRDC assists with the administration of this code. Groundwater Recharge areas area very sensitive to pollution and directly effect the quality of all water sources that are related to them.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/Voluntary
Local Wetlands Policy Ordinance	Irwin County	Georgia Planning Act Part V: Environmental Criteria. This ordinance regulates development of areas designated as wetlands as defined by the U.S. Army Corps of Engineers as jurisdictional wetlands.	2000	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff and illegal dumping of trash	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Ongoing protection of sensitive land not open for development.	Continuous		SGRDC assists with the administration of this code

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/Voluntary
Protected River Corridor Plan Ordinance	Irwin County	Georgia Planning Act Part V: Environmental Criteria. This ordinance regulates development of areas designated as protected river corridors as they related to development and disturbance of land along protected river corridors.	2000	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff and illegal dumping of trash	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Ongoing protection of sensitive land open for development along identified river corridors	Continuous		SGRDC assists with the administration of this code

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/Voluntary
Local Soil & Sedimentation Ordinance	Irwin County	Regulation of BMP's for development Erosion and Sedimentation Control Act (GESA). Requires permits for "land disturbing activities" and requires buffers to be maintained between the land disturbing activity and waters of the state.		Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Continued enforcement of ordinance will ensure less sedimentation in water bodies.	Continuous		SGRDC assists with the administration of this code.

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Suwannee River Basin Management Plan	Georgia Department of Natural Resources	Detailed management plans for the Suwannee River Basin. The purpose of the plan is to develop and implement a basin-planning program to protect, enhance and restore the waters for the State of Georgia, which will provide for effective monitoring, allocation, use, regulation, and management of water resources.	Final draft pending approval March 2002	Pending State approval	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Various Sources	Very Effective

Measurable Milestones	Schedule		Comments
	Start	End	
1. Implement Monitoring Plan and Compile Detailed Information/Data.	2003-	2004	
2. Analyze and Evaluate Detailed Information, Update Basin Assessment and Priority Issues List, Develop Strategies for Priority Issues, and Stakeholder meeting.	2004-	2005	
3. Continue to Develop Strategies for Priority Issues and Prepare and Update Draft River Basin Plan.	2005-	2006	
4. Agency and Public Review and Hearings, Finalize River Basin Plan, Implement River Basin Plan, and Stakeholder meeting.	2006-	2007	
5. Continue to Implement River Basin Plan and Stakeholder meeting.	2007-	Continuous	

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Establish the Natural Range of Dissolved Oxygen Levels in Streams of the South Georgia Coastal Plain	Georgia DNR-EPD	An extensive stream-monitoring program to establish the DO range naturally occurring during critical stream flow conditions in the South Georgia Coastal Plain.	Spring 2003	Grant Applied Conditionally approved per revisions of proposal	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Naturally Occurring	Very Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Three years of bi-weekly water quality and hydrologic parameter monitoring at a maximum of 60 locations. Annual characterization of study stream morphology; semiannual long term BOD; semiannual benthic and periphyton respiration by respirometer. Evaluation and characterization of study watersheds to establish the dynamics affecting DO in each watershed.	Expected start, Spring 2003;	Expected end, Spring 2006	Piscola Creek watershed monitoring data collected in the past four years show that in summer months 8 highly enriched streams in the midst of intensive livestock and row-crop production have much higher DO values than a comparison “reference” stream. These and other data collected by UGA and USDA-ARS scientists have lead the hypothesis that a combination of high summer-time temperatures, low flows, and high loads of organic carbon contributed by riparian vegetation contribute to naturally low DO levels in unimpacted Coastal Plain streams. A proposal to establish an extensive stream-monitoring program to establish the natural range of DO at critical flow conditions has been submitted to Georgia DNR-EPD administered U.S. Environmental Protection Agency’s Clean Water Act Section 319(h) Grant Program.

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/Voluntary
Georgia Forestry Commission	State of Georgia	A set of guidelines to better protect Georgia's streams and other water bodies from forestry non-point source pollution (primarily erosion and sedimentation).	Ongoing	Ongoing	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Forestry Runoff	Very Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Some Best Management Practices (BMP's) for forestry to minimize erosion and stream sedimentation from forestry practices are: timber harvesting, chemical treatments, controlled burning, and streamside management. In 1998, 98% of the 43,906 acres that were evaluated were in compliance with the BMP's. In 1992, the stream compliance was 95.5%. The goal is to meet 100% compliance with each BMP.	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Federal Clean Water Act Section 404	EPA (situations involving forestry are normally referred to the GFC to determine compliance with this regulation)	Requires normal ongoing agricultural and silvicultural practice to adhere to BMP's and 15 baseline provisions for road construction and maintenance in and across waters of the US including lakes, rivers, perennial and intermittent streams, wetlands, sloughs in order to qualify for the exemption from the permitting process.	June 6, 1988	Current	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Sediment from dredge or fill activities	Agriculture and silviculture	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
GFC can report status on accomplishments or complaints investigated involving this act to the RDC as needed.	Continuous		EPA identifies silviculture as the lowest contribution source of non-point pollution

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Memo to the Field: Application of BMP's to mechanical silvicultural site preparation activities for the establishment of pine plantations in the Southeast	EPA/ US Army Corps of Engineers - (cases normally referred to GFC to make initial determination)	Identifies certain bottomland hardwood wetlands that should be subject to permitting if converting to pine plantations.	November 1995	Current	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Biota, habitat	Silviculture	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
GFC can provide status reports as needed	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Federal Farm Bill (Swamp buster)	US Department of Agriculture Natural Resource Conservation Service	Prohibits landowners participating in federal price support programs from converting forested wetlands to agriculture		Current	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Biota (habitat)	Agriculture	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Status reports can be provided as needed	Continuous		

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Georgia Water Quality Control Act (OCGA 12-5-20)	GA DNR EPD	Makes it unlawful to discharge excessive pollutants (sediments, nutrients, pesticides, animal waste, etc.) into waters of the State in amounts harmful to public health, safety, or welfare, or to animals, birds, or aquatic life or the physical destruction of stream habitats.	1964	Current	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Sediments, nutrients, pesticides, and habitat	Silviculture	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
GFC investigates and mediates silvicultural complaints on behalf of EPD. Unresolved complaints are turned over to EPD for enforcement. Status reports can be provided to RDC as needed.	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
GA Growth Planning Act (OCGA 12-2-8)	GA DNR, Department of Community Affairs, and local units of government	Authorized GA DNR to develop minimum planning standards and procedures that local jurisdictions could adopt and enforce pertaining to the protection of river corridors, mountaintops, water supply watersheds/reservoirs, groundwater recharge areas, and wetlands. Silvicultural activities may be exempted from permitting requirements provided the activity complies with BMP's	1991	Local jurisdictions have to adopt ordinances to address these areas	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Biota, habitat, sediment	Silviculture	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
GFC can determine applicability and BMP implementation for local units of government.	Continuous		

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status <small>(In-progress, Planning, Enforced)</small>	Regulatory/ Voluntary
Farm Bill 2002	Natural Resources Conservation Service (NRCS)	The Farm Security and Rural Investment Act of 2002 is landmark legislation for conservation funding and for focusing on environmental issues. The conservation provisions will assist farmers and ranchers in meeting environmental challenges on their land. This legislation simplifies existing programs and creates new programs to address high priority environmental and production goals. The 2002 Farm Bill enhances the long-term quality of our environment and conservation of our natural resources.	2002	Current	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Various Sources	Very Effective

Measurable Milestones	Schedule		Comments
	Start	End	
N/A	Continuous		

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Farm Services Agency	State of Georgia / Local FSA	Stabilizing farm income, helping farmers conserve land and water resources, providing credit to new or disadvantaged farmers and ranchers, and helping farm operations recover from the effects of disaster are the missions of the U.S. Department of Agriculture's Farm Service Agency (FSA).	Ongoing	Ongoing	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Agriculture Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
The 1996 Act removed the link between income support payments and farm prices by providing for a one-time sign-up for a Production Flexibility Contract whereby producers receive seven annual fixed but declining production flexibility contract payments through 2002. This program, entitled the Agricultural Market Transition Act (AMTA), reflects FSA's direction over the next seven years whereby farm commodity prices will be largely determined by market factors, rather than government subsidies and production controls. To receive payments and loans on program commodities, producers must have entered into a 7-year contract by August 1, 1996. More than 98 percent of the eligible acres enrolled. Program commodities include wheat, corn, sorghum, barley, oats, upland cotton, and rice. The contract requires producers to comply with existing conservation plans for the farm, wetland provisions, and planting flexibility provisions, as well as to keep the land in agricultural use. Except for fruits and vegetables, any commodity or crop may be planted on contract acreage on a farm.	Continuous		Utilized in this region due to high amount of farm production.

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Conservation Reserve Program (CRP)	United States Department of Agriculture (USDA)	The Conservation Reserve Program (CRP) provides technical and financial assistance to eligible farmers and ranchers to address soil, water, and related natural resource concerns on their lands in an environmentally beneficial and cost-effective manner. The program provides assistance to farmers and ranchers in complying with Federal, State, and tribal environmental laws, and encourages environmental enhancement. The program is funded through the Commodity Credit Corporation (CCC). The Conservation Reserve Program reduces soil erosion, protects the Nation's ability to produce food and fiber, reduces sedimentation in streams and lakes, improves water quality, establishes wildlife habitat, and enhances forest and wetland resources. It encourages farmers to convert highly erodible cropland or other environmentally sensitive acreage to vegetative cover, such as tame or native grasses, wildlife plantings, trees, filter strips, or riparian buffers. Farmers receive an annual rental payment for the term of the multi-year contract. Cost sharing is provided to establish the vegetative cover practices.		Current	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Various Sources	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
CRP is administered by the Farm Service Agency, with NRCS providing technical land eligibility determinations, Environmental Benefit Index Scoring, and conservation planning.	Continuous	Utilized in this region due to high amount of farm production.	

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Environmental Quality Incentives Program (EQIP)	United States Department of Agriculture (USDA)	The Environmental Quality Incentives Program (EQIP) was reauthorized in the Farm Security and Rural Investment Act of 2002 (Farm Bill) to provide a voluntary conservation program for farmers and ranchers that promotes agricultural production and environmental quality as compatible national goals. EQIP offers financial and technical help to assist eligible participants install or implement structural and management practices on eligible agricultural land.		Current	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Various Sources	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
EQIP offers contracts with a minimum term that ends one year after the implementation of the last scheduled practices and a maximum term of ten years. These contracts provide incentive payments and cost-shares to implement conservation practices. Persons who are engaged in livestock or agricultural production on eligible land may participate in the EQIP program. EQIP activities are carried out according to an environmental quality incentives program plan of operations developed in conjunction with the producer that identifies the appropriate conservation practice or practices to address the resource concerns. The practices are subject to NRCS technical standards adapted for local conditions. The local conservation district approves the plan.	Continuous		Utilized in this region due to high amount of farm production.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Manure Management Plan	Individual	A manure management plan can help provide the most use of the nutrients in manure while protecting the water quality, and meeting manure-handling requirements.	Ongoing	Ongoing	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Manure	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Keeping records of manure applications and continuous soil samples.	Continuous		Utilized in this region due to high amount of farm production.

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Nutrient Management Program	7 Rivers RC & D, NRCS, and University of Georgia Extension Agent	Encourages and educates farmers on the correct usage and amount of fertilizers to maintain high yield and to lessen the impact of nitrates and phosphates to waterways.	1991	In-progress	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Nitrates and Phosphates Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Reduction in the measured amount of DO in impacted waterways.	Continuous		Utilized in this region due to high amount of farm production.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Pesticides Management Program	7 Rivers RC & D, NRCS, and University of Georgia Extension Agent	Encourages and educates farmers on the correct usage and amount of pesticides to reduce the impact of pesticides in the waterways.	1991	In-progress	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Pesticides Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Reduction in the measured amount of DO in impacted waterways.	Continuous		Utilized in this region due to high amount of farm production.

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Soil Testing	University of Georgia Cooperative Extension Services and Individual	Soil samples are taken to determine what nutrients are needed for any agricultural or silvicultural use. This reduces or avoids any unnecessary applications of fertilizers, herbicides, pesticides, etc. so to minimize harmful runoff.		Current	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Nitrates, Phosphates, Pesticides Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Soil samples are taken on a regular basis.	Continuous		Utilized in this region due to high amount of farm production.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Georgia Rules and Regulation for Water Quality Control (391-3-6)	GA DNR EPD	Makes it unlawful to discharge excessive pollutants (sediments, nutrients, pesticides, animal waste, etc.) into waters of the state in amounts harmful to public health, safety, or welfare, or to animals, birds, or aquatic life or the physical destruction of stream habitats.	1964 Revised June 2002	Enforced	Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen / Fecal Coliform	Industry/Non-industry Runoff	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Compliance with rules and various permits issued under rules.	Continuous		

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Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
South Georgia Multi-Jurisdictional Solid Waste Management Plan	Irwin County	10 Counties participate and currently seek to coordinate solid waste management activities throughout the South Georgia Region and to cooperate in the activities of local Comprehensive Plans. The prime focus here is the collection and disposal of waste in a manner, which prevents pollution of surface and sub-service water resources.	1992	In-progress	Voluntary

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Solid Waste	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
This management measure is currently being updated.	Continuous	N/A	

POTENTIAL FUNDING SOURCES

Source	Responsible Authority	Status	Anticipated Funding Amount
319 (h) Grant	EPD/State of Georgia	Must Apply	Unknown
Greenspace Funds	Georgia Department of Natural Resources	Must Apply	Unknown
Conservation Reserve Program	USDA	Must Apply	Unknown
Environmental Quality Incentive Program (EQIP)	Natural Resources Conservation Service	Must Apply	Unknown
Wildlife Habitat Incentive Program	Natural Resources Conservation Service	Must Apply	Unknown
Urban Resources Partnership (URP)	Forest Service, the Natural Resources Conservation Service, the National Park Service, the Environmental Protection Agency, and the Department of Housing and Urban Development	Must Apply	Unknown
Toxics Grant	Jessie Smith Noyes Foundation	Must Apply	Unknown
Sustainable Agriculture Grant	Jessie Smith Noyes Foundation	Must Apply	Unknown
Sustainable Communities Grant	Jessie Smith Noyes Foundation	Must Apply	Unknown
Progressive Fund	The Fund for Southern Communities	Must Apply	Unknown
Brownfields Assessment Demonstration Pilots	EPA Office of Solid Waste and Emergency Response	Must Apply	Unknown
Pollution Prevention Grants	EPA Office of Pollution Prevention and Toxics	Must Apply	Unknown
DCA Educational Outreach	Department of Community Affairs	Must Apply	Unknown

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MONITORING PLAN

Organization	Pollutants	Purpose/Description	Time Frame		Status: (Previous, Current, Proposed)
			Start	End	
Georgia Adopt-A-Stream Water Quality Monitoring	Low Dissolved Oxygen	To help educate and improve/or maintain a streams quality	TBA	TBA	Proposed
USGS Water Quality Testing	Low Dissolved Oxygen	Assess Water Quality	N/A	Continuous	Current
Local government Scrap Tire Management Program	Low Dissolved Oxygen	To reduce the illegal dumping of scrap tires, reduction in solid waste, and other environmental issues by hiring an enforcement / education officer to respond and monitor	TBA	TBA	Proposed
Local / County Governments Water Quality Testing	Low Dissolved Oxygen	Local testing to ensure quality on impaired streams as they relate to effluent discharge	N/A	Continuous	Ongoing
National Environmentally Sound Production Agriculture Laboratory (NESPAL) and USDA-ARS Southeast Watershed Laboratory Monitoring Program	Low Dissolved Oxygen	To study the water quality of the entire Suwannee Basin	N/A	N/A	Current
National Environmentally Sound Production Agriculture Laboratory (NESPAL) Monitoring Program	Low Dissolved Oxygen	319 (h) grant to study dissolved oxygen	2003	2006	Grant applied
Willacoochee River Restoration University of Georgia (UGA)	Low Dissolved Oxygen	A water quality and watershed restoration project helping citizens improve and protect their water resources	2002	2005	Current
Georgia Forestry Commission (GFC) Forest Water Quality Program	Low Dissolved Oxygen, Biota	BMP Education Complaint Investigation BMP Monitoring monthly Assurance Exams	N/A	N/A	Current Current Proposed

COMMENTS: On behalf of the stakeholders of the Suwannee River Basin, the South Georgia RDC suggest further studies on each of the streams that have been listed on the 303(d) list since there have been numerous concerns about when the samples were taken and the number of samples taken from each stream. We also feel that the natural range of dissolved oxygen levels in the streams of the South Georgia Coastal Plains need to be further studied and established specifically for this region. Until the standard is developed, there are currently several organizations that have been involved with monitoring studies related to this region and their data could be used to help develop a proper standard for this region.

Attached are photos of the Willacoochee River, segment #2: Taken East and West of Hwy 129 and North and South of Hwy 90.

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Willacoochee River along Hwy 129.



Willacoochee River East side along Hwy 129.

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Willacoochee River East side along Hwy 129.



Willacoochee River East side along Hwy 129.

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Willacoochee River South side along Hwy 129.



Willacoochee River North side along Hwy 90.

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Willacoochee River North side along Hwy 90.



Willacoochee River North side along Hwy 90.

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Willacoochee River North side along Hwy 90.



Willacoochee River North side along Hwy 90.

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Willacoochee River South side along Hwy 90.



Willacoochee River South side along Hwy 90.

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**Environmental Protection Division of the Department of Natural Resources,
State of Georgia.**