

12-19-2005

Suwannee River Basin
TMDL Implementation Plan
Double Run Creek Watershed
Stream Approach
HUC10 # 0311020201
Reach ID: R031102020101

This document has been requested. Please see watershed approach below.

STATE OF GEORGIA
TMDL IMPLEMENTATION PLAN
WATERSHED APPROACH

Suwannee River Basin

Local Watershed Governments

South Georgia RDC
 Turner County
 City of Rebecca

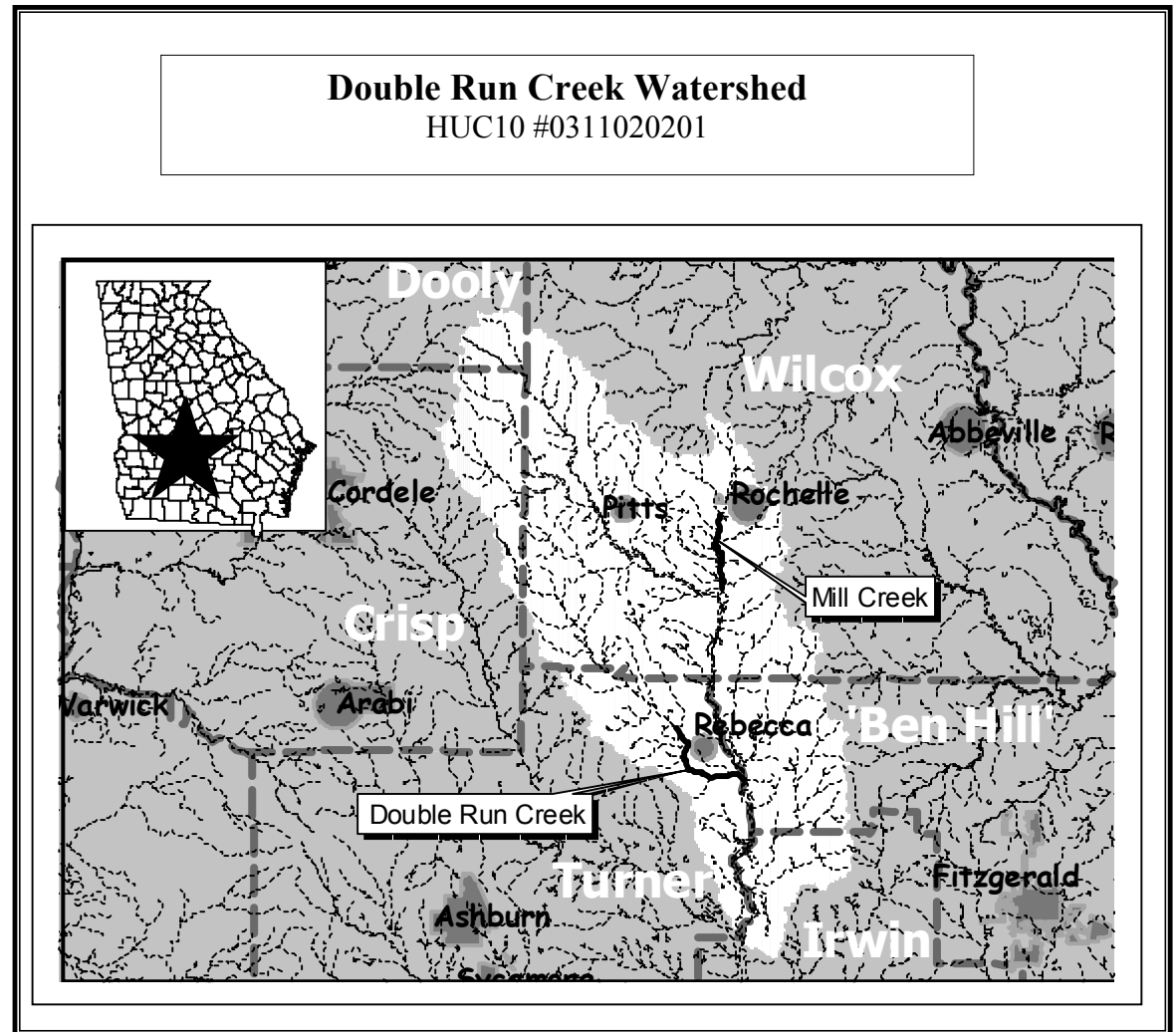


FIGURE 1

Impaired Water body*	Impaired Stream Location	Impairment
1. Double Run Creek	Upstream SR 90 to Alapaha River near Rebecca	Low DO (The EPD has prepared a separate Implementation Plan for Hg)

*This Water body's Number is referenced throughout the Implementation Plan.

POLLUTANT:	SOURCE:	EFFECT:	WHAT CAN I DO?	
			At Home: Community, School	At Work: Business, Government
<input checked="" type="checkbox"/> Dissolved Oxygen (DO) <input 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) Low flow stream conditions	<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 • Dispose of pet waste to minimize runoff <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>Automotive Care:</p> <ul style="list-style-type: none"> • Regular maintenance, 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 <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>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, 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>Sewer Management:</p> <ul style="list-style-type: none"> • Routine visual inspections and reports leaks if any noted <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>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 Waterbodies*	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	Everyone	Current
National Environmentally Sound Production Agriculture Laboratory (NESPAL)	319 (h) grant to study dissolved oxygen	1	River Basins in the Southern Coastal Plain, Georgia	Grant applied
National Environmentally Sound Production Agriculture Laboratory (NESPAL)	Research and education efforts to build a better environment for agriculture and rural America	1	Agriculture and rural America	Current
Upper Suwannee River Watershed Initiative (USRWI)	Non-Point organizations charged with education / outreach / water related activities within the Suwannee River Basin	1	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	1	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	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	Established organizations / clubs and/or those interested	Will depend on group interests and funding sources
South Georgia RDC / Turner County School District	The SGRDC would help Turner 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	1	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	Local government officials / citizens	Current

Georgia Cooperative Services, Turner County	Extension	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	Everyone	Current
Natural Resource Service (NRCS), Turner County	Conservation	The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment.	1	Everyone	Current
University of Georgia, Turner County	4-H Club,	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	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	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. Jack Paulk, Chairman, Turner County	P.O. Box 191	Ashburn	GA	31714	(229) 567- 4313	
Hon. Robert Hunnicut, Mayor, City of Ashburn	P.O. Box 766	Ashburn	GA	31714	(229) 567- 3431	
Hon. Rubye Woodyard, Mayor, City of Rebecca	56 S. Academy Street	Rebecca	GA	31783	(229) 643- 1882	
Hon. Wayne Woodruff, Mayor, City of Sycamore	2529 US Hwy 41	Sycamore	GA	31790	(229) 567-4296	
Jerry Grimes, Ashburn City Manager	P.O. Box 766	Ashburn	GA	31714	(229) 567- 3431	
Carlton Webb, Street Superintendent, City of Ashburn	P.O. Box 766	Ashburn	GA	31714	(229) 567- 3431	

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
Joel Wood- NRCS District Conservationist	110 W 13 th Ave Suite B	Cordele	GA	31015	(229) 273- 4148	
Scott Utley- Turner County Extension Coordinator	414 County Farm Road, Room 2	Ashburn	GA	31714	(229) 567- 3448	
Del Braziel- NRCS Soil Con	414 County Farm Road, Room 2	Ashburn	GA	31714	(229) 567- 3994	
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	
Turner County Farm Service Agency	Ashburn Service Center 414 County Farm Road	Ashburn	GA	31714	(229) 567- 3994	
National Environmentally Sound Production Agriculture Laboratory (NESPAL)	P.O. Box 748	Tifton	GA	31794	(229) 386- 7274	scrow@tifton.cpes.peachnet.edu
Turner County 4-H	414 County Farm Road, Room 2	Ashburn	GA	31714	(229) 567- 3994	
John Paulk, Jr.	95 West Inaha Road	Sycamore	GA	31790		
Stephen Wilson	326 Jerry Young Road	Ashburn	GA	31714		
R. E. Youngblood	330 Youngblood Road	Ashburn	GA	31714		
Gerald Fowler	490 Lloyd Road	Sycamore	GA	31790		
Keith Barnette	5065 Bussey Road	Sycamore	GA	31790		
Curt Pylant	484 Roby Reeves Road	Sycamore	GA	31790		
Deral Dukes	532 Evans Street	Ashburn	GA	31714		
Gene Slade	P.O. Box 644	Ashburn	GA	31714		
Johnny Crawford	P.O. Box 280	Enigma	GA	31749		
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	

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.

Waterbody Name #1	Location	Miles/Area Impacted	Use Classification	Partially Supporting/ Not Supporting (PS/NS)
Double Run Creek	Upstream SR 90 to Alapaha River near Rebecca	5	Fishing	Not Supporting
Primary County	Secondary County	Second RDC	Source (Point/ Non point)	
Turner			Non point	

Polluants	Water Quality Standards (WQS)	Required Reduction	TMDL ID	Date TMDL Established
Low Dissolved Oxygen	5mg/l (daily average) 4 mg/l (minimum) 2.851 mg/l @ USGS 2315740 (EPA WQS)	24%		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 waterbody that is impaired.

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

Pollutant	Potential Sources of Pollutants	Description of Contribution To Impairment	Impacted Waterbodies*
Low Dissolved Oxygen	Natural	Stream below critical conditions: High temperatures and low flow contribute to low levels of dissolved oxygen in the stream	1
Low Dissolved Oxygen	Manufacturing / Industrial discharges	Manufacturing / Industrial runoff that is washed away into nearby water sources, i.e. Chemical runoff or thermal discharge	1
Low Dissolved Oxygen	Urban / Rural Development Runoff	Urban runoff from the City of Rebecca and 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, sediment erosion, and chemicals	1
Low Dissolved Oxygen	Failing septic tanks	Effluent leakage due to overflowing sewage systems and leaking collection lines	1
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	1
Low Dissolved Oxygen	Animal waste	Animal waste that is deposited and then not properly removed is washed into water bodies	1
Low Dissolved Oxygen	Agriculture runoff	Pesticides / Fertilizer runoff causes nutrient build-up in water bodies	1
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	1
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.	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
Well and Septic Ordinances	Turner County City of Rebecca	Onsite permit process for well and septic tanks		Enforced Enforced	Regulatory Regulatory
Pollutant(s) Affected	Potential Sources of Pollutant(s)		Impacted Waterbodies*	Anticipated or Past Effectiveness	
Low Dissolved Oxygen	Septic Systems		1	Effective	
Measurable Milestones			Schedule		
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.			Start	End	Comments
			Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Building Codes	Turner County City of Rebecca	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.	2000 2002	Enforced Pending	Regulatory Pending

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	
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	Turner County City of Rebecca	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 2001	Enforced Pending	Regulatory Pending

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	
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	Turner County City of Rebecca	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 2001	Enforced Pending	Regulatory Pending

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	
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 Ordinances	Turner 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)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff and illegal dumping of trash	1	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	Turner County City of Rebecca	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 2001	Enforced Enforced	Regulatory Regulatory

Pollutant(s) Affected	Potential Sources of Pollutant(s)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff and illegal dumping of trash	1	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
Local Soil & Sedimentation Ordinance	Turner 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)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Urban/Rural Runoff	1	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	Various Sources	1	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	

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	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.

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	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)	Impacted Water bodies*	Anticipated or Past Effectiveness
Sediment from dredge or fill activities	Agriculture and silviculture	1	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 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)	Impacted Water bodies*	Anticipated or Past Effectiveness		
Biota, habitat	Silviculture	1	Effective		
Measurable Milestones		Schedule		Comments	
GFC can provide status reports as needed		Start	End	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	Effective		
Measurable Milestones		Schedule		Comments	
Status reports can be provided as needed		Start	End	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	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)	Impacted Water bodies*	Anticipated or Past Effectiveness
Biota, habitat, sediment	Silviculture	1	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
GFC can determine applicability and 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)	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Various Sources	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	Agriculture Runoff	1	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)	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.

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.

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	1	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	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

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 Regulations 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	Industry/Non-industry Runoff	1	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	Turner 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)	Impacted Water bodies*	Anticipated or Past Effectiveness
Low Dissolved Oxygen	Solid Waste	1	Effective

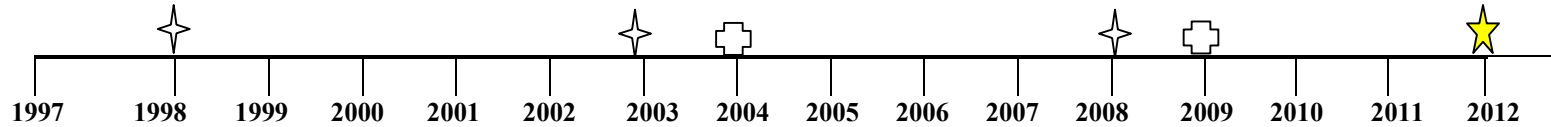
Measurable Milestones	Schedule		Comments
	Start	End	
This management measure is currently being updated.	Continuous		N/A

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
Greenspace Funds	Georgia Department of Natural Resources	Must Apply	Unknown	1
Conservation Reserve Program	USDA	Must Apply	Unknown	1
Environmental Quality Incentive Program (EQIP)	Natural Resources Conservation Service	Must Apply	Unknown	1
Wildlife Habitat Incentive Program	Natural Resources Conservation Service	Must Apply	Unknown	1
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
Toxics Grant	Jessie Smith Noyes Foundation	Must Apply	Unknown	1
Sustainable Agriculture Grant	Jessie Smith Noyes Foundation	Must Apply	Unknown	1
Sustainable Communities Grant	Jessie Smith Noyes Foundation	Must Apply	Unknown	1
Progressive Fund	The Fund for Southern Communities	Must Apply	Unknown	1
Brownfields Assessment Demonstration Pilots	EPA Office of Solid Waste and Emergency Response	Must Apply	Unknown	1
Pollution Prevention Grants	EPA Office of Pollution Prevention and Toxics	Must Apply	Unknown	1
DCA Educational Outreach	Department of Community Affairs	Must Apply	Unknown	1

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	
Quality Monitoring	Georgia Adopt-A-Stream Water	1	Low Dissolved Oxygen	To help educate and improve/or maintain a streams quality	TBA	TBA	Proposed
Water Quality Testing	USGS	1	Low Dissolved Oxygen	Assess Water Quality	N/A	Continuous	Current
Scrap Tire Management Program	Local government	1	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	Re-applying 2003
Water Quality Testing	Local / County Governments	1	Low Dissolved Oxygen	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	Low Dissolved Oxygen	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	Low Dissolved Oxygen	319 (h) grant to study dissolved oxygen	2003	2006	Grant applied
Forest Water Quality Program	Georgia Forestry Commission (GFC)	1	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 Double Run Creek: Taken North and South of Highway 112.



Double Run Creek.



Double Run Creek North Side.



Double Run Creek North Side.



Double Run Creek South Side.



Double Run Creek South Side.

Double Run Creek and Mill Creek Watershed
HUC10# 0311020201

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

TOGETHER WE CAN MAKE A DIFFERENCE!
