STATE OF GEORGIA TMDL IMPLEMENTATION PLAN

SUWANNEE RIVER BASIN

STREAM APPROACH

TMDL Implementation Plans are platforms for establishing a course of action 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 waterbodies/streams and the corresponding pollutants. The impaired waterbodies are located in the same watershed/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 resources. 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), and (c) a monitoring plan to determine the efficiency of the management measures and measurable milestones taken towards reducing pollutants in impaired waterbodies. 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.

Okefenokee Swamp Watershed

HUC10 #0311020101

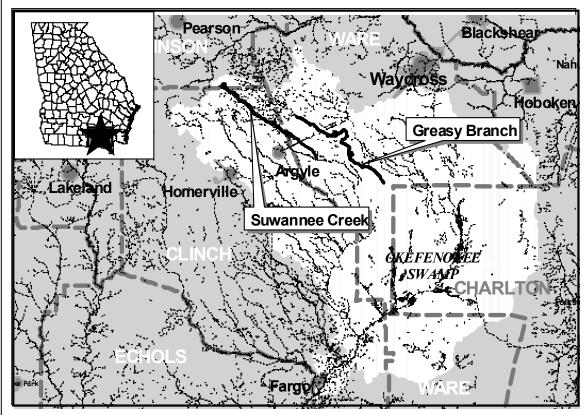


FIGURE 1

Impaired Waterbody*	Location	Impairment		
1. Greasy Branch	U.S. Hwy 84/SR38 to Okefenokee Swamp	Dissolved Oxygen (DO)		
2. Suwannee Creek	Headwaters to Little Suwannee Creek near Manor	Dissolved Oxygen (DO)		

^{*}These Waterbody Numbers are referenced throughout the implementation plan.

1. Greasy Branch

NAME	LOCATION	MILES/AREA IMPACTED	USE CLASSIFICATION	PARTIALLY SUPPORTING/ NOT SUPPORTING (PS/NS)
Greasy Branch	U. S. Hwy84/SR38 to Okefenokee Swamp	10 miles	Fishing	NS
PRIMARY COUNTY	SECONDARY COUNTY	SECOND RDC		SOURCE (POINT/NON-POINT)
Ware				Nonpoint

POLLUTANTS WATER QUALITY STANDARDS REDUCTION

Contributing to DO DO: 5 mg/L (daily)-4 mg/L (minimum)
Natural Water Quality Standard
DO: 2.114 mg/L (minimum)

REQUIRED LOAD
REDUCTION
Nonpoint: 7% TOC, TN, TP

TMDL ID#	DATE TMDL ESTABLISHED
	December 2001

TOC=Total Organic Carbon (lb/yr), TN=Total Nitrogen (lb/yr), TP=Total Phosphorus (lb/yr)

SIGNIFICANT STAKEHOLDERS

Name/Organization	Address	City	State	Zip	Phone	E-mail
Raymond James, Mayor	N/A	Argyle	GA	31623	(912) 487- 2270	N/A
John W. Strickland, Chairperson	100 Court Square	Homerville	GA	31634	(912) 487- 2667	N/A
Wayne Kilmark, Waycross- Ware Planning Commission	902 Grove St.	Waycross	GA	31502	(912) 287- 4379	jshubert@warecounty.com
Edwin Davis, Chairman, Atkinson County	P.O. Box 518	Pearson	GA	31642	(912) 422- 3391	jjatco@planttel.net
Fredrick E. Carpenter Jr., Southeast Georgia RDC	1725 South Georgia Parkway, West	Waycross	GA	31502	(912) 285- 6097	fecsegardc@accessatc.net
Bill Wikoff, International Paper	6508 New Jesup Highway	Brunswick	GA	31523	(912) 265- 1378	Bill.wikoff@ipaper.co.
James Rouse, Rayonier	Rt.1 Box 19-B	Homerville	GA	31634	(912) 487- 5912	jrouse@rayonier.com
Al Browning, River Keepers	P.O. Box 523	Nashville	GA	31702	(229) 686- 2821	Labfarm1@yahoo.com
Bob Kenny, SMURFIT- Stone Container Corporation	Hwy 84E	Homerville	GA	31634	(912) 285- 4087	bkenny@smurfit.com

EDUCATION/OUTREACH ACTIVITIES

Responsible Organization or Entity	Description	Target Audience	Anticipated Dates (MM/YY)
Southeast Georgia Regional Development Center, Fredrick E. Carpenter Jr.	Part V Ordinance/Regulation Review for the City of Argyle, Atkinson County, Clinch County, and Ware County	Local Government	02/2003
Coastal District EPD, Frank VanArsdale	Best Management Practices for Industry	Business Community	04/2004
Coastal District EPD, Frank VanArsdale	Best Management Practices for Water Quality	Business Community	04/2004
Georgia Forestry Commission, Stan Moore	Best Management Practices for Forestry	Forestry Industry	10/2002
NRCS, 7 Rivers RC&D, Luther Jones	Best Management Practices for Agricultural	Farming Community	06/2003
Save Our Satilla, Gloria Taylor	Satilla River Basin Environmental Group	Citizens	10/2002
Southeast Georgia Regional Development Center (RDC), DNR/EPD	Southeast Georgia RDC is assisting local governments with a Water Committee. The Committee has been operational for 9 months. One project that the committee would like to undertake is an educational videotape for Residential and Urban BMPs. The committee believes that the key to quality water is behavior modification through education. This will be collaborative effort between DNR/EPD, Southeast Georgia RDC, Water Committee and Local Governments.	Local Governments and Citizens	11/2003
Adopt-A-Stream	Will assist Al Browning in the introduction of the Adopt-A-Stream program into Atkinson County, Clinch County and Ware County. Mr. Al Browning is an Ecology teacher at Berrien County High School. He can be reached at (229) 686-7428.	Citizens	06/2003

		00020.0.		
Southeast Georgia Regional Development	Will assist local governments in	Citizens and local governments	01/2003	
Center	seeking grants to delineate			
	malfunctioning septic systems,			
	lagoons and other wastewater			
	systems.			

POLLUTANT SOURCES

Pollutant	Source	Description of Contribution to Impairment
Dissolved	Broadcasting of Organic	Introduced into waterways by runoff and wind. Organic materials need aerobic microorganisms to further
Oxygen	Materials	breakdown the materials lending to decreased oxygen in the impacted waterway.
Dissolved Oxygen	Rural Development	Unchecked runoff through stormwater sewers: (1) Discharges of sanitary waste and (2) Improper disposal of waste materials.
Dissolved Oxygen	Land Disturbing Activities	Unchecked runoff from developing/developed sites: (1) Discharges of sanitary waste, (2) Improper disposal of waste materials and (3) Introduction of sediments into waterways. (Sediments change the mechanics of the waterway by reducing flow rates).
Dissolved Oxygen	Spill/Discharge of Raw Sewage	Spillage and unauthorized discharges that are not properly contained and/or decontaminated correctly are left on surface(s) to be washed away during periods of precipitation or routine maintenance (washing) of manure spreading vehicles or other collection apparatuses or containers.
Dissolved Oxygen	Forested Woodlands and Terrain	Heavily forest and wetland often contribute to high organic (leaf litterfall, decomposing plants) loading and slow flows (due to minimum topographical relief) in a surface water system that result in conditions where the dissolved oxygen is naturally lower and cannot meet the numeric criteria without reductions in the natural nutrient and carbon loads. Usually reduction in natural forest or wetlands contributions is not feasible, practicable or desirable through conventional best management practices.
Dissolved	Land Disturbing Activities: (1)	Uncheck runoff from construction sites: (1) Leaking portable waste containers, (2) Improperly disposed waste
Oxygen	Construction Sites, (2)	materials, and (3) Introduction of sediments into waterways. (Sediments change the mechanics of the waterway
	Infrastructure Development and Maintenance	by reducing flow rate and increasing water temperatures)
Dissolved Oxygen	Laundry Care Products	Detergents are emptied into septic systems, onto surface, or deposited into unapproved drainage/septic systems. During periods of precipitation, these chemicals are washed into nearby drainage systems and/or waterways.
Dissolved	Spill/Discharges of Raw	Spillage, unauthorized discharges, and cleansing of contaminated waste vehicles. These untreated materials are
Oxygen	Sewage	left on the surface to be introduced into the drainage system or waterway by precipitation or during the cleansing of equipment or collection apparatuses or containers.
Dissolved	Improper Methods of Trash	Spillage and incorrect disposal techniques place substances on surfaces to be washed into waterway during
Oxygen	Collection and Disposal	precipitation.
Dissolved	Collection and Disposal of	Fluids and materials associated with mechanical repairs and chemical absorbent materials that are not properly
Oxygen	Petroleum Products and	disposed of are left on surfaces to be washed into drainage system or waterways.
	Materials related to the repair of	
	Gasoline and Diesel Equipment.	

Dissolved Oxygen	Leaking Septic Systems	Effluent leakage due to overflowing sewage systems and leaking collection lines.
Dissolved Oxygen	Organic Materials From Lawns, City and County Right-of-Ways	Yard trimmings, leaves, branches and chipping materials that are not properly secured or disposed are washed away into nearby drainage systems and/or waterways.
Dissolved Oxygen	Automotive Product Care	Fluids, materials associated with auto repairs and chemical absorbent materials that are not properly disposed of are placed on surfaces to be washed into drainage system or dumped illegally into drainage systems.
Dissolved Oxygen	Organic Materials from Agricultural and Silvicultural Developments and Operations	Runoff from hay fields, row crop production, leaves, branches and chipping materials that are not properly secured or disposed are washed away into nearby drainage systems and/or waterways.
Dissolved Oxygen	Direct Leaf Litter	Direct introduction of leafs falling into waterways from overhanging branches, limbs and trees. These leaves settle at the bottom and require further breakdown by aerobic microorganisms.

MANAGEMENT MEASURES, RESPONSIBLE PARTIES, AND MEASURABLE MILESTONES

Regulation/Ordinance or Management Measure	Responsible Organization		Description		Enacted/ Projected Date	Status	Regulatory/V oluntary
Georgia Water Quality Control Act Georgia Groundwater Use Act Georgia Erosion & Sedimentation Act Georgia Comprehensive Planning Act Georgia River Basin Management Planning Act		water pollution detergents and require permits surface water v siltation of stat activities and r along state wat plans that includrinking water wetlands; to re	ing Georgia EPD to control in, eliminate phosphate regulate sludge disposal; to so for agricultural ground and withdrawals; to prohibit the waters by land disturbing equire undisturbed buffers ters; to require land-use adde controls to protect supply sources and quire river basin lans on a rotation schedule ver basins.		Enforced	Regulatory	
		Anticipated or	Past				
	arces of Pollutant(s)	Effectiveness	-4:				
sou nor	governed point urce discharge and upoint source runoff lution loads.	Effe	ective				
Measurable Mi	Schedul Start	le End	Comments				

Compliance with regulations to control water pollution including identification and implementation of Best Management Practices.

11/1964 Continuous N/A

Regulation/Ordinance or	r	Responsible Go	vernment,			Enacted/		Regulatory/V
Management Measure		Organization o	r Entity	Descri	ption	Projected Date	Status	oluntary
CAFO Regulations		Georgia	DNR EPD	Permit	tting requirements for Concentrat	ted 2002	Pending	Regulatory
Land Application System	m Permits	General NF	DES Permi	ts Anima	al Feeding Operations and Land			
				Applic	cation Systems with liquid manur	re		
	·		Anticipat	ed or Past				
Pollutant(s) Affected	Sources	of Pollutant(s)	Effective	iess				
DO	lagoons,	LAS sprays	Effective					
	·		Sch	iedule	-			
Measurab	le Milestor	ies	Start	End	Comments			
Compliance with regula	tions to cor	ntrol water	2002	Continuous	Comprehensive Nutrient			
pollution including identification and				Management Plan				
implementation of Best Management Practices					-			

Regulation/Ordinance or	ulation/Ordinance or Responsible Government,				Enacted/		Regulatory/V
Management Measure	Organization	or Entity	Descrip	otion	Projected Date	Status	oluntary
Domesticated and Comme	ercial Ind	ividual	Encour	rages individuals to correctly	2006	Planning	Voluntary
Animal/Livestock Excrem	nent		dispose	e and manage excrement from			
Disposal and Managemen	t Program		animal	s/livestock operations.			
		Anticipat	ed or Past				_
Pollutant(s) Affected	Sources of Pollutant(s)	Effectiver	iess				
DO	Domesticated animals	Effective i	f BMP is				
	and Commercial	implement	ted				
	Livestock Production	_					
		Sch	edule				
Measurable	Milestones	Start	End	Comments			
Reduction in the measural	ble amount of pollutants	2006	Continuous	University of Georgia			

Measurable MilestonesStartEndCommentsReduction in the measurable amount of pollutants contributing to impaired DO in impacted waterways.2006ContinuousUniversity of Georgia Extension Agent must provide educational opportunities if BMP is to become effective.

Regulation/Ordinance	or	Responsible G	overnme	ent,			Enacted/		Regulatory/
Management Measure		Organization	or Entity Description		Projected Date	Status	Voluntary		
Herbicide and Pesticide	Poison	Individual]	Encourages in	dividuals to properly disp	ose 2005	Planning	Voluntary
Care Disposal and Mana	gement			(of dangerous	chemicals			
Program									
			Anticip	ated or P	ast				
Pollutant(s) Affected	Sources	of Pollutant(s)	Effectiv	eness					
DO	Non-com	mercial and	Effectiv	e if BMP	is				
	commerc	ial application	impleme	ented					
	of Herbic	ides and	•						
	Pesticides	S.							
			S	chedule					
Measurabl	le Mileston	ies	Start	Eı	nd	Comments			
Reduction in the measur	able amour	nt of pollutants	2005	Continu	ous Unive	rsity of Georgia	•		
that contribute to impair	ed DO in ir	mpacted			Exten	sion Agent must			
waterways.		•			provio	le educational			
, and the second					oppor	tunities if BMP is to			
					becon	ne effective.			

Regulation/Ordinance or	Responsible Government,		Enacted/		Regulatory/V
Management Measure	Organization or Entity	Description	Projected Date	Status	oluntary
Stream Management Zones	Georgia Forestry Commission	Encourages Forest Production Operator to Plan and Implement strategies to prevent sediments, fluids and nutrients from entering waterway.	1993	In-Progress	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Anticipated or Past Effectiveness
DO	Fluids, excessive	Effective
	nutrients and organic	
	materials	

·	Sch	edule		
Measurable Milestones	Start	End		Comments
Reduction in the measurable amount of pollutants	1993	Continuous	N/A	

Reduction in the measurable amount of pollutants that contribute to impaired DO in impacted waterways.

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Regulation/Ordinance or	Responsible G	overnment,			Enacted/		Regulatory/V
Management Measure	Organization of	or Entity	Description		Projected Date	Status	oluntary
Septic Tank Managemen	nt Southeast Geo	orgia RDC, 7	319 grant to delineate fa	ailing septic	2004	Planning	Voluntary
Program	Rivers RC&D	and local	systems				
	governments i	n watershed.	•				
Pollutant(s) Affected	Sources of Pollutant(s)	Anticipated or	Past Effectiveness				
DO	Effluent leakage from	Effective if BN	MP is implemented				
	collection lines		_				
	•	Sahadul	lo.	_			

	Sc	hedule	
Measurable Milestones	Start	End	Comments
Reduction in the measurable amount of pollutants contributing to impaired DO in impacted waterways.	2004	Continuous	Southeast Georgia RDC will work with 7 Rivers RC&D and local governments to apply for 319(h) grants to delineate and repair or replace malfunctioning septic systems.

Regulation/Ordinance or	Responsible Government,	Enacted/		Regulatory/V	
Management Measure	Organization or Entity	Description	Projected Date	Status	oluntary

Agricultural Best Mana Practices (BMPs)	ngement NRCS (7 Rive University of C	rs RC&D) and Georgia	eorgia program, develops agricultural BMPs		1987 In-Progress
	Extension Serv	vice	educationa	l and monitoring efforts.	
Pollutant(s) Affected	Sources of Pollutant(s)	Anticipated of	or Past Effecti	iveness	
DO	Animal facility runoff, pesticide/herbicide management, irrigation runoff management and manure applications.			Effective	
		Sche	edule		
Measurab	ole Milestones	Start	End	Co	mments
Reduction in the measu contributing to impaired	rable amount of pollutants d DO in impacted	1987	Continuous	NRCS and University of Geor continuous opportunities if BN	gia Extension Agent must provide MP is to remain effective.

waterways.

Regulation/Ordinance or	Responsible Government,		Enacted/		Regulatory/V
Management Measure	Organization or Entity	Description	Projected Date	Status	oluntary

					10 11020101			
Nutrient Management	Program	NRCS (7 Rive University of C Extension Serv	Georgia	correct maintai impacts	ages and educates farmers on th usage and amount of fertilizers n high yield and to lessen the s of nitrates and phosphates to ays. Reduces NPS of pollution.	to	In-Progress	Voluntary
Pollutant(s) Affected	Sources o	f Pollutant(s)	Anticipated	l or Past Eff	ectiveness			
DO	Natural a fertilizers	nd manmade	•	Effec				
	-		Scl	hedule				
Measura	ble Milesto	ones	Start	End	Comme	nts		
Reduction in the meas	urable amo	unt of pollutants	1991	Continuo	us NRCS and University of C	Georgia Extension		
contributing to impaire	ed DO in in	npacted			Agent must provide contin	nuous opportunities		
waterways.					if BMP is to remain effect	ive.		
Regulation/Ordinanc	e or	Responsible C	Government,	<u> </u>		Enacted/	_	Regulatory/V
Management Measur		Organization	or Entity	Descri	ption	Projected Date	Status	oluntary
Forestry Best Manager	ment	Georgia Forest	try Commission	on BMP c	ategories include planning for w	ater 1999	In-progress	Voluntary
Practices (BMPs)		-		quality	, SMZs, road location, construct	tion,		
				stream	crossing and maintenance, timb	er		
				harvest	ing, site preparation/reforestatio	on		
				and ma	nagement/protection.			
Pollutant(s) Affected	Sources	s of Pollutant(s)	Anticipated	l or Past Eff	Tectiveness			
DO	Forestry	<i>I</i>	Effective					
			Sche	dule				
	ble Milesto		Start	End	Comments			
Reduction in the meas	urable amo	unt of pollutants	1999 C	ontinuous	Georgia Forestry Commission	-		
that contribute to impa	ired DO in	impacted			provide education opportunitie	s for foresters if		
waterways.					BMPs are to remain effective.			
water ways.					Bivil 5 die to remain enteenve.			

Regulation/Ordinance or	Responsible Government,	_	Enacted/	_	Regulatory/V
Management Measure	Organization or Entity	Description	Projected Da	te Status	oluntary

Power Equipment, Com Industrial, and Personal Care Disposal and Mana Program	Product	dual	materials	es individuals to properly dispose of that are related to the repair and aintenance of power equipment.	2002	On-going	Voluntary
Pollutant(s) Affected	Sources of Pollutant(s)	Anticip	ated or Past l	Effectiveness			
DO	Equipment cleansing, mechanical repairs and maintenance shops, and individual home auto maintenance and/or repair		Eff	ective			
			Schedule				
	ble Milestones	Start	End	Comments			
	able amount of pollutants ed DO impacted waterways	2002	Continuou	S Local auto part houses encour provide opportunities for indiv dispose of fluids and materials disposed of by normal fluid or methods.	vidual to sthat can't be		
Regulation/Ordinance or Management Measure	Responsible Go Organization or		Descrip	otion	Enacted/ Projected Date	Status	Regulatory/V oluntary
II Cl D'1							
House Cleaner Disposal Management Program	and Indiv	vidual		rages individuals to properly dispose sehold chemicals	2005	Planned	Voluntary
*	Sources of Pollutant(s) Household chemicals	Anticipate Effectiven	of housed or Past ess f program is		2005	Planned	Voluntary
Management Program Pollutant(s) Affected DO	Sources of Pollutant(s)	Anticipate Effectiven Effective i	of housed or Past ess f program is		2005	Planned	Voluntary

Regulation/Ordinance or	Responsible Government,	Description	Enacted/ Status	Regulatory/V
Management Measure	Organization or Entity	•	Projected Date	oluntary

Sewer Management Pr	ogram Indi	vidual	Encou	rages individuals to routinely inspec	et 12/2004	Planning	Voluntai
			sewag	e system on property.			
	Sources of Pollutant(s)	Anticipate	ed or Past				
Pollutant(s) Affected		Effectiven	ess				
DO	Leaking Sewage Lines	Effective	if BMP is				
		implemen	ited				
Measurable Milestones		Sc	hedule				
		Start	End	Comments			
Reduction in the measu	urable amount of pollutants	12/2004	Continuous	University of Georgia			
that contribute to impaired DO in the impacted				Extension Agent must			
waterways.	1			provide educational			
				opportunities if BMP is to			
				become effective.			
				occome chective.			

Regulation/Ordinance or	Responsible Government,	Description	Enacted/	Status	Regulatory/V
Management Measure	Organization or Entity		Projected Date		oluntary
Spill/Discharge Control and	Individual	Encourages individuals to cleanup or	12/2004	Planning	Voluntary
Cleanup Program		control and to report spills.			

Pollutant(s) Affected	Sources of Pollutant(s)	Anticipated or Past
		Effectiveness
DO	Surface Spills or Uncontrolled Discharges	Effective is BMP is implemented

Measurable Milestones	Schedule		Comments
	Start	End	
Reduction in the measurable amount of pollutants that contribute to impaired DO in the impacted waterways.	12/2004	Continuous	University of Georgia Extension Agent must provide educational opportunities if BMP is to become effective.

Regulation/Ordinance or	Responsible Government,	Description	Enacted/ S	Status Regulatory/V
Management Measure	Organization or Entity	•	Projected Date	oluntary

HUC10 #0311020101

BMP Monitoring GFC Within watershed will conduct monthly 01/2003 Current Voluntary aerial BMP evaluations to identify recent forestry practices and conduct BMP audit

Pollutant(s) Affected Sources of Pollutant(s)

DO Silviculture Activities Effective if BMP is implemented

 Measurable Milestones
 Schedule

 Reduction in the measurable amount of pollutants
 01/2003
 Continuous
 N/A

Reduction in the measurable amount of pollutants that contribute to impaired DO in the impacted waterways.

Regulation/Ordinance or	Responsible Government,	Description	Enacted/ Status	Regulatory/V
Management Measure	Organization or Entity	•	Projected Date	oluntary

Storm Water Pollution Prevention	Southeast Georgia RDC,	Storm water runoff is part of a natural	01/2003	Planning	Voluntary
Plan (SWPPP)	Coastal Conservation	hydrologic process. However, human		_	
	Resources, and NRCS	activities, particularly urbanization and			
		associated industrial activities, can alter			
		natural drainage patterns and add			
		pollutants to rivers, and streams. Impact is			
		a decline in fish and restrictions on			
		swimming.			

Pollutant(s) Affected	Sources of Pollutant(s)	Anticipated or Past Effectiveness
DO	Storm Water Run Off	Effective if BMP is
		implemented

Comments
theast Georgia RDC will, h the assistance of Coastal nservation Resources, and CS, seek funds to assist local vernments in the development Storm Water Pollution vention Plan (SWPPP).
h (S

POTENTIAL FUNDING SOURCES

Source	Responsible Authority	Status	Anticipated Funding Amount

Section 319 (h) of the Clean Water Act	EPA/State of Georgia	Must Apply	N/A
Small Business Technical Assistance	Georgia Department of Natural Resources (EPD)	Must Request Assistance	Undetermined-Free Technical
Program			Assistance
Environmental Quality Incentive Program	NRCS	Must Apply	N/A
(EQIP)			
Unified Watershed Assessment program	NRCS	Must Apply	N/A
Conservation Reserve Enhancement Plan	NRCS	Must Apply	N/A
Section 604(b) Grants	Georgia Department of Natural Resources	Must Apply	N/A

MONITORING PLAN

					Status:
			Time F	rame	(Previous, Current,
Organization	Pollutants	Purpose/Description	Start	End	Proposed)
GA EPD/USGS	DO	TMDL Evaluation/Monitoring Data	1998	1998	Previous
GA EPD	DO	Water Quality Testing	2003	2003	Proposed
GA EPD/USGS	DO	TMDL Evaluation	1998	1998	Previous
GFC	DO	BMP Monitoring	01/2003	Continuous	Current
GA DNR EPD	DO	Comprehensive Nutrient Management Plan	03/2002	03/2007	Current
Southeast Georgia RDC, NRCS and	DO	Storm Water Pollution Prevention Plan	01/2003	01/2004	Proposed
Coastal Conservation Resources					
Adopt-A-Stream	DO	Water Quality Testing	8/2003	Continuous	Proposed

COMMENTS: Suwannee Creek is dry at this time. This creek is much like other smaller streams in this region, dry in the summer, wet during late fall and early spring.

2. Suwannee Creek

NAME	LOCATION	MILES/AREA IMPACTED	USE CLASSIFICATION	PARTIALLY SUPPORTING/ NOT SUPPORTING (PS/NS)
Suwannee Creek	Headwaters to Little Suwannee Creek near Manor	16 miles	Fishing	NS
PRIMARY COUNTY	SECONDARY COUNTY	SECOND RDC		SOURCE (POINT/NON-POINT)
Clinch	Ware			Nonpoint

		REQUIRED LOAD		DATE TMDL
POLLUTANTS	WATER QUALITY STANDARDS	REDUCTION	 TMDL ID#	ESTABLISHE
Contributing to DO	DO: 5 mg/L (daily)-4 mg/L (minimum) Natural Water Quality Standard DO: 3.191 mg/L (minimum)	Nonpoint: 7% TOC, TN, TP		December 2003

TOC=Total Organic Carbon (lb/yr), TN=Total Nitrogen (lb/yr), TP=Total Phosphorus (lb/yr)

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Name/Organization	Address	City	State	Zip	Phone	E-mail
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Wayne Kilmark, Waycross- Ware Planning Commission	902 Grove St.	Waycross	GA	31502	(912) 287- 4379	jshubert@warecounty.com
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Fredrick E. Carpenter Jr., Southeast Georgia RDC	1725 South Georgia Parkway, West	Waycross	GA	31502	(912) 285- 6097	fecsegardc@accessatc.net
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Al Browning, River Keepers	P.O. Box 523	Nashville	GA	31702	(229) 686- 2821	Labfarm1@yahoo.com
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Southeast Georgia Regional Development	Will assist local governments in	Citizens and local governments	01/2003						
Center	seeking grants to delineate								
	malfunctioning septic systems,								
	lagoons and other wastewater								
	systems.								

POLLUTANT SOURCES

Pollutant	Source	Description of Contribution to Impairment
Dissolved	Broadcasting of Organic	Introduced into waterways by runoff and wind. Organic materials need aerobic microorganisms to further
Oxygen	Materials	breakdown the materials lending to decreased oxygen in the impacted waterway.
Dissolved Oxygen	Rural Development	Unchecked runoff through stormwater sewers: (1) Discharges of sanitary waste and (2) Improper disposal of waste materials.
Dissolved Oxygen	Land Disturbing Activities	Unchecked runoff from developing/developed sites: (1) Discharges of sanitary waste, (2) Improper disposal of waste materials and (3) Introduction of sediments into waterways. (Sediments change the mechanics of the waterway by reducing flow rates).
Dissolved Oxygen	Spill/Discharge of Raw Sewage	Spillage and unauthorized discharges that are not properly contained and/or decontaminated correctly are left on surface(s) to be washed away during periods of precipitation or routine maintenance (washing) of manure spreading vehicles or other collection apparatuses or containers.
Dissolved Oxygen	Forested Woodlands and Terrain	Heavily forest and wetland often contribute to high organic (leaf litterfall, decomposing plants) loading and slow flows (due to minimum topographical relief) in a surface water system that result in conditions where the dissolved oxygen is naturally lower and cannot meet the numeric criteria without reductions in the natural nutrient and carbon loads. Usually reduction in natural forest or wetlands contributions is not feasible, practicable or desirable through conventional best management practices.
Dissolved	Land Disturbing Activities: (1)	Uncheck runoff from construction sites: (1) Leaking portable waste containers, (2) Improperly disposed waste
Oxygen	Construction Sites, (2)	materials, and (3) Introduction of sediments into waterways. (Sediments change the mechanics of the waterway
	Infrastructure Development and Maintenance	by reducing flow rate and increasing water temperatures)
Dissolved Oxygen	Laundry Care Products	Detergents are emptied into septic systems, onto surface, or deposited into unapproved drainage/septic systems. During periods of precipitation, these chemicals are washed into nearby drainage systems and/or waterways.
Dissolved	Spill/Discharges of Raw	Spillage, unauthorized discharges, and cleansing of contaminated waste vehicles. These untreated materials are
Oxygen	Sewage	left on the surface to be introduced into the drainage system or waterway by precipitation or during the cleansing of equipment or collection apparatuses or containers.
Dissolved	Improper Methods of Trash	Spillage and incorrect disposal techniques place substances on surfaces to be washed into waterway during
Oxygen	Collection and Disposal	precipitation.
Dissolved	Collection and Disposal of	Fluids and materials associated with mechanical repairs and chemical absorbent materials that are not properly
Oxygen	Petroleum Products and	disposed of are left on surfaces to be washed into drainage system or waterways.
	Materials related to the repair of	
	Gasoline and Diesel Equipment.	

Dissolved Oxygen	Leaking Septic Systems	Effluent leakage due to overflowing sewage systems and leaking collection lines.
Dissolved Oxygen	Organic Materials From Lawns, City and County Right-of-Ways	Yard trimmings, leaves, branches and chipping materials that are not properly secured or disposed are washed away into nearby drainage systems and/or waterways.
Dissolved Oxygen	Automotive Product Care	Fluids, materials associated with auto repairs and chemical absorbent materials that are not properly disposed of are placed on surfaces to be washed into drainage system or dumped illegally into drainage systems.
Dissolved Oxygen	Organic Materials from Agricultural and Silvicultural Developments and Operations	Runoff from hay fields, row crop production, leaves, branches and chipping materials that are not properly secured or disposed are washed away into nearby drainage systems and/or waterways.
Dissolved Oxygen	Direct Leaf Litter	Direct introduction of leafs falling into waterways from overhanging branches, limbs and trees. These leaves settle at the bottom and require further breakdown by aerobic microorganisms.

MANAGEMENT MEASURES, RESPONSIBLE PARTIES, AND MEASURABLE MILESTONES

11/1964 Continuous N/A

Regulation/Ordinance of	r Responsible	Government,			Enacted/		Regulatory/V
Management Measure	Organizatio		Description		Projected Date	Status	oluntary
Georgia Water Quality	Control Act Georgia DN	R EPD	Laws authori	zing Georgia EPD to control	11/1964	Enforced	Regulatory
Georgia Groundwater U	Jse Act		water pollution	on, eliminate phosphate			
Georgia Erosion & Sed	imentation		detergents an	d regulate sludge disposal; to			
Act			require permi	ts for agricultural ground and			
Georgia Comprehensiv	e Planning			withdrawals; to prohibit			
Act	\mathcal{E}			ate waters by land disturbing			
Georgia River Basin M	anagement			require undisturbed buffers			
Planning Act	umagement.			aters; to require land-use			
1 mining 1 let				lude controls to protect			
				er supply sources and			
				equire river basin			
				plans on a rotation schedule			
			for all major				
				Iver basilis.			
Dollardond(s) Affordad	Common of Dollarton4(s)	Anticipated					
Pollutant(s) Affected	Sources of Pollutant(s)	Effectivenes					
DO	Ungoverned point]	Effective				
	source discharge and						
	nonpoint source runoff						
	pollution loads.	-	<u> </u>	_			
	1.201	Sche	dule				
Measurab	ole Milestones	Start	End	Comments			

Measurable Milestones Compliance with regulations to control water pollution including identification and implementation of Best Management Practices.

Regulation/Ordinance or	r	Responsible Go	vernment,			Enacted/		Regulatory/V
Management Measure		Organization o	r Entity	Descri	ption	Projected Date	Status	oluntary
CAFO Regulations		Georgia	DNR EPD	Permit	tting requirements for Concentrat	ted 2002	Pending	Regulatory
Land Application System	m Permits	General NF	DES Permi	ts Anima	al Feeding Operations and Land			
				Applic	cation Systems with liquid manur	re		
	·		Anticipat	ed or Past				
Pollutant(s) Affected	Sources	of Pollutant(s)	Effective	iess				
DO	lagoons,	LAS sprays	Effective					
	·		Sch	iedule	-			
Measurab	le Milestor	ies	Start	End	Comments			
Compliance with regulations to control water		2002	Continuous	Comprehensive Nutrient				
pollution including identification and				Management Plan				
implementation of Best	Manageme	ent Practices			-			

Regulation/Ordinance or	Responsible (Government	,		Enacted/		Regulatory/V
Management Measure	ent Measure Organization or Entity			otion	Projected Date	Status	oluntary
Domesticated and Comme	ercial Ind	ividual	Encour	rages individuals to correctly	2006	Planning	Voluntary
Animal/Livestock Excrem	nent		dispose	e and manage excrement from			
Disposal and Managemen	t Program		animal	s/livestock operations.			
		Anticipat	ed or Past				_
Pollutant(s) Affected	Sources of Pollutant(s)	Effectiver	iess				
DO	Domesticated animals	Effective i	f BMP is				
	and Commercial	implement	ted				
	Livestock Production	_					
		Sch	edule				
Measurable	Milestones	Start	End	Comments			
Reduction in the measural	ble amount of pollutants	2006	Continuous	University of Georgia			

Measurable MilestonesStartEndCommentsReduction in the measurable amount of pollutants contributing to impaired DO in impacted waterways.2006ContinuousUniversity of Georgia Extension Agent must provide educational opportunities if BMP is to become effective.

Regulation/Ordinance	or	Responsible G	Governme	ent,			Enacted/		Regulatory/
Management Measure		Organization	or Entity		Description		Projected Date	Status	Voluntary
Herbicide and Pesticide	Poison	Individual			Encourages in	dividuals to properly disposit	ose 2005	Planning	Voluntary
Care Disposal and Mana	gement				of dangerous	chemicals			
Program									
			Anticip	ated or P	ast				
Pollutant(s) Affected	Sources	of Pollutant(s)	Effectiv	eness					
DO	Non-com	mercial and	Effectiv	e if BMP	is				
	commerc	ial application	impleme	ented					
	of Herbic	ides and							
	Pesticides	S.							
			S	chedule					
Measurabl	e Milestone	es	Start	Eı	nd	Comments			
Reduction in the measur	able amour	nt of pollutants	2005	Continu	ous Unive	ersity of Georgia			
that contribute to impair	ed DO in ir	npacted			Exten	sion Agent must			
waterways.		-			provid	de educational			
-					oppor	tunities if BMP is to			
						ne effective.			

Regulation/Ordinance or	Responsible Government,		Enacted/		Regulatory/V
Management Measure	Organization or Entity	Description	Projected Date	Status	oluntary
Stream Management Zones	Georgia Forestry Commission	Encourages Forest Production Operator to Plan and Implement strategies to prevent sediments, fluids and nutrients from entering waterway.	1993	In-Progress	Voluntary
	A 4 - 4 - 4 - 4 - 4 - 4 - 4	04			

Pollutant(s) Affected	Sources of Pollutant(s)	Anticipated or Past Effectiveness
DO	Fluids, excessive	Effective
	nutrients and organic	
	materials	

·	Sch	edule		
Measurable Milestones	Start	End		Comments
Reduction in the measurable amount of pollutants	1993	Continuous	N/A	

Reduction in the measurable amount of pollutants that contribute to impaired DO in impacted waterways.

Regulation/Ordinance or Management Measure	Responsible Go Organization o		Descriptio	1	Enacted/ Projected Date	Status	Regulatory/V oluntary
Septic Tank Management				to delineate failing septic	2004	Planning	Voluntary
Program	Rivers RC&D		systems	8 1 F		8	, , , , , , , , , , , , , , , , , , ,
C	governments in		3				
Pollutant(s) Affected	Sources of Pollutant(s)	Anticipated or	r Past Effective	eness			
DO	Effluent leakage from collection lines	Effective if B	MP is implem	ented			
Measurable	e Milestones	Schedu Start	ule End	Comments			
Reduction in the measura contributing to impaired lawaterways.		2004 Co	7 to ar	outheast Georgia RDC will work Rivers RC&D and local governm apply for 319(h) grants to deline and repair or replace malfunctioning systems.	ate		
Regulation/Ordinance or Management Measure	Responsible Go Organization o		Descriptio	n	Enacted/ Projected Date	Status	Regulatory/V oluntary
	Organization o	r Entity				Status In-Progress	.,
Management Measure	Organization o	r Entity rs RC&D) and	Leads effo	n ort in agricultural water quality develops agricultural BMPs	Projected Date		oluntary
Management Measure Agricultural Best Manage	Organization o ement NRCS (7 Rive	r Entity rs RC&D) and Georgia	Leads effor	ort in agricultural water quality	Projected Date		oluntary
Management Measure Agricultural Best Manage	ement NRCS (7 Rive University of C	r Entity rs RC&D) and Georgia	Leads effor program, education	ort in agricultural water quality develops agricultural BMPs al and monitoring efforts.	Projected Date		oluntary
Management Measure Agricultural Best Manage Practices (BMPs)	ement NRCS (7 Rive University of CExtension Serv	r Entity rs RC&D) and Georgia	Leads effor program, education	ort in agricultural water quality develops agricultural BMPs al and monitoring efforts.	Projected Date		oluntary
Management Measure Agricultural Best Manage Practices (BMPs) Pollutant(s) Affected DO	ement NRCS (7 Rive University of C Extension Serve Sources of Pollutant(s) Animal facility runoff, pesticide/herbicide management, irrigation runoff management and manure applications.	r Entity rs RC&D) and Georgia vice Anticipated of	Leads effor program, education	ort in agricultural water quality develops agricultural BMPs al and monitoring efforts. tiveness Effective	Projected Date 1987		oluntary
Management Measure Agricultural Best Manage Practices (BMPs) Pollutant(s) Affected	ement NRCS (7 Rive University of C Extension Serve Sources of Pollutant(s) Animal facility runoff, pesticide/herbicide management, irrigation runoff management and manure applications.	r Entity rs RC&D) and Georgia vice Anticipated of	Leads effor program, educations or Past Effect	ort in agricultural water quality develops agricultural BMPs al and monitoring efforts. tiveness Effective	Projected Date		oluntary

waterways.

Regulation/Ordinance Management Measure	or	Responsible Go Organization or		Description	l		Enacted/ Projected Date	Status	Regulatory/V oluntary
Nutrient Management	Program	NRCS (7 River University of C Extension Serv	ers RC&D) and Encourages and educates farmers on the Correct usage and amount of fertilizers to		1991	In-Progress	Voluntary		
Pollutant(s) Affected	Sources of	Pollutant(s)	Anticipated	or Past Effecti	veness				
DO	Natural an fertilizers	d manmade		Effective					
	-		Sch	edule					
Measura	ble Mileston	ies	Start	End		Comments			
Reduction in the meas contributing to impairs waterways.			1991	Continuous	NRCS and Univer Agent must provide if BMP is to remain	le continuous			

Regulation/Ordinance Management Measure		Responsible G Organization o		, Descri	otion		nacted/ rojected Date	Status	Regulatory/V oluntary
Forestry Best Managem Practices (BMPs)		Georgia Forestr		sion BMP c quality stream harves	ategories include planning for SMZs, road location, const crossing and maintenance, t ing, site preparation/reforest nagement/protection.	or water 19 truction, timber	999	In-progress	Voluntary
Pollutant(s) Affected	Sources	of Pollutant(s)		ed or Past Ef	ectiveness				
DO	Forestry		Effective					•	
		_	Sch	edule					
Measurab			Start	End	Comm				
Reduction in the measur			1999	Continuous	Georgia Forestry Commiss				
that contribute to impair	red DO in i	mpacted			provide education opportur		esters if		
waterways.					BMPs are to remain effecti	ive.			
Regulation/Ordinance or	•	Responsible Gov	vernment.			E	nacted/		Regulatory/V
Management Measure		Organization or		Description	n		rojected Date	Status	oluntary
Power Equipment, Com	mercial,	Individ	dual	Encourag	es individuals to properly dis	spose of 20	002	On-going	Voluntary
Industrial, and Personal					that are related to the repair				
Care Disposal and Mana	agement			routine m	nintenance of power equipm	ient.			
Program	•		_	<u>.</u>					
Pollutant(s) Affected		of Pollutant(s)	Anticip	ated or Past					
DO	* *	nt cleansing,		Eff	ective				
		cal repairs and							
		nce shops, and l home auto							
		n nome auto nce and/or repair.							
	mamicha	nee and/or repair.		Schedule					
Measura	ble Milesto	ones	Start	End	Cor	mments			
Reduction in the measur	rable amou	nt of pollutants	2002	Continuou	s Local auto part house	es encourage	and	I	
that contribute to impair					provide opportunities				
•	-				dispose of fluids and	materials tha	at can't be		
					disposed of by norma	al fluid or tra	sh disposal		
					methods.				

Regulation/Ordinance or Management Measure		Responsible Go Organization or		Descri	ption		Enacted/ Projected Date	Status	Regulatory/V oluntary
House Cleaner Disposal Management Program	and	Indiv	vidual		_	dividuals to properly dispose hemicals	2005	Planned	Voluntary
Pollutant(s) Affected	Sources of	f Pollutant(s)	Anticipat Effective	ed or Past	senoid C	nemeats			
DO		chemicals		if program is					
Measurabl	le Milestone	S	Sch Start	redule End		Comments			
Reduction in the measure that contribute to impair waterways.		*	2005	Continuous	(South encour	Disposal Company land Waste Inc.) must rage individuals to ly secure and dispose of nold chemicals			

Regulation/Ordinance or	Responsible Government,	Description	Enacted/ Status	Regulatory/V
Management Measure	Organization or Entity		Projected Date	oluntary

Sewer Management Program	Individual	Encourages individuals to routinely inspect	12/2004	Planning	Voluntary	
		sewage system on property				

	Sources of Pollutant(s)	Anticipated or Past
Pollutant(s) Affected		Effectiveness
DO	Leaking Sewage Lines	Effective if BMP is
		implemented

Measurable Milestones	Sch	ieaule	
	Start	End	Comments
Reduction in the measurable amount of pollutants	12/2004	Continuous	University of Georgia
that contribute to impaired DO in the impacted			Extension Agent must
waterways.			provide educational
			opportunities if BMP is to
			become effective.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/V oluntary
Spill/Discharge Control and	Individual	Encourages individuals to cleanup or	12/2004	Planning	Voluntary
Cleanup Program		control and to report spills.			

Pollutant(s) Affected	Sources of Pollutant(s)	Anticipated or Past Effectiveness
DO	Surface Spills or Uncontrolled Discharges	Effective is BMP is implemented

Measurable Milestones	Schedule		Comments
	Start	End	
Reduction in the measurable amount of pollutants that contribute to impaired DO in the impacted waterways.	12/2004	Continuous	University of Georgia Extension Agent must provide educational opportunities if BMP is to become effective.

Regulation/Ordinance or	Responsible Government,	Description	Enacted/	Status	Regulatory/V
Management Measure	Organization or Entity		Projected Date		oluntary

BMP Monitoring	GFC	Within watershed will conduct monthly	01/2003	Current	Voluntary
-		aerial BMP evaluations to identify recent			
		forestry practices and conduct BMP audit			

Pollutant(s) Affected	Sources of Pollutant(s)	Anticipated or Past Effectiveness
DO	Silviculture Activities	Effective if BMP is
		implemented

	Schedule			
Measurable Milestones	Start	End		Comments
Reduction in the measurable amount of pollutants that contribute to impaired DO in the impacted waterways.	01/2003	Continuous	N/A	

Regulation/Ordinance or	Responsible Government,	Description	Enacted/	Status	Regulatory/V
Management Measure	Organization or Entity	•	Projected D	ate	oluntary

Satilla River Basin TMDL Implementation Plan Okefenokee Swamp Watershed HUC10 #0311020101

Storm Water Pollution Prevention	Southeast Georgia RDC,	Storm water runoff is part of a natural	01/2003	Planning	Voluntary
Plan (SWPPP)	Coastal Conservation	hydrologic process. However, human		_	•
	Resources, and NRCS	activities, particularly urbanization and			
		associated industrial activities, can alter			
		natural drainage patterns and add			
		pollutants to rivers, and streams. Impact is			
		a decline in fish and restrictions on			
		swimming.			
	A 4: - 1: 4 4 4	Dage		-	

		Anticipated or Past
Pollutant(s) Affected	Sources of Pollutant(s)	Effectiveness
DO	Storm Water Run Off	Effective if BMP is
		implemented

	Sc	hedule	
Measurable Milestones	Start	End	Comments
Reduction in the measurable amount of pollutants that contribute to impaired DO in the impacted waterways.	01/2003	Continuous	Southeast Georgia RDC will, with the assistance of Coastal Conservation Resources, and NRCS, seek funds to assist local governments in the development of Storm Water Pollution Prevention Plan (SWPPP).

Satilla River Basin TMDL Implementation Plan Okefenokee Swamp Watershed HUC10 #0311020101

POTENTIAL FUNDING SOURCES

Source	Responsible Authority	Status	Anticipated Funding Amount
Section 319 (h) of the Clean Water Act	EPA/State of Georgia	Must Apply	N/A
Small Business Technical Assistance	Georgia Department of Natural Resources (EPD)	Must Request Assistance	Undetermined-Free Technical
Program			Assistance
Environmental Quality Incentive Program	NRCS	Must Apply	N/A
(EQIP)			
Unified Watershed Assessment program	NRCS	Must Apply	N/A
Conservation Reserve Enhancement Plan	NRCS	Must Apply	N/A
Section 604(b) Grants	Georgia Department of Natural Resources	Must Apply	N/A

Satilla River Basin TMDL Implementation Plan Okefenokee Swamp Watershed HUC10 #0311020101

MONITORING PLAN

	_				Status:
			Time F	rame	(Previous, Current,
Organization	Pollutants	Purpose/Description	Start	End	Proposed)
GA EPD/USGS	DO	TMDL Evaluation/Monitoring Data	1998	1998	Previous
GA EPD	DO	Water Quality Testing	2003	2003	Proposed
GA EPD/USGS	DO	TMDL Evaluation	1998	1998	Previous
GFC	DO	BMP Monitoring	01/2003	Continuous	Current
GA DNR EPD	DO	Comprehensive Nutrient Management Plan	03/2002	03/2007	Current
Southeast Georgia RDC, NRCS and	DO	Storm Water Pollution Prevention Plan	01/2003	01/2004	Proposed
Coastal Conservation Resources					
Adopt-A-Stream	DO	Water Quality Testing	8/2003	Continuous	Proposed

COMMENTS:

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

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

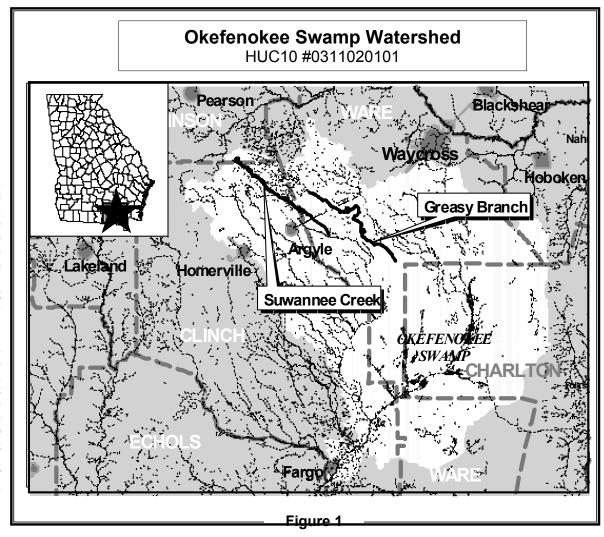
STATE OF GEORGIA TMDL IMPLEMENTATION PLAN WATERSHED APPROACH

SUWANNEE RIVER BASIN

Local Watershed Governments SOUTHEAST GEORGIA RDC Clinch County Ware County Atkinson County City of Argyle

TMDL Implementation Plans are platforms for establishing a course of action 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 waterbodies/streams and the corresponding pollutants. The impaired waterbodies are located in the same watershed/subbasin identified by a HUC10 code (Figure 1).

This Implementation Plan addresses an action plan, education/outreach activities, stakeholders, pollutant sources, and potential funding resources 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 the impaired waterbodies. 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 impaired streams.



Impaired Waterbody*	Impaired Stream Location	Impairment
1. Greasy Branch	U.S. Hwy 84/SR38 to Okefenokee Swamp	Dissolved Oxygen (DO)
2. Suwannee Creek	Headwaters to Little Suwannee Creek near Manor	Dissolved Oxygen (DO)

^{*}These Waterbody Numbers are referenced throughout the Implementation Plan.

Action Plan for Okefenokee Swamp Watershed

				24111700
POLLUTANT:			WHAT	CAN I DO?
	SOURCE:	EFFECT:	At Home: Community, School	At Work: Business, Government
X Dissolved Oxygen (DO)	Industrial	X Habitat	Septic Tank Management: a. Prevent soil contamination. b. Prevent waste runoff. c. Routine and regular maintenance of septic	Automotive Care: a. Regular maintenance of fleet vehicles, check for leaks and the proper disposal of fluids at approved locations.
Fecal Coliform (FC)	Urban	X Recreation	system. Pet Excrement Disposal:	Lawn and Garden Care: Ensure that contracted lawn services adhere to:
Sediment	X Agriculture	X Drinking Water	a. Properly dispose of pet excrement. Automotive Care: a. Regular maintenance, check for leaks and the proper disposal of fluids at approved	a. Proper yard maintenance. b. Proper disposal of organic and non-organic yard by products. c. Proper precautions and correct usage of
Metals	X Forestry Residential	X Aesthetics	locations. Lawn and Garden Care: a. Proper yard maintenance.	chemical and fertilizers. Commercial Chemical Cleaners: a. Proper disposal of commercial chemicals.
 Fish Consumption Guidelines (FCG) Other (Please List) 	X Other (Please List) Wetlands Heavy Forested Areas Terrain	Other (Please List)	a. Proper yard maintenance. b. Proper disposal of organic and non-organic yard by products. c. Proper precautions and correct usage of chemical and fertilizers. Household Cleaners: a. Proper disposal of household chemicals. b. Correct usage of chemicals. Sewer management: a. Routine visual inspections and report leaks if noted. Spill/Discharge Control and Cleanup: a. Control and cleanup spills according to instruction of manufacture. Miscellaneous Product Care: a. Control and cleanup spills according to instruction of manufacture. Trash Pickup: a. Visually inspect containers and report damage or leaks b. Keep container secure at all times c. Ensure that trash is picked up on a regular schedule.	b. Correct usage of chemicals. c. Inform all employees of MDSS. Sewer management: a. Routine visual inspections and report leaks if noted. Spill/Discharge Control and Cleanup: a. Control and cleanup spills according to instruction of manufacture. Trash Pickup: a. Visually inspect containers and report damage or leaks b. Keep container secure at all times c. Ensure that trash is picked up on a regular schedule. Agriculture: Best Management Practices (BMPs) a. Waste storage structure-Utilize and store waste b. Filter Strips-Reduce soil erosion, filter runoff and provide wildlife habitat. c. Nutrient Management-Prevent over-application of nutrients, protect against soil contamination. Forestry: Best Management Practices (BMPs) a. Streamside Management Zones (SMZS) b. Road building-Prevents soil erosion

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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)
Southeast Georgia Regional Development Center, Fredrick E. Carpenter Jr.	Part V Ordinance/Regulation Review for the City of Argyle, Atkinson County, Clinch County, and Ware County	1, 2	Local Government	02/2003
Coastal District EPD, Frank VanArsdale	Best Management Practices for Industry	1, 2	Business Community	04/2004
Coastal District EPD, Frank VanArsdale	Best Management Practices for Water Quality	1, 2	Business Community	04/2004
Georgia Forestry Commission, Stan Moore	Best Management Practices for Forestry	1, 2	Forestry Industry	10/2002
NRCS, 7 Rivers RC&D, Luther Jones	Best Management Practices for Agricultural	1, 2	Farming Community	06/2003
Save Our Satilla, Gloria Taylor	Satilla River Basin Environmental Group	1, 2	Citizens	10/2002
Southeast Georgia Regional Development Center (RDC), DNR/EPD	Southeast Georgia RDC is assisting local governments with a Water Committee. The Committee has been operational for 9 months. One project that the committee would like to undertake is an educational videotape for Residential and Urban BMPs. The committee believes that the key to quality water is behavior modification through education. This will be collaborative effort between DNR/EPD, Southeast Georgia RDC, Water Committee and Local Governments.	1, 2	Local Governments and Citizens	11/2003
Adopt-A-Stream	Will assist Al Browning in the introduction of the Adopt-A-Stream program into Atkinson County, Clinch County and Ware County. Mr. Al Browning is an Ecology teacher at Berrien County High School. He can be reached at (229) 686-7428.	1, 2	Citizens	06/2003
Southeast Georgia Regional Development Center	Will assist local governments in seeking grants to delineate malfunctioning septic systems, lagoons and other wastewater systems.	1, 2	Citizens and local governments	01/2003

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 waterbodies 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
Raymond James, Mayor	N/A	Argyle	GA	31623	(912) 487-2270	N/A
John W. Strickland, Chairperson	100 Court Square	Homerville	GA	31634	(912) 487-2667	N/A
Wayne Kilmark, Waycross-Ware	902 Grove St.	Waycross	GA	31502	(912) 287-4379	jshubert@warecounty.com
Planning Commission						
Edwin Davis, Chairman, Atkinson	P.O. Box 518	Pearson	GA	31642	(912) 422-3391	jjatco@planttel.net
County						
Fredrick E. Carpenter Jr.,	1725 South Georgia Parkway, West	Waycross	GA	31502	(912) 285-6097	fecsegardc@accessatc.net
Southeast Georgia RDC		•				
Bill Wikoff, International Paper	6508 New Jesup Highway	Brunswick	GA	31523	(912) 265-1378	Bill.wikoff@ipaper.co.
James Rouse, Rayonier	Rt.1 Box 19-B	Homerville	GA	31634	(912) 487-5912	jrouse@rayonier.com
Al Browning, River Keepers	P.O. Box 523	Nashville	GA	31702	(229) 686-2821	<u>Labfarm1@yahoo.com</u>
Bob Kenny, SMURFIT-Stone	Hwy 84E	Homerville	GA	31634	(912) 285-4087	bkenny@smurfit.com
Container Corporation						

HUC10: #0311020101

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 the streams on the 303(d) list will be provided upon request.

Waterbody Name #	Location U. S. Hwy84/SR38 to Okefe	lı	Miles/Area mpacted 0 miles	Use Classification Fishing	Partially Supporting/ Not Supporting (PS/NS)
Primary County Ware	Secondary County	inoxee 5 wainp	Second RDC	1 13111115	Source (Point/ Nonpoint)
Pollutants Contributing to DO	Water Quality Standards DO: 5mg/Ldaily) - 4mg/L (minimum) Natural Water Quality Standard DO: 2.114 mg/L	Required Load Reduction 7% TOC, TN, TP		TMDL ID	Date TMDL Established December 2001

TOC=Total Organic Carbon (lb/yr), TN=Total Nitrogen (lb/yr), TP=Total Phosphorus (lb/yr)

Waterbody Name #2	2 Location		Miles/Area Impacted	Use Classification	Partially Supporting/ Not Supporting (PS/NS)
Suwannee Creek	Headwaters to Little Suwan	nee Creek near Manor	16 miles	Fishing	NS
Primary County	Secondary County		Second RD	3	Source (Point/ Nonpoint)
Clinch	Ware				Nonpoint
Pollutants	Water Quality Standards	Required Reduction		TMDL ID	Date TMDL Established
Contributing to DO	DO: 5mg/L(daily) - 4mg/L(minimum) Natural Water Quality Standard DO: 3.191mg/L	7% TOC, TN, TP			December 2001

TOC=Total Organic Carbon (lb/yr), TN=Total Nitrogen (lb/yr), TP=Total Phosphorus (lb/yr)

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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, Municipal Sewage Treatment Plant)

Pollutant	Sources of Pollutants	Description of Contribution to Impairment	Impacted Waterbodies*
Dissolved Oxygen	Chemical/Fertilizer Applications, Silvicultural and Farming application of chemicals by aerial and broadcast means.	Residential Chemical/Fertilizer (Nitrates and Phosphates) runoff increases the natural eutrophication rates in streams and creeks, and contributes to impaired DO by producing a carbonaceous chemical reacting with O ² .	1, 2
Dissolved Oxygen	Organic Materials From Agricultural and Silvicultural Developments and Operations.	Runoff from hay fields, row crop production, leaves, branches and chipping materials that are not properly secured or disposed is washed away into nearby drainage systems and/or waterways.	1, 2
Dissolved Oxygen	Lateral Leaf Litter	Decrease in Oxygen due to decomposition of organic materials.	1, 2
Dissolved Oxygen	Wetlands	Wetland areas often contribute to high organic (leaf litterfall, decomposing plants) loading, slow flows (due to minimum topographical relief) and elevated temperatures in a surface water system that result in conditions where the dissolved oxygen is naturally lower and cannot meet the numeric criteria without reductions in the natural nutrient and carbon loads. Usually reduction in natural forest or wetlands contributions is not feasible, practicable or desirable through conventional best management practices.	1, 2
Dissolved Oxygen	Uncovered manure piles	Introduced into the waterway by the following methods: (1) Wind, and (2) runoff due to the introduction of water onto the pile. These nutrient enriched materials are then introduced into the waterway by the above means and aerobic microorganisms are needed to further breakdown the materials lending to decreased oxygen amounts in the waterway.	1, 2
Dissolved Oxygen	Access to waterways by livestock	Manure, feed and other materials are either transported on hooves, introduced into the stream by drinking livestock defectaion, and/or feed is introduced into the waterway by runoff due to well traveled paths.	1, 2
Dissolved Oxygen	Manure from livestock operations	Runoffs from livestock feedlots are introduced into the waterway by rainfall or feedlot maintenance operations.	1, 2
Dissolved Oxygen	Sediments	Sediments slow the rate of flow and increase the temperature of the water, depleting the amount of available oxygen through mechanical alteration of the waterway.	1, 2

Pollutant	Sources of Pollutants	Description of Contribution to Impairment	Impacted Waterbodies*
Dissolved Oxygen	Direct Leaf Litter	Direct introduction of leafs falling into waterways from overhanging branches, limb and trees. These leaves settle at the bottom and require further breakdown by aerobic microorganisms.	1, 2
Dissolved Oxygen	Broadcasting of Organic Materials	Introduced into waterways by runoff and wind. Organic materials need aerobic microorganisms to further breakdown the materials lending to decreased oxygen in the impacted waterway.	1, 2
Dissolved Oxygen	Rural Development	Unchecked runoff through stormwater sewers: (1) Discharges of sanitary waste and (2) Improper disposal of waste materials.	1, 2
Dissolved Oxygen	Land Disturbing Activities	Unchecked runoff from developing/developed sites: (1) Discharges of sanitary waste, (2) Improper disposal of waste materials and (3) Introduction of sediments into waterways. (Sediments change the mechanics of the waterway by reducing flow rates).	1, 2
Dissolved Oxygen	Spill/Discharge of Raw Sewage	Spillage and unauthorized discharges that are not properly contained and/or decontaminated correctly are left on surface(s) to be washed away during periods of precipitation or routine maintenance (washing) of manure spreading vehicles or other collection apparatuses or containers.	1, 2
Dissolved Oxygen	Forested Woodlands and Terrain	Heavily forest and wetland often contribute to high organic (leaf litterfall, decomposing plants) loading and slow flows (due to minimum topographical relief) in a surface water system that result in conditions where the dissolved oxygen is naturally lower and cannot meet the numeric criteria without reductions in the natural nutrient and carbon loads. Usually reduction in natural forest or wetlands contributions is not feasible, practicable or desirable through conventional best management practices.	1, 2
Dissolved Oxygen	Land Disturbing Activities: (1) Construction Sites, (2) Infrastructure Development and Maintenance	Uncheck runoff from construction sites: (1) Leaking portable waste containers, (2) Improperly disposed waste materials, and (3) Introduction of sediments into waterways. (Sediments change the mechanics of the waterway by reducing flow rate and increasing water temperatures)	1, 2
Dissolved Oxygen	Laundry Care Products	Detergents are emptied into septic systems, onto surface, or deposited into unapproved drainage/septic systems. During periods of precipitation, these chemicals are washed into nearby drainage systems and/or waterways.	1, 2
Dissolved Oxygen	Spill/Discharges of Raw Sewage	Spillage, unauthorized discharges, and cleansing of contaminated waste vehicles. These untreated materials are left on the surface to be introduced into the drainage system or waterway by precipitation or during the cleansing of equipment or collection apparatuses or containers.	1, 2
Dissolved Oxygen	Improper Methods of Trash Collection and Disposal	Spillage and incorrect disposal techniques place substances on surfaces to be washed into waterway during precipitation.	1, 2

Pollutant	Sources of Pollutants	Description of Contribution to Impairment	Impacted Waterbodies*
Dissolved Oxygen	Collection and Disposal of Petroleum Products and Materials related to the repair of Gasoline and Diesel Equipment.	Fluids and materials associated with mechanical repairs and chemical absorbent materials that are not properly disposed of are left on surfaces to be washed into drainage system or waterways.	1, 2
Dissolved Oxygen	Leaking Septic Systems	Effluent leakage due to overflowing sewage systems and leaking collection lines.	1, 2
Dissolved Oxygen	Organic Materials From Lawns, City and County Right-of-Ways	Yard trimmings, leaves, branches and chipping materials that are not properly secured or disposed are washed away into nearby drainage systems and/or waterways.	1, 2
Dissolved Oxygen	Automotive Product Care	Fluids, materials associated with auto repairs and chemical absorbent materials that are not properly disposed of are placed on surfaces to be washed into drainage system or dumped illegally into drainage systems.	1, 2
Dissolved Oxygen	Organic Materials from Agricultural and Silvicultural Developments and Operations	Runoff from hay fields, row crop production, leaves, branches and chipping materials that are not properly secured or disposed are washed away into nearby drainage systems and/or waterways.	1, 2
Dissolved Oxygen	Direct Leaf Litter	Direct introduction of leafs falling into waterways from overhanging branches, limbs and trees. These leaves settle at the bottom and require further breakdown by aerobic microorganisms.	1, 2

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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), the current status (i.e. enforced, in-progress, planning), and measurable milestones and schedule. Milestones are used to show development in attaining water quality standards and to determine whether management measures are being implemented.

Regulation/Ordinance	or	Responsible				Enacted/		Regulatory/
Management Measure		Organization			ription	Projected Date	Status	Voluntary
Georgia Water Quality Control Act Georgia DNR EPD			Laws	authorizing Georgia EPD to control	11/1964	Enforced	Regulatory	
Georgia Groundwater U	se Act			water	pollution, eliminate phosphate			
Georgia Erosion & Sedi	mentation			deter	gents and regulate sludge disposal; to			
Act			require permits for agricultural ground and					
Georgia Comprehensive	Planning				ce water withdrawals; to prohibit			
Act	C				on of state waters by land disturbing			
Georgia River Basin Ma	inagement				ties and require undisturbed buffers			
Planning Act	magement				state waters; to require land-use			
			plans that include controls to protect					
					ing water supply sources and			
					nds; to require river basin			
					gement plans on a rotation schedule			
	-				l major river basins.			
	Sources of		-	pacted	Anticipated or Past			
Pollutant(s) Affected	Pollutant(s)			rbodies*	Effectiveness			
DO	Ungoverned			1, 2	Effective			
	source disch	arge and						
	nonpoint sou	urce runoff						
	pollution loa	ads.						
			Scl	hedule				
Measurable Milestones	3		Start	End	Comments			
Compliance with regular	tions to contro	ol water	11/1964	Continuous	N/A			

pollution including identification and implementation of Best Management Practices.

Regulation/Ordinance or Responsible Government Measure Organization of						Enacted/ Projected Date	Status	Regulatory/ Voluntary	
CAFO Regulations		Georgia 1	DNR EPD	P	Permittir	ng requirements for Concentrated	1 2002	Pending	Regulatory
Land Application System	n Permits	General NP	DES Permit	ts A	Animal I	Feeding Operations and Land			
				Α	Applicat	ion Systems with liquid manure			
Impacted				Anticipated or Past					
Pollutant(s) Affected	lutant(s) Affected Sources of Pollutant(s) Waterbodies*		dies*	1	Effectiveness				
DO	lagoons, l	LAS sprays	1	1, 2	I	Effective			
			Sch	nedule					
Measurable Milestones			Start	En	nd (Comments			
Compliance with regulat	tions to con	trol water	2002	Continu	nuous (Comprehensive Nutrient			
pollution including identification and				ľ	Management Plan				
implementation of Best 1	Manageme	nt Practices				-			

Regulation/Ordinance or Responsible Management Measure Organization			Government, or Entity Description			Status	Regulatory/ Voluntary
Domesticated and Comr	nercial Ind	lividual	En	ncourages individuals to correctly	2006	Planning	Voluntary
Animal/Livestock Excre	ement		dis	spose and manage excrement from			
Disposal and Manageme	ent Program		an	nimals/livestock operations.			
		Im	pacted	Anticipated or Past			
Pollutant(s) Affected	Sources of Pollutant(s)	Wate	rbodies*	Effectiveness			
DO	Domesticated animals		1, 2	Effective if BMP is	_		
	and Commercial			implemented			
	Livestock Production			_			
	•	Scl	hedule	•			
Measurable Milestones	S	Start	End	Comments			
Reduction in the measur	able amount of pollutants	2006	Continuo	ous University of Georgia	_		
contributing to impaired	contributing to impaired DO in impacted			Extension Agent must provide			
waterways.				educational opportunities if			
				BMP is to become effective.			

Regulation/Ordinance or Responsible G		Government	•		Enacted/		Regulatory/
Management Measure Organization		or Entity Description		Projected Date	Status	Voluntary	
Herbicide and Pesticide	Poison Individual		Er	ncourages individuals to properly dispose	2005	Planning	Voluntary
Care Disposal and Mana	agement		of	f dangerous chemicals			
Program				-			
		Imp	acted	Anticipated or Past			
Pollutant(s) Affected	Sources of Pollutant(s)	Water	bodies*	Effectiveness			
DO	Non-commercial and	1	1, 2	Effective if BMP is			
	commercial application			implemented			
	of Herbicides and						
	Pesticides.						
		Schedule					
Measurable Milestones	s	Start	End	Comments			
Reduction in the measur	rable amount of pollutants	2005 C	Continuou	us University of Georgia			
that contribute to impair	red DO in impacted			Extension Agent must			
waterways.				provide educational			
-				opportunities if BMP is to			
				become effective.			

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Stream Management Zones	Georgia Forestry Commission	Encourages Forest Production Operator to Plan and Implement strategies to prevent sediments, fluids and nutrients from entering waterway.	1993	In-Progress	Voluntary
Source	s of Impacted	d Anticipated or Past			

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
DO	Fluids, excessive nutrients and organic materials	1, 2	Effective
	-		

	Scl	hedule	
Measurable Milestones	Start	End	Comments
Reduction in the measurable amount of pollutants	1993	Continuous	N/A

Reduction in the measurable amount of pollutants that contribute to impaired DO in impacted 1993 waterways.

Regulation/Ordinance Management Measure			•	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Septic Tank Managemen	nt Southeast Geo	rgia RDC, 7	7 3	319 grant to delineate failing septic	2004	Planning	Voluntary
Program	Rivers RC&D	and local	S	ystems			
	governments is	n watershed	l.				
	Sources of	lmp	pacted				
Pollutant(s) Affected	Pollutant(s)	Wate	rbodies*	* Anticipated or Past Effectiveness			
DO	Effluent leakage from		1, 2	Effective if BMP is implemented			
	collection lines			_			
		Sch	hedule				
Measurable Milestones	5	Start	End	d Comments			
Reduction in the measur	able amount of pollutants	2004	Continu	ious Southeast Georgia RDC will work w	ith		
contributing to impaired	DO in impacted			7 Rivers RC&D and local governmen	nts		
waterways.				to apply for 319(h) grants to delineat	e		
,				and repair or replace malfunctioning			
				septic systems.			

Management Measure Responsible Organization of			Descriptio	n	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Agricultural Best Management NRCS (7 Rive		ers RC&D) and	Leads effor	t in agricultural water quality	1987	In-Progress	Voluntary
Practices (BMPs)	Practices (BMPs) University of		program, d	evelops agricultural BMPs			
	Extension Ser		educationa	and monitoring efforts.			
		Waterb	odies*				
Pollutant(s) Affected	Sources of Pollutant(s)	Impa	cted	Anticipated or I	Past Effectiveness		
DO	OO Animal facility runoff,		2	Effective			
	pesticide/herbicide						
	management, irrigation						
	runoff management and						
	manure applications.						
		Sche	dule				
Measurable Milestones		Start	End	Comments			
Reduction in the measurable amount of pollutants contributing to impaired DO in impacted		1987	Continuous	NRCS and University of Georg continuous opportunities if BM			_

waterways.

	Regulation/Ordinance or Responsible Organization			Descriptio	n	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Nutrient Management Program NRCS (7 Rivers I University of Geo Extension Service			Georgia	correct usa maintain hi impacts of	s and educates farmers on the ge and amount of fertilizers to igh yield and to lessen the nitrates and phosphates to . Reduces NPS of pollution.	1991	In-Progress	Voluntary
Pollutant(s) Affected	Pollutant(s) Affected Sources of Pollutant(s)			odies* cted	Anticipated or Past Effe	ctiveness		
DO	Natural an fertilizers	d manmade	1,	2	Effective			
			Sche	dule				
Measurable Milestone	Measurable Milestones			End	Comments			
Reduction in the measurable amount of pollutants contributing to impaired DO in impacted waterways.		1991	Continuous	NRCS and University of Georg Agent must provide continuous if BMP is to remain effective.				

Forestry Best Management Georgia Forestry Commission BMP categories in			
Practices (BMPs) quality, SMZs, ros stream crossing ar	clude planning for water 1999 d location, construction, d maintenance, timber paration/reforestation rotection.	In-progress	Voluntary

			npacted	
Pollutant(s) Affected	Sources of Pollutant(s)	Wat	terbodies*	Anticipated or Past Effectiveness
DO	Forestry		1, 2	Effective
		S	chedule	
Measurable Milestones		Start	End	Comments
Reduction in the measure	able amount of pollutants	1999	Continuous	Georgia Forestry Commission must continuously
that contribute to impaire	ed DO in impacted			provide education opportunities for foresters if
waterways.	•			BMPs are to remain effective.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Power Equipment, Commercial, Industrial, and Personal Product Care Disposal and Management	Individual	Encourages individuals to properly dispose of materials that are related to the repair and routine maintenance of power equipment.	2002	On-going	Voluntary
Program					

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
DO	Equipment cleansing, mechanical repairs and	1, 2	Effective
	maintenance shops, and individual home auto		
	maintenance and/or repair.		

		Schedule	
Measurable Milestones	Start	End	Comments
Reduction in the measurable amount of pollutants that contribute to impaired DO impacted waterways.	2002	Continuous	Local auto part houses encourage and provide opportunities for individual to dispose of fluids and materials that can't be disposed of by normal fluid or trash disposal methods.

Regulation/Ordinance Management Measure		Responsible Government, Organization or Entity Des		ription	Enacted/ Projected Date	Status	Regulatory/ Voluntary
House Cleaner Disposal Management Program		vidual Encourages individuals to properly disp of household chemicals		urages individuals to properly dispose	2005	Planned	Voluntary
Pollutant(s) Affected DO	Sources of Pollutant(s) Household chemicals	Water	pacted rbodies*	Anticipated or Past Effectiveness Effective if program is implemented			
Measurable Milestones		Sch Start	edule End	Comments			
Reduction in the measur that contribute to impair waterways.	rable amount of pollutants ed DO impacted	2005	Continuous	Waste Disposal Company (Southland Waste Inc.) must encourage individuals to properly secure and dispose of household chemicals			

Regulation/Ordinance of Management Measure	•	le Government, tion or Entity		Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Sewer Management Prog	gram Indi	ndividual Enco		Encourages individuals to routinely inspect		Planning	Voluntary
			sewag	e system on property.			
	Sources of	lm	pacted	Anticipated or Past			
Pollutant(s) Affected	Pollutant(s)	Wate	rbodies*	Effectiveness			
DO	Leaking Sewage Lines		1, 2	Effective if BMP is			
				implemented			
Measurable Milestones		Scl	nedule				
		Start	End	Comments			
Reduction in the measurathat contribute to impaire waterways.	able amount of pollutants ed DO in the impacted	12/2004	Continuous	University of Georgia Extension Agent must provide educational opportunities if BMP is to become effective.			

Regulation/Ordinance Management Measure	-	nsible Government, anization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Spill/Discharge Control Cleanup Program	and	Individual	Individual Encourages individuals to cleanup or control and to report spills.		Planning	Voluntary
Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodie	•			
DO	Surface Spills or Uncontrolled Discharges	1, 2	Effective is BMP is implemented			
Measurable Milestone	<u>.</u> S	Schedule	e Comments	Ī		

Measurable Milestones	Scl	hedule	Comments
	Start	End	
Reduction in the measurable amount of pollutants that contribute to impaired DO in the impacted waterways.	12/2004	Continuous	University of Georgia Extension Agent must provide educational
			opportunities if BMP is to become effective.

Regulation/Ordinance or Responsible Govern Management Measure Organization or En			t,	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
BMP Monitoring		SFC	aerial	n watershed will conduct monthly BMP evaluations to identify recent by practices and conduct BMP audit		Current	Voluntary
Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodie	es*	Anticipated or Past Effectiveness			
DO	Silviculture Activities	1, 2		Effective if BMP is implemented			
Measurable Milestones Start		dule End	Comments				
Reduction in the measur	able amount of pollutants	01/2003	Continuous	N/A			

that contribute to impaired DO in the impacted

waterways.

Regulation/Ordinance Management Measure		nsible Governmer Inization or Entity		Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Storm Water Pollution F Plan (SWPPP)	Coa	neast Georgia RDC stal Conservation ources, and NRCS	hydr activ asso natu pollu a dec	m water runoff is part of a natural cologic process. However, human vities, particularly urbanization and ciated industrial activities, can alter ral drainage patterns and add utants to rivers, and streams. Impactine in fish and restrictions on mming.	•	Planning	Voluntary
Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodi	06*	Anticipated or Past Effectiveness			
DO DO	Storm Water Run C		.	Effective if BMP is implemented	I		
Measurable Milestones	S	Sche Start	edule End	Comments	<u></u>		

Southeast Georgia RDC will, with the assistance of Coastal

Conservation Resources, and NRCS, seek funds to assist local governments in the development of Storm Water Pollution Prevention Plan (SWPPP).

01/2003 Continuous

Reduction in the measurable amount of pollutants that

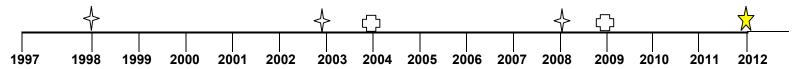
contribute to impaired DO in the impacted waterways.

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*
Section 319 (h) of the Clean Water Act	EPA/State of Georgia	Must Apply	N/A	1, 2
Small Business Technical Assistance	Georgia Department of Natural	Must Request	Undetermined-Free	1, 2
Program	Resources (EPD)	Assistance	Technical Assistance	
Environmental Quality Incentive Program	NRCS	Must Apply	N/A	1, 2
(EQIP)				
Unified Watershed Assessment program	NRCS	Must Apply	N/A	1, 2
Conservation Reserve Enhancement Plan	NRCS	Must Apply	N/A	1, 2
Section 604(b) Grants	Georgia Department of Natural	Must Apply	N/A	1, 2
	Resources			

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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.



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		Impacted			Time Frame		Status (Previous, Current,
Management Measure	Organization	Waterbodies*	Pollutants	Purpose/Description	Start	End	Proposed)
TMDL Evaluation/Monitoring Data	GA EPD/USGS	1, 2	DO	TMDL Evaluation /Monitoring data for Georgia 305(b)/303(d) List	1998	1998	Previous
Water Quality Testing	GA EPD	1, 2	DO	Water Quality Testing/Assessment of water quality.	2003	2003	Proposed
TMDL Evaluation	GA EPD/USGS	1, 2	DO	Monitoring data for GA 305(b)/303(d) list	1998	1998	Previous
BMP Monitoring	GFC	1, 2	DO	Within watershed will conduct monthly aerial BMP evaluations to identify recent forestry practices and conduct BMP.	01/2003	Continuous	Current
Comprehensive Nutrient Management Plan	GA DNR EPD	1, 2	DO	Component of general CAFO/LAS permits to identify and describe practices that are to be implemented to assure compliance with the limitations and conditions of the permit.	03/2002	03/2007	Current
Storm Water Pollution Prevention Plan	Southeast Georgia RDC, NRCS and Coastal Conservation Resources	1, 2	DO	Southeast Georgia RDC will, with the assistance of Coastal Conservation Resources and NRCS, seek funds to assist local governments in the development of Storm Water Pollution Prevention Plan (SWPPP).	01/2003	01/2004	Proposed
Water Quality Testing	Adopt-A-Stream	1, 2	DO	Water Quality Testing/Assessment of water quality.	8/2003	Continuous	Proposed

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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 criterion is recorded in the space provided. Additional relevant criteria are presented in Comments.

- Percent of concentration or load change (monitoring program)
- Categorical change in classification of the stream (delisting the stream is the goal)
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.
- Regulatory controls or activities installed (ordinances, laws)
- Best management practices installed (agricultural, forestry, urban)
COMMENTS Suwannee Creek is dry at this time. This creek is much like other smaller streams in this region, dry in the summer, wet during late fall and early spring.

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: Fredrick E	. Carpenter Jr.				
1725 South Georgia Parkway, West					
Vaycross	ST:	GA	31503		
ecsegardc@ac	cessatc.net		-		
Date Submitted to EPD: 12/16/02					
	Southeast 725 South Geo Vaycross ecsegardc@ac	Southeast Georgia RDC 725 South Georgia Parkway, Vaycross ST: ecsegardc@accessatc.net	Southeast Georgia RDC 725 South Georgia Parkway, West Vaycross ST: GA ecsegardc@accessatc.net	Southeast Georgia RDC 725 South Georgia Parkway, West Vaycross ST: GA 31503 ecsegardc@accessatc.net	

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

TOGETHER WE CAN MAKE A DIFFERENCE!

Department Use Only:

Implementation Plan		Impaired Waterbodies				
Implementation Plan	1	2	3	4		
Action Plans						
Education/Outreach Activities						
Stakeholders						
Pollutant Sources Identified						
Description of Management Measures						
Measurable Milestones and Schedule						
Potential Funding Sources						
Monitoring Plan						
Criteria To Determine Whether Substantial Progress Is Being Made						
Supporting Documents						