

River Basin Planning Act

(O.C.G.A. 12-5-520 to 525)

92 SB637/AP

Senate Bill 637

By: Senators Johnson of the 47th, Pollard of the 24th, Edge of the 28th and Egan of the 40th.

An Act

To amend Chapter 5 of Title 12 of the Official Code of Georgia Annotated, relating to water resources, so as to define certain terms; to provide for the development of river basin management plans for certain rivers; to provide for the contents of such plans; to provide for the appointment and duties of local advisory committees; to provide for notice and public hearings; to provide for submission to and approval of plans to the Board of Natural Resources; to make certain provisions relative to issuing certain permits; to provide for the application for and use of certain funds; to provide that this Act shall not enlarge the powers of the Department of Natural Resources; to repeal conflicting laws; and for other purposes.

Be It Enacted by the General Assembly of Georgia:

Section 1. Chapter 5 of Title 12 of the Official Code of Georgia Annotated, relating to water resources, is amended by inserting at the end thereof the following:

Article 8

12-5-520. As used in this article, the term:

- (1) "Board" means the Board of Natural Resources.
- (2) "Director" means the director of the Environmental Protection Division of the Department of Natural Resources.

12-5-521. The director shall develop river basin management plans for the following rivers: Alapaha, Altamaha, Canoochee, Chattahoochee, Coosa, Flint, Ochlocknee, Ocmulgee, Oconee, Ogeechee, St. Marys, Satilla, Savannah, Suwanee, Tallapoosa, and Tennessee. The director shall consult the chairmen of the local advisory committees on all aspects of developing the management plans. The director shall begin development of the management plan for the Chattahoochee and Flint river basins by December 31, 1992, and for the Coosa and Oconee river basins by December 31, 1993. Beginning in 1994, the director shall begin development of one management plan per calendar year until all required management plans have been begun. All management plans shall be completed not later than five years after they were begun and shall be made available to the public within 180 days after completion.

12-5-522. The management plans provided by Code Section 12-5-521 shall include, but not be limited to, the following:

- (1) A description of the watershed, including the geographic boundaries, historical, current, and projected uses, hydrology, and a description of water quality, including the current water quality conditions;
- (2) An identification of all governmental units that have jurisdiction over the watershed and its drainage basin;
- (3) An inventory of land uses within the drainage basin and important tributaries including point and nonpoint sources of pollution;
- (4) A description of the goals of the management plan, which may include educating the general public on matters involving the environmental and ecological concerns specific to the river basin, improving water quality and reducing pollution at the source, improving aquatic habitat and reestablishing native species of fish, restoring and protecting wildlife habitat, and providing recreational benefits; and
- (5) A description of the strategies and measures necessary to accomplish the goals of the management plan.

12-5-523. As an initial action in the development of a management plan, the director shall appoint local advisory committees for each river basin to consist of at least seven citizens and a chairman appointed by the director. The local advisory committees shall provide advice and counsel to the director during the development of the management plan. Each committee shall meet at the call of the chairman but not less than once every four months. The chairman and members of the local advisory committees shall serve without compensation or reimbursement of expenses.

12-5-524.

- (a) Upon completion of the penultimate draft of a management plan, the director shall conduct public hearings within the river basin. At least one public hearing shall be held in each river basin named in Code Section 12-5-521. The director shall publish notice of each such public hearing in a newspaper of general circulation in the area announcing the date, time, place, and purpose of the public hearing. A draft of the management plan shall be made available to the public at least 30 days prior to the public hearing. The director shall receive public comment at the public hearing and for a period of at least ten days after the public hearing.
- (b) The division shall evaluate the comments received as a result of the public hearings and shall develop the final draft of the management plan for submission to the board for consideration within 60 days of the public hearing.
- (c) The board shall consider the management plan within 60 days after submission by the director. The department shall publish the management plan adopted by the board and shall make copies available to all interested local governmental officials and citizens within the river basin covered by such management plan.
- (d) Upon the board's adoption of a final river basin management plan, all permitting and other activities conducted by or under the control of the Department of Natural Resources shall be consistent with such plan.
- (e) No provision of this article shall constitute an enlargement of the existing statutory powers of the department.

12-5-525. The director is directed to apply for the maximum amount of available funds pursuant to Sections 106, 314, 319, and 104(b)(2) of Public Law 95-217, the federal Clean Water Act, and any other available source for the development of river basin management plans.”

Section 2. All laws and parts of laws in conflict with this Act are repealed.

Georgia Instream Water Quality Standards For All Waters: Toxic Substances

(Excerpt From Georgia Rules and Regulations for Water Quality Control Chapter 391-3-6-.03 Water Use Classifications and Water Quality Standards)

- I Instream concentrations of the following chemical constituents which are considered to be other toxic pollutants of concern in the State of Georgia shall not exceed the criteria indicated below under 7-day, 10-year minimum flow (7Q10) or higher stream flow conditions except within established mixing zones:
1. 2,4-Dichlorophenoxyacetic acid (2,4-D) 70 µg/l
 2. Methoxychlor* 0.03 µg/l
 3. 2,4,5-Trichlorophenoxy propionic acid (TP Silvex) 50 µg/l
- II Instream concentrations of the following chemical constituents listed by the U.S. Environmental Protection Agency as toxic priority pollutants pursuant to Section 307(a)(1) of the Federal Clean Water Act (as amended) shall not exceed criteria indicated below under 7-day, 10-year minimum flow (7Q10) or higher stream flow conditions except within established mixing zones or in accordance with site specific effluent limitations developed in accordance with procedures presented in 391-3-6-.06.
1. Arsenic
 - (a) Freshwater 50 µg/l
 - (b) Coastal and Marine Estuarine Waters 36 µg/l
 2. Cadmium
 - (a) Freshwater
 - (at hardness levels less than 100 mg/l) 0.7 µg/l*
 - (at hardness levels of 100 mg/l to 199 mg/l) 1.1 µg/l*
 - (at hardness levels greater than or equal to 200 mg/l) 2.0 µg/l*
 - Note: Total hardness expressed as CaCO₃.
 - (b) Coastal and Marine Waters 9.3 µg/l
 3. Chlordane*
 - (a) Freshwater 0.0043 µg/l
 - (b) Coastal and Marine Estuarine Waters 0.004 µg/l
 4. Chromium (VI)
 - (a) Freshwater 11 µg/l
 - (b) Coastal and Marine Estuarine Waters 50 µg/l
 5. Total Chromium
 - (at hardness levels less than 100 mg/l) 120 µg/l
 - (at hardness levels of 100 mg/l to 199 mg/l) 210 µg/l
 - (at hardness levels greater than or equal to 200 mg/l) 370 µg/l
 - Note: Total hardness expressed as CaCO₃.
 6. Copper
 - (a) Freshwater
 - (at hardness levels less than 100 mg/l) 6.5 µg/l*
 - (at hardness levels of 100 mg/l to 199 mg/l) 12 µg/l
 - (at hardness levels greater than or equal to 200 mg/l) 21 µg/l
 - Note: Total hardness expressed as CaCO₃.
 - (b) Coastal and Marine Estuarine Waters 2.9 µg/l*
 7. Cyanide*
 - (a) Freshwater 5.2 µg/l
 - (b) Coastal and Marine Estuarine Waters 1.0 µg/l
 8. Dieldrin* 0.0019 µg/l
 9. 4,4'-DDT* 0.001 µg/l
 10. a-Endosulfan*
 - (a) Freshwater 0.056 µg/l
 - (b) Coastal and Marine Estuarine Waters 0.0087 µg/l
 11. b-Endosulfan*
 - (a) Freshwater 0.056 µg/l
 - (b) Coastal and Marine Estuarine Waters 0.0087 µg/l
 12. Endrin* 0.002 µg/l
 13. Heptachlor*
 - (a) Freshwater 0.0038 µg/l
 - (b) Coastal and Marine Estuarine Waters 0.0036 µg/l
 14. Heptachlor Epoxide*
 - (a) Freshwater 0.0038 µg/l

	(b) Coastal and Marine Estuarine Waters	0.0036 µg/l
15.	Lead*	
	(a) Freshwater	
	(at hardness levels less than 100 mg/l)	1.3 µg/l
	(at hardness levels of 100 mg/l to 199 mg/l)	3.2 µg/l
	(at hardness levels greater than or equal to 200 mg/l)	7.7 µg/l
	Note: Total hardness expressed as CaCO ₃ .	
	(b) Coastal and Marine Estuarine Waters	5.6 µg/l
16.	Lindane [Hexachlorocyclohexane (g-BHC-Gamma)]	0.08 µg/l
17.	Mercury*	
	(a) Freshwater	0.012 µg/l
	(b) Coastal and Marine Estuarine Waters	0.025 µg/l
18.	Nickel	
	(a) Freshwater	
	(at hardness levels less than 100 mg/l)	88 µg/l
	(at hardness levels of 100 mg/l to 199 mg/l)	160 µg/l
	(at hardness levels greater than or equal to 200 mg/l)	280 µg/l
	Note: Total hardness expressed as CaCO ₃ .	
	(b) Coastal and Marine Estuarine Waters	8.3 µg/l
19.	Pentachlorophenol*	
	(a) Freshwater	2.1 µg/l
	(b) Coastal and Marine Estuarine Waters	7.9 µg/l
20.	PCB-1016	0.014 µg/l
21.	PCB-1221	0.014 µg/l
22.	PCB-1232	0.014 µg/l
23.	PCB-1242	0.014 µg/l
24.	PCB-1248	0.014 µg/l
25.	PCB-1254	0.014 µg/l
26.	PCB-1260	0.014 µg/l
27.	Phenol	300 µg/l
28.	Selenium	
	(a) Freshwater	5.0 µg/l
	(b) Coastal and Marine Estuarine Waters	71 µg/l
29.	Silver	**
30.	Toxaphene	0.0002 µg/l
31.	Zinc	
	(a) Freshwater	
	(at hardness levels less than 100 mg/l)	60 µg/l
	(at hardness levels of 100 mg/l to 199 mg/l)	110 µg/l
	(at hardness levels greater than or equal to 200 mg/l)	190 µg/l
	Note: Total hardness expressed as CaCO ₃ .	
	(b) Coastal and Marine Estuarine Waters	86 µg/l

Notes:

- The in-stream criterion is lower than the EPD laboratory detection limits.

** Numeric limits are not specified. This pollutant is addressed in 391-3-6-.06.

III Instream concentrations of the following chemical constituents listed by the U. S. Environmental Protection Agency as toxic priority pollutants pursuant to Section 307(a)(1) of the Federal Clean Water Act (as amended) shall not exceed criteria indicated below under annual average or higher stream flow conditions:

1.	Acenaphthene	**
2.	Acenaphthylene	**
3.	Acrolein	780 µg/l
4.	Acrylonitrile	0.665 µg/l
5.	Aldrin	0.000136 µg/l
6.	Anthracene	110000 µg/l
7.	Antimony	4308 µg/l
8.	Arsenic	0.14 µg/l
9.	Benzidine	0.000535 µg/l
10.	Benzo(a)Anthracene	0.0311 µg/l
11.	Benzo(a)Pyrene	0.0311 µg/l
12.	3,4-Benzofluoranthene	0.0311 µg/l
13.	Benzene	71.28 µg/l
14.	Benzo(ghi)Perylene	**
15.	Benzo(k)Fluoranthene	0.0311 µg/l
16.	Beryllium	**
17.	a-BHC-Alpha	0.0131 µg/l
18.	b-BHC-Beta	0.046 µg/l
19.	Bis(2-Chloroethyl)Ether	1.42 µg/l
20.	Bis(2-Chloroisopropyl)Ether	170000 µg/l
21.	Bis(2-Ethylhexyl)Phthalate	5.92 µg/l
22.	Bromoform (Tribromomethane)	360 µg/l
23.	Carbon Tetrachloride	4.42 µg/l
24.	Chlorobenzene	21000 µg/l
25.	Chlorodibromomethane	34 µg/l
26.	2-Chloroethylvinyl Ether	**
27.	Chlordane	0.000588 µg/l
28.	Chloroform (Trichloromethane)	470.8 µg/l
29.	2-Chlorophenol	**
30.	Chrysene	0.0311 µg/l
31.	Dibenzo(a,h)Anthracene	0.0311 µg/l
32.	Dichlorobromomethane	22 µg/l
33.	1,2-Dichloroethane	98.6 µg/l
34.	1,1-Dichloroethylene	3.2 µg/l
35.	1,3-Dichloropropylene (Cis)	1700 µg
36.	1,3-Dichloropropylene (Trans)	1700 µg/l
37.	2,4-Dichlorophenol	790 µg/l
38.	1,2-Dichlorobenzene	17000 µg/l
39.	1,3-Dichlorobenzene	2600 µg/l
40.	1,4-Dichlorobenzene	2600 µg/l
41.	3,3'-Dichlorobenzidine	0.077 µg/l

42. 4,4'-DDT	0.00059 µg/l	79. PCB-1242	0.00045 µg/l
43. 4,4'-DDD	0.00084 µg/l	80. PCB-1248	0.00045 µg/l
44. 4,4'-DDE	0.00059 µg/l	81. PCB-1254	0.00045 µg/l
45. Dieldrin	0.000144 µg/l	82. PCB-1260	0.00045 µg/l
46. Diethyl Phthalate	120000 µg/l	83. Phenanthrene	**
47. Dimethyl Phthalate	2900000 µg/l	84. Phenol	4,600,000 µg/l
48. 2,4-Dimethylphenol	**	84. Pyrene	11,000 µg/l
49. 2,4-Dinitrophenol	14264 µg/l	85. 1,1,2,2-Tetrachloroethane	10.8 µg/l
50. Di-n-Butyl Phthalate	12100 µg/l	85. Tetrachloroethylene	8.85 µg/l
51. 2,4-Dinitrotoluene	9.1 µg/l	87. Thallium	48 (6.3) µg/l ‡
52. 1,2-Diphenylhydrazine	0.54 µg/l	88. Toluene	200000 µg/l
53. Endrin Aldehyde	0.81 µg/l	89. 1,2-Trans-Dichloroethylene	**
54. Endosulfan Sulfate	2.0 µg/l	90. 1,1,2-Trichloroethane	41.99 µg/l
55. Ethylbenzene	28718 µg/l	91. Trichloroethylene	80.7 µg/l
56. Fluoranthene	370 µg/l	92. 2,4,6-Trichlorophenol	6.5 µg/l
57. Fluorene	14000 µg/l	93. 1,2,4-Trichlorobenzene	**
58. Heptachlor	0.000214 µg/l	94. Vinyl Chloride	525 µg/l
59. Heptachlor Epoxide	0.00011 µg/l	Notes:	
60. Hexachlorobenzene	0.00077 µg/l	**	Numeric limits are not specified. These pollutants are addressed in 391-3-6-.06.
61. Hexachlorobutadiene	49.7 µg/l	†	EPD has proposed to the Board of Natural Resources changing numeric limits for methylene chloride from unspecified to 1600 µg/l consistent with EPA's National Toxics Rule.
62. Hexachlorocyclopentadiene	17000 µg/l	‡	EPD has proposed to the Board of Natural Resources changing numeric limits for thallium from 48 to 6.3 µg/l consistent with EPA's National Toxics Rule.
63. Hexachloroethane	8.85 µg/l	IV	Site specific criteria for the following chemical constituents will be developed on an as-needed basis through toxic pollutant monitoring efforts at new or existing discharges that are suspected to be a source of the pollutant at levels sufficient to interfere with designated uses:
64. Indeno(1,2,3-cd)Pyrene	0.0311 µg/l	1.	Asbestos
65. Isophorone	600 µg/l	V	Instream concentrations of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) must not exceed 0.0000012 µg/l under long-term average stream flow conditions.
66. Lindane [Hexachlorocyclohexane (g-BHC-Gamma)]	0.0625 µg/l	(e)	Applicable State and Federal requirements and regulations for the discharge of radioactive substances shall be met at all times.
67. Methyl Bromide (Bromomethane)	4000 µg/l		
68. Methyl Chloride (Chloromethane)	**		
69. Methylene Chloride	†		
70. 2-Methyl-4,6-Dinitrophenol	765 µg/l		
71. 3-Methyl-4-Chlorophenol	**		
72. Nitrobenzene	1900 µg/l		
73. N-Nitrosodimethylamine	8.12 µg/l		
74. N-Nitrosodi-n-Propylamine	**		
75. N-Nitrosodiphenylamine	16.2 µg/l		
76. PCB-1016	0.00045 µg/l		
77. PCB-1221	0.00045 µg/l		
78. PCB-1232	0.00045 µg/l		

Point Source Control Efforts

Georgia DNR's management has promoted continuing improvement in the quality of return flows from permitted point sources in the basin. During the past twenty-five years, the majority of our municipal wastewater treatment plants were constructed or updated to meet state and/or federally mandated effluent standards. State and federal construction grants and the citizens of local municipalities funded these projects. This massive construction program has been so successful that over 90% of all these facilities in Georgia are currently meeting their effluent limits. We must protect our investments in these facilities and in the State's water quality.

The history of construction improvements for permitted dischargers within the Oconee basin is summarized in the following table:

HUC 03060102

1958	Stephens County Middle School installed a septic tank system with subsurface sand filters.
Unknown	City of Clayton installed an Imhoff Tank.
1969	Milliken & Company Humphrey Plant 3 acre pond system built by others.
1971	Stephens County High School aerated pond system constructed.
1971	City of Toccoa built two lagoon systems for \$795,300.
1972	Center For Spiritual Awareness built a septic tank system for \$10,000.
1972	City of Clayton installed a 0.16 MGD activated sludge package plant.
1974	Milliken & Company Avalon Plant built 0.025 MGD package plant with polishing pond for \$54,000.
1989	City of Clayton installed a 0.4 MGD extended aeration activated sludge plant for \$1,012,549.
1991	City of Clayton expanded their activated sludge system to treat 0.8 MGD for \$525,000.
1997	City of Clayton sludge handling and disinfection systems upgraded plus new lab building and equipment for \$1,369,471.
1999	City of Toccoa built the 0.41 MGD Toccoa Creek Wastewater Treatment Facility and the 2.54 MGD Eastanoolee Creek Facility for \$10,000,000. These plants utilize activated sludge and ultraviolet disinfection.
1999	Center For Spiritual Awareness septic tank system cleaned and checked for \$5,365.

HUC 03060103

1962	Hartwell Powerplant wastewater treatment septic tank constructed for \$39,978.
1963	Milliken & Company Newton Plant spray pond built by others. Typically only discharges when drained for cleaning.

- 1968 Hartwell Powerplant wastewater system redirected from tailrace to a disposal field for \$5,000.
- 1976 City of Lincolnton built a 0.26 MGD extended aeration package plant for approximately \$650,000.
- 1989 Engelhard Corporation Hartwell Operations built physical/chemical treatment systems for more than \$123,000.
- 1999 City of Lincolnton upgraded and expanded to 0.52 MGD activated sludge process for \$2,235,000.

HUC 03060104

- 1966 Milliken & Company Sibley Plant built a spray pond for \$20,988. The pond typically only discharges when drained for cleaning.
- 1970 City of Comer built an aeration cell and stabilization pond system for \$250,000.
- 1971 City of Elberton built the Fortson Creek and Falling Creek WPCPs for \$968,308. Both plants had a capacity of 0.6 MGD and utilized the extended aeration activated sludge process.
- 1974 Homer Housing Authority built a 0.0065 MGD septic tank/subsurface sand filter and chlorination system.
- 1986 City of Crawford built sedimentation lagoons.
- 1988 City of Royston constructed a wastewater treatment plant.
- 1993 Elberton Utilities upgraded and expanded the Falling Creek WPCP to 0.9 MGD for \$1,031,938.

HUC 03060105

- 1993 City of Thomson - McDuffie County built the 0.2 MGD Mattox Creek Land Application System for \$1,000,000.

HUC 03060106

- 1939 Fort Gordon constructed a 4 MGD trickling filter plant for \$261,000.
- 1963 Gracewood State School and Hospital built a 0.05 MGD trickling filter treatment plant for \$342,357.
- 1966 DSM Chemicals North America, Inc. in Augusta built an activated sludge treatment plant.
- 1967 City of Augusta constructed a primary treatment system for \$4,536,000.
- 1970 Fort Gordon installed sludge drying beds for \$50,000.
- 1972 DSM Chemicals North American, Inc. in Augusta expanded their activated sludge treatment system.
- 1972 Columbia County constructed the Crawford Creek WPCP activated sludge treatment system.
- 1973 Columbia County constructed the Reed Creek WPCP activated sludge treatment system.
- 1975 DSM Chemicals North America, Inc. in Augusta expanded and upgraded their activated sludge system.

1975	City of Augusta built a secondary treatment facility for \$2,795,000.
1980	City of Hephzipah took operational control of a wastewater treatment system originally constructed by the Richmond County School Board for an estimated \$500,000.
1982	City of Augusta built wastewater laboratory and shop for \$2,190,000.
1982	Gracewood State School and Hospital upgraded their trickling filter system for \$195,000.
1983	City of Augusta Phase I upgraded their treatment system for \$ \$11,000,000.
1984	Columbia County expanded and upgraded the Reed Creek WPCP.
1986	City of Augusta Phase II upgraded their system for \$11,000,000.
1988	Columbia County built the Little River WPCP, an activated sludge treatment system.
1990	City of Augusta added equalization and centrifuges for \$7,400,000.
1990	Columbia County expanded the Reed Creek WPCP.
1990	DSM Chemicals North America, Inc. in Augusta built an expansion and upgraded to tertiary treatment.
1990	Fort Gordon upgrades for \$50,000.
1991	Fort Gordon grit trap added for \$50,000.
1992	Fort Gordon upgraded trickling filter media for \$150,000.
1992	City of Augusta generators phase I \$371,800.
1992	Columbia County Crawford Creek WPCP expanded.
1994	Columbia County Reed Creek WPCP upgraded.
1994	City of Augusta generators phase II \$512,679.
1995	Fort Gordon WPCP chlorination system upgraded for \$12,000.
1996	Gracewood State School and Hospital upgraded with new comminutor, grit chamber and chlorination unit for \$86,841.
1996	Columbia County Reed Creek WPCP added dechlorination system.
1996	City of Augusta built phase I constructed wetlands treatment system for \$6,778,527.
1997	City of Augusta added a belt filter press for \$60,696.
1998	City of Augusta rehabilitated the WPCP pump station for \$102,985.
1998	Columbia County Crawford Creek WPCP upgraded by connecting an overflow point to the Little River WPCP collection system. The Little River WPCP expanded.
1998	City of Augusta upgraded their clarifier and disinfection system for \$581,000.
1999	City of Augusta pump station rehabilitation and Phase II constructed Wetlands system for \$5,501,450.
1999	Columbia County Reed Creek WPCP upgraded.

HUC 03060108

- 1949 City of Thomson - McDuffie County constructed Brier Creek WPCP using primary sedimentation with anaerobic digestion.
- 1957 City of Waynesboro built a trickling filter system.
- 1966 J. M. Huber Corporation built Wrens Plant Impound with thickener and 16 acre impound.
- 1970 City of Thomson - McDuffie County upgraded the Brier Creek WPCP to extended aeration process and expanded to 1 MGD.
- 1981 ECC International in Wrens constructed a physical/chemical treatment system for \$525,000.
- 1987 City of Thomson - McDuffie County upgraded the Brier Creek WPCP with a new extended aeration system including dechlorination and post aeration for \$3,000,000.
- 1987 City of Waynesboro WPCP expanded and upgraded for > \$1,000,000.
- 1990 J. M. Huber Corporation installed a additional hydro-separator and switched from lime-polymer system to a polymer aided acidic system for solids removal.
- 1991 City of Waynesboro WPCP expanded and upgraded.
- 1995 ECC International in Wrens expanded their impound capacity for \$385,000.

HUC 03060109

- 1929 Citgo Asphalt Refining Company built a oil/water separator and sand filter treatment system.
- Around 1960 City of Savannah acquired the Travis Field WPCP from the US Army to serve a small portion of west Chatham County.
- 1968 International Paper built a solids removal system consisting of primary clarification and sludge dewatering for \$354,300.
- 1970 Hercules Incorporated separated sewers from storm sewers and installed an oil/water separator.
- 1972 Hercules Incorporated installed a secondary treatment system.
- 1972 City of Savannah Travis Field 0.75 MGD activated sludge WPCP built.
- 1973 International Paper added an aerated stabilization basin for \$6,117,000.
- 1974 City of Savannah constructed the 20 MGD President Street WPCP activated sludge system and the 3 MGD Wilshire WPCP.
- 1974 City of Tybee Island extended aeration WPCP built for \$2,000,000.
- 1974 Garden City 1 MGD extended aeration WPCP built for \$600,000.
- 1975 International Paper rehabilitated pumps for \$28,000.
- 1976 Gulfstream Aerospace Corporation built a physical/chemical treatment system for \$300,000.
- 1976 Hercules Incorporated installed clarifier and thickener.

1978	Hercules upgraded their aerated lagoon.
1980s	Hercules increased contaminated stormwater holding capacity.
1984	City of Savannah President Street WPCP upgraded by adding a belt press.
1985	City of Pooler/Bloomington built an overland flow treatment system.
1985	Gulfstream Aerospace Corporation WPCP upgraded by adding sand and carbon filters and plate and frame filter presses for \$200,000.
1986	International Paper added aerators to aerated stabilization basin for \$262,000.
1987	Fort James Corporation Savannah River Mill constructed an activated sludge process WPCP for \$16,030,000.
1987	International Paper replaced centrifuge with four screw presses for \$1,600,000.
1988	City of Savannah Travis Field WPCP discharge moved to Savannah River.
1988	City of Savannah President Street WPCP ash lagoon discharges capped and flow diverted to head of plant. Four WPCPs closed (Wilmington Park, Islandwood, Cloverdale and Seagate) and their flows pumped to President Street plant.
1989	City of Savannah President Street incinerators upgraded for \$ 10,000,000.
1989	City of Savannah Wilshire WPCP expanded to 4.5 MGD and upgraded to activated sludge system and discharge moved to the Savannah River.
1989	International Paper replaced influent and effluent lines to aerated stabilization basin for \$4,289,000.
1989	Fort James WPCP upgraded for \$2,700,000.
1989	Atlantic Wood Industries constructed a groundwater extraction and treatment system for \$60,000.
1990	Atlantic Wood Industries system upgraded with the addition of a polymer system and two larger oil/water separators for \$120,000.
1990	Fort James WPCP upgraded by adding a second secondary clarifier, another sludge press and tertiary filters for \$5,270,000.
1992	International Paper added: seven aerators to aerated stabilization basin, baffle curtains and nutrient addition system for \$1,292,000.
1995	City of Savannah President Street WPCP expanded to 27 MGD and upgraded.
1995	City of Tybee Island WPCP upgraded with automatic bar screen and odor control system for \$350,000.
1996	Gulfstream Aerospace Corporation WPCP upgraded by adding: equalization, ultraviolet-peroxide oxidation system, lamella clarifier, upflow sand filter, and air stripper for \$838,000.
1996	City of Savannah Travis Field WPCP activated sludge system upgraded and expanded to 1.5 MGD for \$2,300,000. Discharge moved to Savannah River.
1997	Atlantic Wood Industries system upgraded by adding an oxidation system that uses hydrogen sulfide and ozone.

- 1997 City of Savannah President Street WPCP upgraded with belt filter presses and a dissolved air floatation system for more than \$3,000,000.
- 1998 International Paper a carbon dioxide neutralization system for \$115,000.
- 1998 City of Savannah President Street WPCP upgraded to treat 2.5 MGD of flow to reuse standards and irrigate the Savannah Harbor Golf Club for \$1,150,000.
- 1998 City of Savannah Wilshire WPCP solids handling system upgraded.
- 1999 Hercules rehabilitated their clarifiers and installed a new oil recovery system.

NPDES Permits for Discharges in the Savannah River Basin

FACILITY NAME	NPDES #	PERMITTED FLOW (MGD)	MAJOR	COUNTY	RECEIVING STREAM
A&M PRODUCTS INC	GA0036811			JEFFERSON	JORDAN CR
AIR LIQUID AMERICA CORP	GA0046230			CHATHAM	SAVANNAH RV
ALBION KAOLIN COMPANY	GA0002470			RICHMOND	GRINDSTONE BR
AONIA WTP	GAWP10000			WILKES	UPTON CR
ARCADIAN FERTILIZER L.P.	GA0002071		Y	RICHMOND	SAVANNAH RV
ARMY COE (HARTWELL POWERPLANT)	GA0037516			HART	SAVANNAH RV
ARMY COE (R.RUSSEL POWERPLANT)	GA0037524			ELBERT	CLARKS HILL LAKE
ATHENS YMCA CAMP TALLULAH	GA0034339			RABUN	TRIB TO TALLULAH FALLS LAKE
ATLANTIC WOOD IND	GA0047783			CHATHAM	SAVANNAH RV
AUGUSTA BUTLER CREEK	GA0037621	46.100	Y	RICHMOND	BUTLER CR
AUGUSTA WTP	GA0046957	0000.000		RICHMOND	OATES CRK TRIB. TO BUTLER
BANKS CO ELEM SCHOOL	GA0033871	0.006		BANKS	HUDSON RV TRIB
BANKS CO MOUNTAIN CR WTP	GAWP10000			BANKS	
BIG A ELEM SCHOOL	GA0033855			STEPHENS	WARDS CR
BOWMAN POND	GA0021067	0.090		ELBERT	FORT CR
BUDGET INN SAVANNAH	GA0034096	0.023		CHATHAM	SPRINGFIELD CANAL
C. E. MINERALS	GA0035742			LINCOLN	LLOYDS CR/LITTLE RV
CAMP CHATTOOGA	GA0033961	0.006		RABUN	TALLULAH FALLS LAKE

FACILITY NAME	NPDES #	PERMITTED FLOW (MGD)	MAJOR	COUNTY	RECEIVING STREAM
CARNESVILLE WPCP	GA0035734	0.075		FRANKLIN	STEPHENS CR
CENTER FOR SPIRITUAL AWARE	GA0022403	0.004		RABUN	LAKE RABUN TRIB
CENTRAL OF GEORGIA R/R	GA0002381			CHATHAM	OGEECHEE CANAL TO SAVANNAH RV
CITGO ASPHALT REFINING CO	GA0004332			CHATHAM	SAVANNAH RV
CLAYTON WPCP	GA0020923	0.800		RABUN	STEOA CREEK TRIBUTARY
COATS AMERICAN INC	GA0002038		Y	STEPHENS	EASTANOLLEE CR
COLUMBIA CO CRAWFORD	GA0031984	1.500	Y	COLUMBIA	CRAWFORD CR
COLUMBIA CO HEALTH DEPT	GA0049735			COLUMBIA	KIOKEE CR
COLUMBIA CO LITTLE RIVER	GA0047775	1.500	Y	COLUMBIA	SAVANNAH RIVER
COLUMBIA CO REED	GA0031992	4.600	Y	COLUMBIA	REED CR
COLUMBIA CO WTP	GAWP10000			COLUMBIA	SAVANNAH RV
COMBUSTION ENG GRAVES MT	GA0035742			LINCOLN	
COMER POND	GA0021598	0.090		MADISON	SOUTH FORK BROAD RIVER TR
COMMERCE DAVIS HOUSE	GA0032646	0.067		BANKS	CROOKED CREEK TRIB
COMMERCE HOLIDAY INN	GA0032638	0.040		BANKS	CROOKED CREEK TRIB
COMMERCE NORTHSIDE	GA0026247	1.050	Y	JACKSON	BEAVER DAM CR TRIB
CRAWFORD EASTSIDE WPCP	GA0033693	0.030		OGLETHORPE	GROVE CRK TRIB. TO BROAD
CRAWFORD WTP	GAWP10000	0000.000		OGLETHORPE	UNNAMED TRIB TO LONG CRK
CSR AGGREGATES RICHMOND	GA0037231			RICHMOND	PHINZY DITCH
CSX TRANSPORTATION INC	GA0046167			ELBERT	UNNAMED TRIB TO BEAVERDAM CR
DANIELSVILLE	GA0048224	0.075		MADISON	SOUTH FORK BROAD RV
DAVIDSON MINERAL PROP STEPHEN	GA0036773			STEPHENS	NORTH FORK/BROAD RV
DHR GRACEWOOD HOSPITAL WTP	GA0022161	0.500		RICHMOND	SPIRIT CR

FACILITY NAME	NPDES #	PERMITTED FLOW (MGD)	MAJOR	COUNTY	RECEIVING STREAM
DHR GRACEWOOD SCH REC WPCP	GA0047279	0.003		COLUMBIA	CLARK HILL RES TRIB
DIT SRA#112/I-75 VISITOR	GA0033278	0.015		CHATHAM	KNOXBORO CR TRIB
DIT SYLVANIA WELCOME STAT	GA0030287	0.015		SCREVEN	SAVANNAH RV
DNR ELIJAH CLARK STATE PA	GA0032701	0.046		LINCOLN	CLARK HILL RESERVOIR
DNR HART STATE PARK	GA0049972	0.007		HART	LAKE HARTWELL
DNR MISTLETOE STATE PARK	GA0049425	0.027		COLUMBIA	CLARK HILL RESERVOIR
DNR TUGALOO STATE PARK	GA0033260	0.003		FRANKLIN	LAKE HARTWELL
DOGWOOD LANE MHP TOCCOA	GA0034282	0.020		STEPHENS	OGGS BRANCH TRIB
DOT REST AREA #81/FRANKLI	GA0023621	0.015		FRANKLIN	INDIAN CR
DOT REST AREAS #62?	GA0047325	0.020		COLUMBIA	
DSM CHEMICALS AUGUSTA INC	GA0002160		Y	RICHMOND	SAVANNAH RV
E.M. INDUSTRIES INC	GA0034355			CHATHAM	SAVANNAH RV
EASTANOLLEE ELEM SCHOOL	GA0033863			STEPHENS	EASTANOLLEE CR
ECC INTERNATIONAL WRENS	GA0048101			JEFFERSON	RAYBURN BR
EFFINGHAM ELEM SOUTH	GA0046990	0.015		EFFINGHAM	UNNAMED TRIB TO BLACK CRE
ELBERTON FALLING CR	GA0025682	0.900		ELBERT	FALLING CREEK TRIB
ELBERTON FORTSON CR	GA0025631	0.600		ELBERT	FORTSON CR TRIB
ENGELHARD CORP CHATHAM	GA0048330			CHATHAM	SAVANNAH RV
FORT HOWARD CORP	GA0046973		Y	EFFINGHAM	SAVANNAH RV
FRANKLIN CO HIGH SCHOOL	GA0034231			FRANKLIN	STEPHEN CR-BROAD RV
FRANKLIN SPRINGS POND	GA0050172	0.100		FRANKLIN	HAYNES CR TRIB
GAF CORP SAVANNAH PLT	GA0003841			CHATHAM	SAVANNAH RV
GARDEN CITY WPCP	GA0031038	2.000	Y	CHATHAM	SAVANNAH RV

FACILITY NAME	NPDES #	PERMITTED FLOW (MGD)	MAJOR	COUNTY	RECEIVING STREAM
GEORGIA BAPTIST ASSEMBLY	GA0034169	0.025		STEPHENS	LAKE LOUISE
GEORGIA PACIFIC CORP	GA0047007			CHATHAM	SAVANNAH RV
GEORGIA PACIFIC GYPSUM	GA0001961			CHATHAM	SAVANNAH RV
GEORGIA POWER TALLULAH	GA0004162			HABERSHAM	TALLULAH RV
GEORGIA POWER TUGALO	GA0004189			HABERSHAM	TUGALO RV
GEORGIA POWER VOGTLE	GA0026786		Y	BURKE	SAVANNAH RV
GEORGIA POWER YONAH	GA0004197			STEPHENS	TUGALO RV
GULFSTREAM AEROSPACE CORP	GA0003255			CHATHAM	PIPE MAKERS CL
HARBOR LIGHT MARINA	GA0025321	0.005		HART	LAKE HARTWELL
HARLEM WPCP	GA0020389	0.250		COLUMBIA	UCHEE CR
HARTWELL WPCP	GA0020885	1.250	Y	HART	CEDAR CR TRIB
HEARDMONT NURSING HOME	GA0022276	0.012		ELBERT	BERTRAM CR
HEPHZIBAH WPCP	GA0049433	0.080		RICHMOND	LITTLE SPIRIT CR TRIB
HERCULES	GA0026867			CHATHAM	DUNDEE CL
HERTY FOUNDATION SAVANNAH	GA0002402			CHATHAM	DUNDEE CANAL
HOMER HOUSING AUTHORITY	GA0030031	0.007		BANKS	BLUE POND CR
HUNT WESSON	GA002399			CHATHAM	
INTERMARINE USA	GA0003671			CHATHAM	SAVANNAH RV
INTERNATIONAL PAPER CO	GA0037711			BURKE	TRIB TO MCBEAN CR
INTERNATIONAL PAPER COMPANY	GA0002801		Y	RICHMOND	SAVANNAH RV
KEMIRA	GA0003646		Y	CHATHAM	SAVANNAH RV
KING DIVISION OF SPARTAN MILLS	GA0004049			RICHMOND	SAVANNAH RV
LAKE BURTON HATCHERY	GA0029840			RABUN	LAKE BURTON
LAVONIA WPCP	GA0047589	1.320	Y	FRANKLIN	BEAR CR TO UNAWATTI TRIB

FACILITY NAME	NPDES #	PERMITTED FLOW (MGD)	MAJOR	COUNTY	RECEIVING STREAM
LEE ARRENDALE CORR INST	GA0022209	0.250		HABERSHAM	TRIB TO HUDSON RV
LINCOLN CO WTP	GAWP10000			LINCOLN	
LINCOLN TON WPCP	GA0049450	0.260		LINCOLN	REEDY CR TRIB
MARTIN MARIETTA AGGR	GA0002909			RICHMOND	SAVANNAH RV
MARTIN MARIETTA CAMAK QUARRY	GA0002321			WARREN	MIDDLE CR
MARTIN MARIETTA HOMER QUARRY	GA0046213			BANKS	UNNAMED TRIB/ HUDSON RV
MARTIN MARIETTA MATL INC	GA0037346			COLUMBIA	LITTLE KIOKEE CR
MEARL CORP	GA0031011			HART	BOYD CR/ CEDAR CR
MEARL CORPORATION	GA0046221			HART	CEDAR CR
MILLIKEN	GA0024368			STEPHENS	BIG TOMS CR TRIB
MILLIKEN & CO NEWTON PLANT	GA0035637			HART	FOREST CR
MILLIKEN & COMPANY	GA0024643			STEPHENS	DICKS CR
MILLIKEN SIBLEY MILL	GA0024627			FRANKLIN	SHOAL CR
NANCY HART INTERMED CARE	GA0031232			ELBERT	BROAD RV
OGLETHORPE CO BD OF ED	GA0045977	0.010		OGLETHORPE	UNNAMED TRIB. TO BROOKS C
OGLETHORPE CO BD OF ED	GA0045969	0.010		OGLETHORPE	UNNAMED TRIB. TO INDIAN C
OLIN CORPORATION AUGUSTA	GA0003719			RICHMOND	SAVANNAH RV
PCS NITROGEN FERTILIZER LP	GA0002356		Y	CHATHAM	SAVANNAH RV
PERIDOT CHEMICALS	GA0002925			RICHMOND	SAVANNAH RV
PINE FOREST S/D PORT WENT	GA0034801	0.040		CHATHAM	BLACK CR
POOLER/BLOOMINGD ALE REG	GA0047066	0.980		CHATHAM	HARDIN CANAL
RICHMOND CO SPIRIT CR	GA0047147	2.240	Y	RICHMOND	SPIRIT CRK TRIB/ SAV. RV
RINCON	GA0046442	0.500		EFFINGHAM	SWEIGOFFER CRK TRIB/ MILL
ROYSTON WPCP	GA0021491	0.500		FRANKLIN	HANNAH CR
S.R. 56 WTP	GAWP10000			BURKE	

FACILITY NAME	NPDES #	PERMITTED FLOW (MGD)	MAJOR	COUNTY	RECEIVING STREAM
SARDIS WPCP	GA0020893	0.100		BURKE	CHANDLER MILL BR
SAVANNAH ELEC EFFINGHAM	GA0003883		Y	EFFINGHAM	SAVANNAH RV
SAVANNAH ELEC RIVERSIDE	GA0003751			CHATHAM	SAVANNAH RV
SAVANNAH ELEC WENTWORTH	GA0003816			CHATHAM	SAVANNAH RV
SAVANNAH ELECTRIC & POWER CO	GA0047708			CHATHAM	SPRINGFIELD CANAL TO SAVANNAH RV
SAVANNAH PRESIDENT ST	GA0025348	27.000	Y	CHATHAM	SAVANNAH R.
SAVANNAH SUGAR REFINERY	GA0003611			CHATHAM	SAVANNAH RV
SAVANNAH TRAVIS FIELD	GA0020427	1.000	Y	CHATHAM	SAVANNAH RV
SAVANNAH WILSHIRE/WINDSOR	GA0020443	4.500	Y	CHATHAM	VERNON RV
SAVANNAH WTP	GAWP10000			CHATHAM	ST. AUGUSTINE CR
SAVANNAH YACHT CLUB	GA0033189			CHATHAM	WILMINGTON RV
SNYDER BROTHERS	GA0032123			STEPHENS	TRIB TO CARNES CR
SOLUTIA INC	GA0002178			RICHMOND	BUTLER CR
SOUTH CAROLINA ELECTRIC	GA0003786			RICHMOND	SAVANNAH RV
SOUTHERN AGGREGATES COLUMBIA	GA0036790			COLUMBIA	LITTLE KIOKEE CR
SOUTHERN STATES PHOSP & FERTIL	GA0002437			CHATHAM	KAYTON CANAL TO SAV RV
SPRINGFIELD	GA0020770	1.500		EFFINGHAM	EBENEZER CR
STEPHENS CO HIGH SCHOOL	GA0049042			STEPHENS	EASTANOLLEE CR
STONE CONTAINER CORP	GA0002798		Y	CHATHAM	SAVANNAH RV
SYLVANIA WPCP	GA0021385	1.510	Y	SCREVEN	BUCK CR
TALLULAH FALLS SCHOOL	GA0035441	0.005		HABERSHAM	TALLULAH RV
THERMAL CERAMICS INC	GA0002488			RICHMOND	ROCKY CR
THIELE KAOLIN HOBBS	GA0032981			WARREN	BIG BRANCH TO BRIER CR
THOMSON WPCP	GA0020974	2.500	Y	MCDUFFIE	WHITES CR

FACILITY NAME	NPDES #	PERMITTED FLOW (MGD)	MAJOR	COUNTY	RECEIVING STREAM
TIGNALL	GA0046141			WILKES	TANYARD BR
TOCCOA CREEK	GA0021806	0.410		STEPHENS	TOCCOA CR TO TUGALOO RIVE
TOCCOA EASTANOLLEE CR	GA0021814	1.450	Y	STEPHENS	EASTANOLLEE CR TO TUGALOO
TOCCOA FALLS COLLEGE	GA0025798	0.093		STEPHENS	TOCCOA FALLS CREEK
TOCCOA WTP	GAWP10000	0000.000		STEPHENS	TOCCOA CR
TYBEE ISLAND	GA0020061	1.000	Y	CHATHAM	SAVANNAH RV
UNION CAMP CORPORATION	GA0001988		Y	CHATHAM	SAVANNAH RV
USA FT GORDON	GA0003484		Y	RICHMOND	BUTLER CR-SPIRIT CR
USA HUNTER AFB STP	GA0027588		Y	CHATHAM	FORREST RV
USRY POND WTP	GAWP10000			MCDUFFIE	
WASHINGTON WPCP	GA0031101	4.000	Y	WILKES	ROCKY CR
WAYNESBORO WPCP	GA0020231	2.000	Y	BURKE	MCINTOSH CREEK TRIB
WRENS WPCP	GA0021857	0.480		JEFFERSON	BRUSHY CR

Support of Designated Uses for Rivers, Streams, and Lakes in the Savannah River Basin, 1998-1999

Rivers/Streams Supporting Designated Uses

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
SAVANNAH RIVER BASIN			
HUC 03060102			
Chattooga River (1,31)	Stateline to Lake Tugaloo (Rabun Co.)	Wild/Scenic	36
Coleman River (4)	Tributary to Tallulah River (Rabun Co.)	Fishing	5
Davidson Creek (4)	Tributary to Panther Creek near Tallulah Falls (Habersham/Stephens Co.)	Fishing	6
Holcomb Creek (4)	Headwaters to Billingsley Creek (Rabun Co.)	Fishing	4
Hoods Creek (4)	Headwaters to Walnut Fork (Rabun Co.)	Fishing	3
Little Toccoa Creek (4)	Tributary to Toccoa Creek, Toccoa (Stephens Co.)	Fishing	4
Moccasin Creek (4)	Tributary to Lake Burton (Rabun Co.)	Fishing	5
Panther Creek (1,4)	Upstream Lake Yonah (Habersham/Stephens Co.)	Fishing	9
Sarahs Creek (4)	Headwaters to Rd. S 884 (Rabun Co.)	Fishing	5
Tallulah River (1)	Upstream Lake Burton (Rabun Co.)	Fishing	11
Tiger Creek (4)	Headwaters to Pole Bridge Creek near Clayton (Rabun Co.)	Fishing	8
Toccoa Creek (4)	Stephens County	Fishing	5

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Walnut Fork (4)	Headwaters to Hoods Creek (Rabun Co.)	Fishing	4
Warwoman Creek (4)	Finney Creek to Sarah's Creek (Rabun County)	Fishing	6
Wildcat Creek (4)	Headwaters to SR 197 (Rd. S874) (Rabun Co.)	Fishing	6
HUC 03060103			
Pistol Creek (1)	Headwaters to Clarks Hill Lake near Tignall (Wilkes/Lincoln Co.)	Fishing	8
Savannah River (1)	Hwy. 368 to Coldwater Creek (Elbert Co.)	Recreation	6
HUC 03060104			
Bear Creek (1)	SCS Pond to Unawatti Creek, Lavonia (Franklin Co.)	Fishing	1
Bear Creek (1)	Lavonia	Fishing	1
Beaverdam Creek (1)	Commerce	Fishing	5
Broad River (1)	Hwy. 77 to Clarks Hill Lake (Elbert Co.)	Fishing	24
Hannah Creek (1)	Royston to Broad River (Franklin/Madison Co.)	Fishing	8
Little Bear Creek (1)	Tributary to Unawatti Creek, Lavonia (Franklin Co.)	Fishing	1
Middle Fork Broad River (4)	Dicks Creek to upstream Lake Russell (Stephens Co.)	Fishing	4
North Fork Broad River (4)	Habersham/Stephens Co. Line to Old Rock Quarry Rd. near Toccoa (Stephens Co.)	Fishing	5
Unawatti Creek (1)	Downstream Lavonia	Fishing	6
HUC 03060105-None			
HUC 03060106			
Butler Creek (1)	Boardmans Pond to SR56, South Augusta (Richmond Co.)	Fishing	8
Crawford Creek (1,2)	Downstream Columbia Co. WPCP to Tudor Branch	Fishing	2
Grindstone Branch (1)	Rhodes Pond to Spirit Creek, Hephzibah (Richmond Co.)	Fishing	1

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Kiokee Creek (1)	Greenbrier Creek to Savannah River near Evans (Columbia Co.)	Fishing	6
McBean Creek (1)	Poorly Branch to Savannah River (Richmond/Burke Co.)	Fishing	14
Phinizy Ditch (1)	Augusta (Richmond Co.)	Fishing	2
Savannah River (1,31)	Johnsons Landing to Brier Creek (Screven Co.)	Fishing/Drinking Water	26
Spirit Creek (1)	Marcum Branch to McDade Pond (Richmond Co.)	Fishing	14
HUC 03060108			
Beaverdam Creek (1)	McDonald Branch to Brier Creek, near Sylvania (Screven Co.)	Fishing	5
HUC 03060109			
St. Augustine Creek (1)	Walthour Swamp to Front River near Port Wentworth (Effingham/Chatham Co.)	Fishing	7

Rivers/Streams Partially Supporting Designated Uses

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	EVALUATED CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
SAVANNAH RIVER BASIN									
HUC 03060102									
Toccoa Creek (1)	Little Toccoa Creek to Lake Hartwell (Stephens Co.)	Fishing	FC	M,UR	City of Toccoa's overflowing manholes is being addressed through State & Federal enforcement actions. EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	3	X	X	3
Warwoman Creek (1)	Sarah's Creek to Chattooga River (Rabun Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	4	X	X	3
West Fork Chattooga River (1,4)	Rabun County	Wild/Scenic	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
HUC 03060103									
Cedar Creek (1,2)	Downstream Hartwell WPCP to Little Cedar Creek (Hart Co.)	Fishing	Zn	M	Hartwell constructed land application system and eliminated discharge 8/99.	8	X	X	2
Reed Creek (1)	Upstream Lake Hartwell (Hart Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3
Savannah River (1,11,31)	Lake Hartwell to Lake Russell (Hart/Elbert Co.)	Recreation	DO	Dam Release	Dam Release. EPD will continue to work with the Corps of Engineers to assess and implement feasible actions.	8	X	3	2
HUC 03060104									
Beaverdam Creek (1)	Downstream Commerce (Jackson Co.)	Fishing	DO	M	Commerce in compliance with permit limits. Model predicts dissolved oxygen violations at low flows. Georgia transmitted TMDL to EPA 2/00.	1	X	3	1
Broad River (1)	SR 281 to Scull Shoal Creek near Danielsville (Madison Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3
Crawford Creek (1)	Upstream Lake Hartwell near Lavonia (Franklin Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	4	X	X	3

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	EVALUATED CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
HUC 03060105									
Little River (1)	Kettle Creek to Rocky Creek (Wilkes Co.)	Fishing	FCG	NP	EPD will address nonpoint sources through a watershed protection strategy. Note: Fish Consumption Guidelines due to mercury in fish tissue.	23	X	X	3
Little River (1)	Rocky Creek to Clarks Hill Lake (Wilkes Co.)	Fishing	FC,FCG	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy. Note: Fish Consumption Guidelines due to mercury in fish tissue.	8	X	3,X	3
Rocky Creek (1,2,9)	Washington to Little River (Wilkes Co.)	Fishing	Bio	UR	EPD will address nonpoint sources (urban runoff) through a watershed protection strategy.	12	X	X	3
HUC 03060106									
Jones Creek (2)	Tributary to Savannah River near Evans (Columbia Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy. Columbia Co. has applied for an areawide stormwater permit.	3	X	3	3
Reed Creek (2)	Bowen Pond to Savannah River (Columbia Co.)	Fishing	FC	UR	EPD will address nonpoint sources (urban runoff) through a watershed protection strategy. Columbia Co. has applied for an areawide stormwater permit.	1	X	3	3
Savannah River (1,11,30)	Clarks Hill Lake to Stevens Creek Dam (Columbia Co.)	Fishing	DO,FCG	Dam Release,NP	Dam Release. EPD will address nonpoint sources through a watershed protection strategy. Note: Fish consumption guidelines due to mercury in fish tissue.	9	X	3,X	2,3
Savannah River (1,30)	Stevens Creek Dam to US Hwy 78/278 (Columbia/Richmond Co.)	Drinking Water	DO,FCG,FC	Dam Release,UR	Dam Release. EPD will address nonpoint sources (urban runoff) through a watershed protection strategy. Note: Fish consumption guidelines due to mercury in fish tissue.	9	X	3,X	2,3
Savannah River (1)	US Hwy. 78/278 to Johnsons Landing (Richmond/Burke/Screven Co.)	Fishing	FCG	NP	EPD will address nonpoint sources through a watershed protection strategy. Fish consumption guidelines due in part to natural source of mercury.	78	X	X	3

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	EVALUATED CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
Spirit Creek (1)	McDade Pond to Savannah River (Richmond Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy. An areawide stormwater permit was issued to Augusta/Richmond County on 4/20/95.	7	X	X	3
HUC 03060108									
Brier Creek (1)	Hwy 305 to Savannah River (Burke/Screven Co)	Fishing	FCG	NP	EPD will address nonpoint sources through a watershed protection strategy. Note: Fish Consumption Guidelines due to mercury in fish tissue.	45	X	X	3
Brushy Creek (1)	SR 80 (Rd. S1571) west Wrens to Brier Creek (Jefferson/Burke Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	15	X	X	3
Reedy Creek (1)	Warren Co. line to Brier Creek near Wrens (Jefferson Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	12	X	X	3
Whites Creek (1)	Downstream Thomson WPCP (McDuffie Co.)	Fishing	Tox	M	Thomson under Order to meet whole effluent toxicity & TRC limits by 5/99. Paying stipulated penalties for not meeting permit requirements.	2	X	3	2
HUC 03060109									
Pipemaker Canal (1)	Walthour Creek to Confluence with Savannah River (Effingham/Chatham Co.)	Fishing	FCG	NP	EPD will address nonpoint sources through a watershed protection strategy. Fish consumption guidelines due in part to natural source of mercury.	13	X	X	3
Savannah River (1,10)	Brier Creek to Tide Gate (Screven/Effingham/Chatham Co.)	Fishing/Drinking Water/Coastal Fishing	FCG	NP	EPD will address nonpoint sources through a watershed protection strategy. Fish consumption guidelines due in part to natural source of mercury.	84	X	X	3

*Indicates minimal data set.

Criterion Violated Codes (Column 4)

Bio	=	Biota Impacted
Cd	=	Cadmium
Cu	=	Copper
DO	=	Dissolved Oxygen
FC	=	Fecal Coliform Bacteria
FCG	=	Fish Consumption Guidelines
Hg	=	Mercury

Pb	=	Lead
Temp	=	Temperature
Tox	=	Toxicity Indicated
Zn	=	Zinc
*	=	Minimal Database

Evaluated Cause Codes (Column 5)

CSO	=	Combined Sewer Overflow
Dam Release	=	
I1	=	Industrial Facility
M	=	Municipal Facility
NP	=	Nonpoint Sources/ Unknown Sources
UR	=	Urban Runoff/Urban Effects

Rivers/Streams Not Supporting Designated Uses

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	POTENTIAL CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
SAVANNAH RIVER BASIN									
HUC 03060102									
Eastanollee Creek (1,2,3)	Toccoa to Lake Hartwell (Stephens Co.)	Fishing	Zn,FC,Cu,Tox	M,UR,I1	City of Toccoa's overflowing manholes is being addressed through State & Federal enforcement actions. The permit for Toccoa Eastanollee Cr. WPCP contains a limit for Cu and requires Zn monitoring for future evaluation. EPD will address nonpoint source (urban runoff) through a watershed protection strategy. Coats American under order. Toxicity to be addressed through construction of a wetlands system scheduled for completion 9/1/99. Wetlands system completed but not operating at design yet. Failed WET test 12/99.	14	X	3,X	2
Shoal Creek (1)	Pooles Creek to Lake Hartwell, Parkertown (Hart Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	1	X	X	3
Stekoa Creek (1)	Clayton to Chattooga River (Rabun Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	14	X	3	3
HUC 03060103									
Beaverdam Creek (1)	Confluence of North & South Beaverdam Creeks to Savannah River near Elberton (Elbert Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	22	X	X	3
Cedar Creek (1)	Little Cedar Creek to Savannah River near Montevideo (Hart Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	4	X	X	3
Cold Water Creek (1)	SR 77 to Little ColdWater Creek near Ruckersville(Elbert Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
Fortson's Creek (2)	Elberton to Beaverdam Creek (Elbert Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	4	X	3	3

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	POTENTIAL CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
HUC 03060104									
Bear Creek (1)	Downstream Lavonia WPCP (Franklin Co.)	Fishing	DO	M	Lavonia in compliance with permit. Under schedule to meet total residual chlorine limit by 6/2/99 and BOD & ammonia 6/2/2000. Georgia transmitted TMDL to EPA 02/00.	2	X	3	1
Clark Creek (1)	Greensboro Branch to Long Creek near Tignall (Wilkes Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
Falling Creek (1)	Dry Fork Creek to Broad River near Fortsonia (Elbert Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	4	X	X	3
Hudson River (1)	Mountain Creek to Webb Creek near Homer (Banks Co.)	Fishing	FC	UR,M	EPD will address nonpoint source (urban runoff) through a watershed protection strategy. The Homer Housing Authority has installed an upgraded chlorination system.	13	X	X	3
Hudson River (1)	Black Creek to Nails Creek near Fort Lamar (Franklin/Madison Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	8	X	X	3
Middle Fork Broad River (1)	Nancy Town Creek to Hunters Creek (Banks/Franklin Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	13	X	X	3
No. Fork Broad River (1)	Unawatti Creek to Broad River near Carnesville (Franklin Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3
So. Fork Broad River (1)	Brush Creek to Beaverdam Creek near Comer (Madison Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	3	X	X	3
So. Fork Broad River (1)	Clouds Creek to Fork Creek near Carlton (Madison/Oglethorpe Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	7	X	X	3

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	POTENTIAL CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
HUC 03060105									
Little River (1)	Confluence of N. & S. Forks to Kettle Creek near Washington (Taliaferro/Wilkes Co.)	Fishing	FC,FCG	NP	EPD will address nonpoint sources through a watershed protection strategy. Note: FCG is a partial support. Fish consumption guidelines due to mercury in fish tissue.	6	X	X	3
Middle Creek (1)	Childers Creek to Big Creek (trib. to Clark Hill Lake), near Wrightsboro (McDuffie Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
HUC 03060106									
Butler Creek (1)	Phinizy Ditch to Savannah River, Augusta (Richmond Co.)	Fishing	DO,FC,Se	M,UR	Augusta under A.O. to improve WPCP O&M. Phase II of the wetlands system is to be completed by 10/1/2000. Urban runoff is being addressed in the EPD Stormwater Management Strategy. An areawide stormwater permit was issued to Augusta/Richmond County on 4/20/95.	3	X	3,X	2
Reed Creek (1)	Rd. S1727 to Bowen Pond near Martinez (Columbia Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy. Columbia County has applied for an areawide stormwater permit.	8	X	3	3
Rocky Creek (1)	SR 56 to below New Savannah Road, Augusta (Richmond Co.)	Fishing	FC,Tox	UR,I2	Urban runoff is being addressed in the EPD Stormwater Management Strategy. An areawide stormwater permit was issued to Augusta/Richmond County on 4/20/95. Southern Wood Piedmont site under remediation.	2	X	3,X	2
Uchee Creek (1)	Tudor Branch to upstream Little River near Evans (Columbia Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy. Columbia County has applied for an areawide stormwater permit	3	X	X	3
HUC 03060108									
Brier Creek (1)	Big Brier Creek to Sweetwater Creek near Thomson (McDuffie Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	3	X	X	3

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	POTENTIAL CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
HUC 03060109									
Buck Creek (1)	Downstream Sylvania WPCP to Savannah River (Screven Co.)	Fishing	DO,Cu	M	Sylvania completed Individual Control Strategy in 1994 and is in compliance with permit. Sylvania WPCP passed WET test 5/95. NPDES permit has limits for CN & Zn. In compliance with permit limits.	12	X	2	1
Ebenezer Creek (1,4)	Long Bridge to Savannah River near Springfield (Effingham Co.)	Fishing	DO	NP	Multiagency study ongoing to address issues and implement solutions.	6	X	3	2
Runs Branch (Ebenezer Creek) (1)	Cowpen Creek to Little Ebenezer Creek near Clio (Effingham Co.)	Fishing	DO,FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	11	X	X	2

*Indicates minimal data set.

Criterion Violated Codes (Column 4)

Bio	=	Biota Impacted
Cd	=	Cadmium
Cu	=	Copper
DO	=	Dissolved Oxygen
FC	=	Fecal Coliform Bacteria
FCG	=	Fish Consumption Guidelines
Hg	=	Mercury
Pb	=	Lead
Se	=	Selenium
Temp	=	Temperature
Tox	=	Toxicity Indicated
Zn	=	Zinc
*	=	Minimal Database

Potential Cause Codes (Column 5)

CSO	=	Combined Sewer Overflow
I1	=	Industrial Facility
M	=	Municipal Facility
NP	=	Nonpoint Sources/ Unknown Sources
UR	=	Urban Runoff/Urban Effects

Estuarine Waters Not Fully Supporting Designated Uses

ESTUARY NAME (Data Source)	LOCATION	WATER USE CLASSIFICATION	USE SUPPORT CATEGORY	CRITERION VIOLATED	POTENTIAL CAUSE(S)	SQUARE MILES AFFECTED	305(b)	303(d)	Priority
Savannah Harbor (1)	Hwy 17 to South Channel	Coastal Fishing	PS	FC	UR,M	4	X	3	3

Use Support Status (Column 4)

S = Supporting
 PS = Partially Supporting
 NS = Not Supporting

Criterion Violated Codes (Column 5)

Bio = Biota Impacted
 Cd = Cadmium
 Cu = Copper
 DO = Dissolved Oxygen
 FC = Fecal Coliform Bacteria
 FCG = Fish Consumption Guidelines
 Hg = Mercury
 Pb = Lead
 Temp = Temperature
 Tox = Toxicity Indicated
 Zn = Zinc
 * = Minimal Database

Potential Cause Codes (Column 6)

CSO = Combined Sewer Overflow
 I1 = Industrial Facility
 M = Municipal Facility
 NP = Nonpoint Sources/ Unknown Sources
 UR = Urban Runoff/Urban Effects

Lakes/reservoirs Not Fully Supporting Designated Uses

LAKE NAME	LOCATION	SUPPORT CATEGORY	WATER USE CLASSIFICATION	CRITERION VIOLATED	POTENTIAL CAUSE(S)	ACRES AFFECTED	305(b)	303(d)	Priority
Clarks Hill Lake (1)	Lincoln and Columbia Counties	PS	Recreation	FCG	NP	69,999	X	X	3
Lake Burton (1)	Rabun County	PS	Recreation	FCG	NP	2,775	X	X	3
Lake Hartwell (1,11,31)	Tugaloo Arm - Hartwell	NS	Recreation	FCG	I2	55,950	X	3	NA
Lake Rabun (1)	Rabun County	PS	Recreation	FCG	NP	835	X	X	3
Lake Russell (1)	Elbert County	PS	Recreation	FCG	NP	26,650	X	X	3
Lake Tugaloo (1)	Rabun County	PS	Recreation	FCG	NP	598	X	X	3
Nancy Town Lake (1)	Habersham County	PS	Fishing	FCG	NP	8	X	X	3

*Indicates minimal data set.

Use Support Status (Column 3)

S = Supporting
 PS = Partially Supporting
 NS = Not Supporting

Criterion Violated Codes (Column 5)

Bio = Biota Impacted
 Cd = Cadmium
 Cu = Copper
 DO = Dissolved Oxygen
 FC = Fecal Coliform Bacteria
 FCG = Fish Consumption Guidelines
 Hg = Mercury
 Pb = Lead
 Temp = Temperature
 Tox = Toxicity Indicated
 Zn = Zinc
 * = Minimal Database

Potential Cause Codes (Column 6)

CSO = Combined Sewer Overflow
 I1 = Industrial Facility
 M = Municipal Facility
 NP = Nonpoint Sources/ Unknown Sources
 UR = Urban Runoff/Urban Effects

Savannah River Basin Contact Information

<p>Department of Community Affairs 60 Executive Park South, N.E. Atlanta, GA 30329 Phone: 404.679.4940 www.dca.state.ga.us</p>	<p>Coastal Georgia RDC PO Box 1917 Brunswick, GA 31521 Phone: 912.264.7363 www.dca.state.ga.us/publications/cg.html</p>
<p>Georgia Mountains RDC PO Box 1720 Gainesville, GA 30503 Phone: 770.538.2626 www.dca.state.ga.us/publications/gm.html</p>	<p>Northeast Georgia RDC 305 Research Drive Athens, GA 30605-2795 Phone: 706.369.5650 www.dca.state.ga.us/publications/neg.html</p>
<p>Heart of Georgia Altamaha RDC PO Drawer 1260 Baxley, GA 31515 Phone: 912.367.3648 www.dca.state.ga.us/publications/hga.html</p>	<p>Central Savannah River RDC PO Box 2800 Augusta, GA 30914-2800 Phone: 706.210.2000 www.dca.state.ga.us/publications/csra.html</p>
<p>Georgia Soil and Water Conservation Commission Region 2 PO Box 8024 Athens, GA 30603 Phone: 706.542.9233 www.gaswcc.org</p>	<p>Georgia Forestry Commission 5645 Riggins Mill Road Dry Branch, GA 31020 Phone: 478.751.3500 www.GFC.State.Ga.US/</p>
<p>DNR Wildlife Resources Division 2070 U.S. Highway 278, S.E. Social Circle, GA 30279 www.dnr.state.ga.us/dnr/wild</p>	<p>DNR Coastal Resources Division One Conservation Way Brunswick, GA 31520-8687 Phone: 912.264.7218 www.dnr.state.ga.us/dnr/coastal</p>
<p>DNR-EPD Air Protection Branch 4244 International Parkway, Suite 120 Atlanta, GA 30354 Phone: 404.363.7000</p>	<p>DNR-EPD Geological Survey Branch 19 Martin Luther King Jr. Drive Atlanta, GA 30334 Phone: 404.656.3214</p>
<p>DNR-EPD Hazardous Waste Management Branch 205 Butler Street SE, Suite 1154 East Tower Atlanta, GA 30334 Phone: 404.656.7802</p>	<p>DNR-EPD Land Protection Branch 4244 International Parkway, Suite 104 Atlanta, GA 30354 Phone: 404.362.2537</p>
<p>DNR-EPD Program Coordination Branch 205 Butler Street, SE, Suite 1152 East Tower Atlanta, GA 30334 Phone: 404.656.4713</p>	<p>DNR-EPD Water Protection Branch 4220 International Parkway, Suite 101 Atlanta, GA 30354 Phone: 404.675.6232</p>
<p>DNR-EPD Water Resources Branch 205 Butler Street SE, Suite 1058 East Tower Atlanta, GA 30334 Phone: 404.656.6328</p>	<p>DNR-EPD Brunswick District Office One Conservation Way Brunswick, GA 31520-8687 Phone: 912.264.7283</p>

Appendix F. Savannah River Basin Contact Information

<p>United States Environmental Protection Agency (EPA) Region 4, Water Management Division Atlanta Federal Center 61 Forsyth Street, SW Atlanta, GA 30303-3104 Phone: 404.562.9345 www.epa.gov/region4/</p>	<p>US Army Corps of Engineers, Savannah District PO Box 889 Savannah, GA 31402-0889 Phone: 912.652.5279 www.sas.usace.army.mil</p>
<p>US Army Corps of Engineers, Mobile District PO Box 2288 Mobile, AL 36628-0001 Phone: 334.690.2505 www.sas.usace.army.mil</p>	<p>US Army Corps of Engineers, Hartwell Project Resource Manager's Office PO Box 278 Hartwell, GA 30643 Phone: 888.893.0678 www.sas.usace.army.mil</p>
<p>US Army Corps of Engineers, Russell Project Resource Manager's Office 4144 Russell Dam Drive Elberton, GA 30635 Phone: 706.213.3400 www.sas.usace.army.mil</p>	<p>US Army Corps of Engineers, Thurmond Project Resource Manager's Office Route 1, Box 12 Clarks Hill, SC 29821 Phone: 864.333.1147 800.533.3478 ext. 1147 www.sas.usace.army.mil</p>
<p>United States Department of Agriculture Natural Resources Conservation Service Stephens Federal Building 355 East Hancock Avenue Athens, GA 30601-2769 Phone: 706.546.2272 www.ga.nrcs.usda.gov/ga/gaadm/dirso.htm</p>	<p>United States Geological Survey Water Resources Division Peachtree Business Center, Suite 130 3039 Amwiler Road Atlanta, GA 30360-2824 Phone: 770.903.9100 www.usgs.gov</p>

with urban storm water issues and leaking and overflowing sanitary sewers) and private landowner actions (e.g., correcting failed septic systems; using best management practices in animal operations and land application of waste residuals). Other issues will require significant additional time and effort before they are addressed sufficiently (e.g., restoration of riparian zones and aquatic habitat). Some of these issues may require trial management efforts and adapting those efforts over time based on observations of what works well, particularly where there is no 100 percent effective solution evident at the time of strategy development. Future management should focus on the priorities among those continuing needs, as determined by communities and partners in management.

Additionally, continued growth in population is expected in the Savannah basin (see Section 2). This growth will place additional demands on water resources, and require corresponding responses in management. More people means more water use (drinking water, industrial consumption, irrigation), more storm water runoff (from impervious surfaces of new houses, roads, industries, businesses, and parking lots), and more contamination (sediment; nutrients; organic material; pesticides, herbicides, and other toxics). Therefore, it is essential that stakeholders continue to work together to plan and implement the most cost-effective ways of restoring and protecting water resources.

Blending Regulatory and Voluntary Approaches

Although the regulatory authorities of agencies such as EPD are important for protection and restoration of Georgia's waters, RBMP partners will continue to emphasize voluntary and cooperative approaches to watershed management. This will take time and be very challenging. Long-term protection means that the people, local governments, and businesses must learn collectively what is needed for protection and adapt their lifestyles and operations accordingly. Experience indicates that we are much more likely to buy into proposed management solutions in which we have a say and control over how we spend our time and money. The challenge in the future, therefore, is to continue to "build bridges" between regulatory and voluntary efforts, using each where they best serve the people and natural resources of Georgia.

8.2 Working to Strengthen Planning and Implementation Capabilities

Understanding One Another's Roles

Increasing awareness and understanding of the roles and capabilities of local, state, and federal partners is one of the keys to future success in basin management for the Savannah River. Lack of understanding can lead to finger pointing and frustration on the part of all involved. Increasing opportunities for stakeholders to develop this awareness and understanding should result in more effective management actions.

This basin plan provides one opportunity for stakeholders to increase their awareness of conditions in the basin and to learn about ongoing and proposed new management strategies. Within this context, stakeholders can develop a better understanding of certain roles and responsibilities. For example, this basin plan points out several areas where EPD has regulatory authority and corresponding duties, including:

- Establishing water quality use classifications and standards.
- Assessing and reporting on water quality conditions.
- Facilitating development of River Basin Management Plans.
- Developing TMDLs

- Implementation Plan Development through Regional Development Centers (RDCs)
- Issuing permits for point source discharges of treated wastewater, municipal storm water discharges as required, and land application systems.
- Issuing water supply permits.
- Enforcing compliance with permit conditions.

In many areas, however, organizations or entities other than EPD are responsible; for example,

- Septic tank permitting and inspection (County Health Departments) and maintenance (individual landowners).
- Land development (land use) and zoning ordinances (local governments).
- Sanitary sewer and storm water ordinances (local governments).
- Water supply source water protection ordinances (local governments).
- Urban storm water and drainage (local governments).
- Erosion and sediment control (local governments).
- Siting of industrial parks, landfills, and wastewater treatment facilities (local governments).
- Floodplain management (FEMA, local governments).
- Implementation of forestry best management practices (Georgia Forestry Commission with support from the American Forest and Paper Association, Georgia Forestry Association, The University of Georgia School of Forest Resources, Southeastern Wood Producers Association, and the American Pulpwood Association).
- Implementation of agricultural best management practices (landowners with support from state and federal agricultural agencies).
- Proper use, handling, storage, and disposal of chemicals (businesses, landowners, municipalities, counties, etc.).

These are but a few of the areas involved, but they illustrate how responsibilities are spread across many stakeholders in each basin. Additionally, other agencies and organizations—regional development centers; federal, state, and local technical assistance programs; citizens groups; and business associations—assist in planning and implementation in many of these areas. As stakeholders become more familiar with one another’s responsibilities and capabilities, they will become increasingly aware of appropriate partners to work with in addressing their issues of concern.

Using the RBMP Framework to Improve Communication

Raising awareness frequently involves two-way communication. The RBMP framework’s interactive planning and outreach sessions provide additional opportunities for two-way communication. For example, Basin Technical Planning Team meetings provide opportunities for partners to share information on their responsibilities and capabilities with each other. Similarly, River Basin Advisory Committee meetings and Stakeholder meetings provide opportunities for citizens, businesses, government agencies, associations, and others. to share information and learn from each other. Although these interactions often require considerable time, they are critical to the future

of management in the basin because they build the working relationships and trust that are essential to carrying out effective, integrated actions.

Continuing to Streamline Our Efforts

Increased coordination will also result if partners in this approach continue to streamline their efforts. There are many laws and requirements with related and complementary goals, e.g., Georgia's Growth Strategies Act, Planning Act, River Corridor Protection Act, Comprehensive Ground Water Management Plan, and River Basin Management Planning requirements, in addition to federal Clean Water Act water quality regulations and Safe Drinking Water Act source water protection requirements. Partners should continue to find ways to make actions under these laws consistent and complementary by eliminating redundancy and leveraging efforts. Again, partners can use the forums in the RBMP framework (e.g., river basin team and advisory committees) to discuss and implement ideas to streamline roles and make the best use of their funds and staff resources.

8.3 Addressing the Impacts from Continued Population Growth and Land Development

Supporting Consistent Implementation of Protection Measures

In addressing the impacts from anticipated population growth and increased land development in the basin, future managers will need to increase their understanding of roles and use forums to coordinate and develop more specific action plans. Historically, mitigating impacts from newly developed areas has been approached mostly on a case-by-case basis. Unfortunately, this approach has resulted in inconsistent planning and implementation of water resource protection measures. River basin planning offers an opportunity for a more consistent approach by making it easier for landowners, local governments, and businesses to work together at the watershed and basin levels.

One way that Georgia EPD will address this issue is by approving only new and expanding permits for water withdrawals and wastewater discharges that are consistent with the basin plan and that meet the intent of the Georgia Planning Act. Rather than waiting for the permit application process, however, local governments can work together and with EPD to work out some of these issues in advance. There are incentives for organizations such as the Georgia Water Pollution Control Association (WPCA), the Georgia Municipal Association (GMA), the Association of County Commissioners of Georgia (ACCG), and the Regional Development Centers (RDCs) to work out consistent methods to conduct watershed assessments in developing areas and to improve the implementation of protection measures as development occurs. EPD, DCA, and other partners can coordinate by facilitating discussion at RBMP meetings and supporting local initiatives aimed at this issue. An excellent example of this cooperative effort is the Georgia Water Management Campaign being facilitated by the Association of County Commissioners in cooperation with the Georgia EPD, the Georgia Municipal Association, and the Georgia Environmental Facilities Authority.

8.4 The Next Iteration of the Basin Cycle

Building on Previous, Ongoing, and Planned Efforts

As discussed above and in Section 7.3, there is more work to do to adequately restore and protect all of Georgia's water resources. After focusing on the implementation of this

plan, the Savannah River basin will enter into its second iteration of the basin management cycle (scheduled for April 2001). The next cycle will provide and opportunity to review issues that were not fully addressed during the first cycle and to reassess or identify any new priority issues. In other words, future management efforts can and should build on the foundation created by previous, ongoing, and already planned management actions.

Providing a Historical Reference for the Next Basin Planning Effort

Additional water resources management issues will also be addressed in the Comprehensive Water Resources Management Study for the Savannah River basin (SRB Study). The 1996 Water Resources Development Act authorized the U.S. Army Corps of Engineers to develop an updated plan addressing current and future needs in the basin, examine reallocation of storage at Corps of Engineers multipurpose projects, and develop a better management structure to deal with basin water resource issues. Potential water resources management issues to be addressed in the study include upper basin needs vs. downstream needs, water supply allocations, flood control, hydropower, water quality, habitat, aquatic plant control, and recreation.

The Reconnaissance phase of the comprehensive water resources management study for the basin was initiated in February 1998 and completed in July 1999. The final report will be completed in September 2003.

The Corps of Engineers is also coordinating this effort with various state and federal agencies including the states of Georgia and South Carolina, as well as Federal agencies such as the Environmental Protection Agency (EPA), US Geological Survey, and the Natural Resources Conservation Service.

Savannah Harbor Channel Deepening Project

Another concern that will be addressed during the next basin planning cycle is the environmental impacts of the proposed Savannah Harbor Deepening Project Georgia. Georgia Ports Authority is recommending a plan to increase the channel depth of the Port of Savannah from 42 to 48 feet to accommodate larger container vessels calling at the port. The potential environmental impacts could include increased salinity levels and decreased oxygen levels in the river and adjacent to the Savannah National Wildlife Refuge, loss of acres of saltwater wetlands, and increased chloride levels at the city of Savannah water intake on a tributary to the Savannah River. Construction on the project is scheduled to start in the fall of 2001 and be completed in the year 2005.

New Savannah Bluff Lock and Dam

Another future issue in the Savannah River basin is the continued operation and maintenance of the New Savannah Bluff Lock and Dam (NSBLD), which was constructed in 1937. The Army Corps of Engineers, Savannah District, initiated a study to review the current use of the NSBLD and recommend its future disposition to Congress. The project was authorized for the sole purpose of supporting commercial navigation along the Savannah River. Augusta-Richmond County currently operates the lock and the adjacent 50-acre public park and recreational area under an agreement with the Corps. The project currently provides water supply, recreation, tourism, and environmental benefits to the region. The study was completed in 2000 and a report was submitted to Congress for action. The Corps will rehabilitate the lock and dam and work with local governments in Georgia and South Carolina to establish a plan for operation of the project.

8.5 Priorities for Additional Data Collection

In 1997-1998 monitoring efforts were focused on the Savannah and Ogeechee River basins in accordance with the EPD basin planning schedule. Intensive monitoring will return to the Savannah basin in support of the next iteration of the basin planning cycle in 2002. Prior to this time, EPD and partners will develop a monitoring plan for the Savannah. The monitoring plan will have two manage components: general assessment of water quality status within the basin, and targeted assessment to address priority issues and concerns.