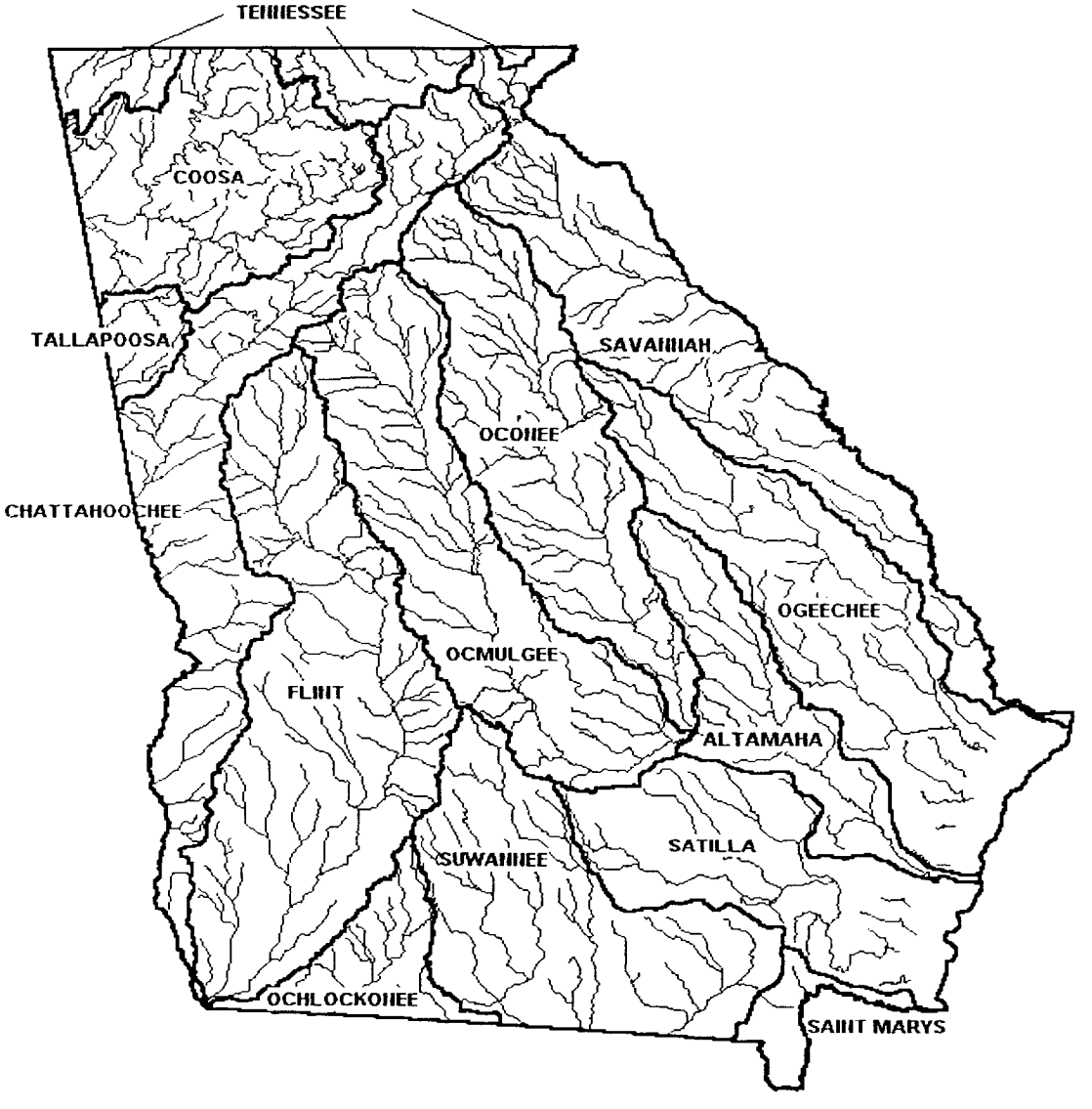
WATER QUALITY IN GEORGIA 2000-2001



GEORGIA DEPARTMENT OF NATURAL RESOURCE
ENVIRONMENTAL PROTECTION DIVISION

WATER QUALITY IN GEORGIA

2000-2001

Georgia Department of Natural Resources
Environmental Protection Division
205 Butler Street, SE
Floyd Towers East
Atlanta, Georgia 30334

WATER QUALITY IN GEORGIA

Preface

This report was prepared by the Georgia Environmental Protection Division GAEPD, Department of Natural Resources, as required by Section 305(b) of Public Law 92-500 (the Clean Water Act) and as a public information document. It represents a synoptic extraction of the EPD files and, in certain cases, information has been presented in summary form from those files. The reader is therefore advised to use this condensed information with the knowledge that it is a summary document and more detailed information is available in the EPD files.

This report covers a two-year period, January 1, 2000 through December 31, 2001. Comments or questions related to the content of this report are invited and should be addressed to:

Environmental Protection Division
Georgia Department of Natural Resources
Floyd Towers East
205 Butler Street, S.E.
Atlanta, Georgia 30334

2000-2001

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CHAPTER 1

Executive Summary

Purpose

This report, *Water Quality in Georgia, 2000-2001*, was prepared by the Georgia Environmental Protection Division (GAEPD) of the Department of Natural Resources (DNR). The DNR Coastal Resources (CRD) and Wildlife Resources Divisions (WRD), the Georgia Forestry Commission, and the Georgia Soil and Water Conservation Commission also contributed portions of the report. In addition, water quality data was provided by a number of governmental agencies and universities.

The report is often referred to as the Georgia 305(b) Report as it is prepared to comply with this section of the Federal Clean Water Act. Section 305(b) requires that each State prepare and submit to the Administrator of the United States Environmental Protection Agency (USEPA) a report, biennially, which describes water quality conditions of navigable waters across the State. The USEPA provides guidance to the States to establish a framework for consistent reporting across the nation. The USEPA reviews the individual State reports and uses the information to develop a national water quality inventory report which is transmitted to the Congress of the United States.

This report provides an assessment of the water quality conditions of surface and groundwater in Georgia and includes a description of the nature, extent and causes of documented water quality problems. This assessment of water quality problem areas serves as the basis for lists required by Sections 303(d), 314, and 319 of the Clean Water Act. The report also includes a review and summary of ongoing wetland, estuary, and coastal public health/aquatic life issues; and water protection, groundwater, and drinking water program summaries.

In addition to complying with the Federal Clean Water Act, the major objective of this report is to provide Georgians a broad summary of information on water quality and the programs being implemented by the GAEPD to protect water resources across the State.

Water Protection In Georgia

The GAEPD is and has been since its inception in 1972 a comprehensive environmental agency responsible for environmental protection, management, regulation, permitting, and enforcement in Georgia. The GAEPD has for many years aggressively sought most available program delegations from the USEPA

in order to achieve and maintain a coordinated, integrated approach to environmental management. Today the GAEPD administers regulatory programs for water pollution control, hazardous waste management, air quality control, solid waste management, strip mining, soil erosion control, geologic survey activities, radiation control, water supply and groundwater management, underground storage tanks, surface water allocation, and safe dams.

This integrated approach to water pollution control originated in 1964 with the predecessor of the GAEPD, the Georgia Water Quality Control Board. The Georgia Water Quality Control Act of 1964 established the Board and consolidated all water pollution control functions under the Board. Early efforts by the Board in the late 1960s and early 1970s included documentation and assessment of water quality conditions, followed by judicial actions to force cleanup of targeted, priority water pollution problem areas. Another major action by the Board during this period was the establishment of water quality standards.

The Federal Clean Water Act of 1972 established the national goal of the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water wherever attainable. Most industries in Georgia had installed effective water pollution control facilities by the end of 1972. In the mid/late 1970s, the GAEPD placed emphasis on the construction of municipal treatment plants, issuance of NPDES permits to municipal and industrial discharges, and the initiation of programs to monitor permit compliance and take appropriate enforcement actions. Major monitoring, modeling, and basin planning work was coordinated in support of treatment plant design and permitting programs. Priority was placed on targeted waters and on discharges to water quality limited stream segments through the construction grant priority funding list.

Today the Water Protection Branch of the GAEPD, in cooperation with many local, state, and federal agencies, manages most aspects of water pollution control, including, monitoring; water quality modeling and total maximum daily loads (TMDLs); river basin management planning and the continuing planning process; water quality standards; nonpoint source management; toxic substance monitoring and fish tissue monitoring; aquatic toxicity testing; watershed assessment and the State revolving loan process for funding municipal water pollution control plant construction; the NPDES permit and enforcement program for municipal and industrial point sources; the erosion and sedimentation program; stormwater management; industrial pretreatment; and land application of treated wastewater.

The GAEPD has designated the Georgia Soil and Water Conservation Commission as the lead agency for dealing with water quality problems caused by agriculture. The Georgia Forestry Commission has been designated by the GAEPD as the lead agency to deal with water quality problems due to commercial forestry operations.

Water Protection Programs

Georgia is rich in water resources. According to USEPA estimates, the State has 44,056 miles of perennial streams, 23,906 miles of intermittent streams, and 603 miles of ditches and canals for a total of 70,150 stream miles. Also, the State has 4.8 million acres of wetlands (9% tidally affected), 425,582 acres of public lakes and reservoirs, 854 square miles of estuaries, and 100 miles of coastline. This rich water heritage is often taken for granted. However, unusual events such as the flood in the summer of 1994 and drought conditions experienced throughout Georgia in 1986, 1988 and 1999-2002 serve as reminders that water resources cannot be taken for granted and sound regulatory programs are necessary to protect the resources.

In 2000-2001, the GAEPD placed emphasis on river basin management planning, monitoring and assessment, modeling and TMDLs, NPDES permitting and enforcement, nonpoint source pollution abatement, stormwater permitting, treatment plant funding, fish consumption guidance, and public participation projects.

River Basin Management Planning. River basin management planning or the watershed approach to assessing and addressing water quality issues was a priority in 2000-2001. River basin planning is an important process as it provides a basis for integrating point and nonpoint source water protection efforts across the State. A law passed by the Georgia General Assembly in 1992 requires the Department of Natural Resources to develop management plans for each river basin in Georgia. Chattahoochee and Flint River Basin Plans were completed in 1997 and the Coosa, Tallapoosa and Oconee River Basin Plans were completed in 1998. In 2000-2001, river basin planning work was ongoing on the Savannah, Ogeechee, Ochlockonee, Suwannee, Satilla, St. Marys, Ocmulgee, Oconee, and Altamaha Rivers. Plans were completed for the Savannah and Ogeechee River Basins in 2001. The River Basin Management Planning program is discussed in Chapter 2.

The GAEPD is also working with the United States Environmental Protection Agency (USEPA) and South Carolina on a Savannah River Watershed Project and with the Florida Department of Environmental Protection and the Suwannee River Water Management District in Florida to conduct basin planning for the Suwannee River.

Monitoring and Assessment. Georgia's waters are currently classified for one of the following water use classifications: drinking water, recreation, fishing, coastal fishing, wild river, or scenic river. Specific water quality standards are assigned to support each water use classification. The use classifications and standards are discussed in some detail in Chapter 3. The quality of Georgia's waters is judged by the extent to which the waters support the uses (comply with

standards set for the water use classification or designations) for which they have been designated. Water quality monitoring programs and information on assessments of Georgia's waters are discussed in Chapter 3.

Water Quality Modeling. In 2000-2001, significant effort was invested in developing TMDLs. During this period TMDLs were established for 303(d) listed waters in the Ochlockonee, Suwannee, Satilla and St. Marys River Basins. TMDLs were also developed for listed waters in the Ocmulgee, Oconee, and Altamaha River basins and publicly noticed in June 2001. In addition to TMDL development, implementation plans were developed for more than a hundred TMDLs established in the 1998-1999 time frame.

Work continued in 2000-2001, on the Chattahoochee River Modeling Project. The objective of the effort is to develop a dynamic water quality model of the Chattahoochee River from Buford Dam to Franklin. This project involves issue identification, model selection and building, field data collection, model calibration and verification, and critical period model development. The water quality model will serve to support point source wasteload allocation, TMDL development, nutrient management, water supply, and stormwater management decisions. This project will continue into 2002. This work is discussed in Chapter 3.

Fish Consumption Guidance. In 2000-2001 the GAEPD, WRD and CRD continued work on the risk based fish consumption guidance program. The results of the program are published annually in the *DNR Freshwater and Saltwater Sport Fishing Regulations* which are provided to all Georgians who purchase a fishing license. The information is discussed in additional detail in the DNR publication, *Guidelines for Eating Fish from Georgia Waters* - 2002 which is reproduced in Appendix C. This guidance provides fishermen with information that is useful and understandable. This program is one of the most progressive in the southeast and has been praised by USEPA, Region IV, and the USEPA Office of Science and Technology in Washington. This work is discussed in Chapter 6.

NPDES Permitting and Enforcement. A considerable amount of time was allocated to treated wastewater discharge permit reissuance activities in 2000-2001. NPDES permits were modified or reissued to 239 municipal/private dischargers and to 189 industrial dischargers. In addition, 98 private dischargers were covered under general permit No. GAEPD 1000. Since the initiation of the program in 1974, NPDES permit issuance and enforcement has been a high priority for the GAEPD.

Compliance and enforcement activities continued to receive significant attention in 2000-2001. By the end of 2001, of 126 major municipal discharges, 121 facilities were in general compliance with final limitations. The remaining five facilities are under compliance schedules to resolve the noncompliance or

implementing infiltration/ inflow strategies. Enforcement action has been taken by the GAEPD to insure problems are alleviated. Of 47 major industrial discharges, 46 facilities were achieving permit compliance at the end of 2001. The one major industrial discharger not in compliance at the end of 2001 is under an order to attain compliance. Permitting, compliance and enforcement work is discussed in Chapter 7.

The GAEPD utilizes all reasonable means to attain compliance, including technical assistance, noncompliance notification letters, conferences, consent orders, and civil penalities. Emphasis is placed on achieving compliance through cooperative action. However, compliance cannot always be achieved in a cooperative manner. The Director of the GAEPD has the authority to negotiate consent orders or issue administrative orders. In 2000-2001 five Administrative Orders and 219 Consent Orders were issued and a total of $1,088,296 in negotiated settlements was collected.

Swine Feeding Operations. During 2000 and 2001 rules were developed and implemented for swine feeding operations. This process is discussed in Chapter 7.

Zero Tolerance. In response to a resolution adopted in 1998 by Georgia Department of Natural Resources that directed EPD to provide the "best quality of effort possible enforcing Georgia's environmental laws", a "zero tolerance" strategy was adopted for certain high growth areas of the state requiring enforcement action on any and all noncompliance issues. This process is discussed in Chapter 7.

Nonpoint Source Management Program. The control of point source problems has allowed the GAEPD to place increasing emphasis on the prevention, control and abatement of nonpoint sources of pollution. The GAEPD is responsible for administering and enforcing laws to protect the waters of the State, defined to include surface and ground water. Consequently, the GAEPD has been designated as the administering or lead agency for implementing the State's Nonpoint Source Management Program. This program combines regulatory and non-regulatory approaches, in cooperation with other State and Federal agencies, local and regional governments, State colleges and universities, businesses and industries, non-governmental organizations and individual citizens.

Georgia's initial Nonpoint Source Assessment Report was completed in compliance with the Federal Clean Water Act and approved by the USEPA in January 1990. This report, as required by Section 305(b) of Public Law 92-500, serves as the current process to update the Nonpoint Source Assessment Report.

In January, 1997, the GAEPD initiated efforts with the University of Georgia - Institute of Community Affairs and Development to revise and update the Nonpoint Source Management Program. This revision of the State's Nonpoint Source Management Program is intended to meet the requirements for funding under Section 319(b) of the Federal Clean Water Act and to delineate short and long-term goals and implementation strategies. Just as important, it is also designed to be an information resource for the wide range of stakeholders across the State who are involved in the prevention, control and abatement of nonpoint sources of pollution. It has been developed as an inventory of the full breadth of nonpoint source management (regulatory and non-regulatory) in Georgia, including activities which are currently underway or planned for the time period FFY 2000 through FFY 2004.

The State's Nonpoint Source Management Program focuses on the comprehensive categories of nonpoint sources of pollution identified by the USEPA: Agriculture, Silviculture, Construction, Urban Runoff, Hydrologic/Habitat Modification, Land Disposal, Resource Extraction and Other Nonpoint Sources. This revision of the State's Nonpoint Source Management Program was developed through a consultatory process, incorporating input from a wide range of stakeholders involved in nonpoint source management activities throughout the State: local, regional, State and Federal agencies, as well as private, non-governmental organizations. This process encouraged intergovernmental resource sharing and increased stakeholder involvement. This revision of the State's Nonpoint Source Management Program established new partnerships and strengthened existing partnerships in the development and implementation of nonpoint source strategies.

Under Section 319(h) of the Federal Clean Water Act, the USEPA awards a Nonpoint Source Implementation Grant to the GAEPD to fund eligible projects which support the implementation of the State's Nonpoint Source Management Program. Section 319(h) Grant funds for the prevention, control and/or abatement of nonpoint sources of pollution are made available annually to public agencies in Georgia. With funding from Section 319(h) FY90 - FY99 Grants, the GAEPD has awarded over $18,800,000 in grant funds to State agencies, local and regional governments, Resource Conservation and Development Councils, State colleges and universities to fund eligible projects supporting the State's Nonpoint Source Management Program. The nonpoint source programs are described in Chapter 7.

Stormwater Management. The GAEPD developed its Storm Water Permitting Strategy in February, 1991, and revised it in February, 1997. Georgia's Phase II Storm Water Permitting Strategy was approved by USEPA in May 2000. In 1994-1995 a total of 58 NPDES permits were issued to large and medium municipal separate storm sewer systems (MS4s). The 45 NPDES permits

covering the Atlanta metro area were reissued in 1999. The 13 NPDES permits for medium MS4s were reissued in April 2000.

In 1993, a general NPDES permit for storm water associated with industrial activity was issued. This permit was reissued in 1998. There are currently approximately 2500 facilities that have submitted Notices of Intent for coverage under the reissued permit. The general permit for storm water from construction activities was issued in September, 1996, appealed, and eventually overturned by a State Administrative Law Judge in April, 1998. The permit was redrafted and issued in July, 1999 and was subsequently appealed. Settlement negotiations began in October, 1999. A revised general NPDES permit for construction activities was issued on June 12, 2000, and became effective on August 1, 2000. Storm water management is discussed in Chapter 7.

State Revolving Loan Fund. In March 1988, Georgia became the third State in the nation to receive a Capitalization Grant from the USEPA for implementation of the State Revolving Loan Fund. In 2000-2001 more than seventeen million dollars were obligated to communities for wastewater system improvements through the Georgia Environmental Facilities Authority (GEFA) in the form of low-interest, state loans. In addition, Georgia received a total of seven million dollars through federal Capitalization Grants. The revolving loan program is discussed in Chapter 7.

Major Issues and Challenges

The key issues and challenges to be addressed now and in the future years include (1) the control of toxic substances, (2) the reduction of nonpoint source pollution, (3) the need to increase public involvement in water quality improvement projects, and (4) a sustainable supply of potable water. The implementation of the River Basin Management Planning program in Georgia provides a framework for addressing each of the key issues.

The reduction of toxic substances in rivers, lakes, sediment and fish tissue is extremely important in protecting both human health and aquatic life. The sources are widespread. The most effective method to reduce releases of toxic substances into rivers is pollution prevention which consists primarily of eliminating or reducing the use of toxic materials or at least reducing the exposure of toxic materials to drinking water, wastewater and stormwater. It is very expensive and difficult to reduce low concentrations of toxic substances in wastewaters by treatment technologies. It is virtually impossible to treat large quantities of stormwater and reduce toxic substances. Therefore, toxic substances must be controlled at the source.

The pollution impact on Georgia streams has radically shifted over the last two decades. Streams are no longer dominated by untreated or partially treated

sewage discharges which resulted in little or no oxygen and little or no aquatic life. The sewage is now treated, oxygen levels have returned and fish have followed. However, another source of pollution is now affecting Georgia streams. That source is referred to as nonpoint and consists of mud, litter, bacteria, pesticides, fertilizers, metals, oils, suds and a variety of other pollutants being washed into rivers and lakes by stormwater. This form of pollution, although somewhat less dramatic than raw sewage, must be reduced and controlled to fully protect Georgia's streams. As with toxic substance control, nonstructural techniques such as pollution prevention and best management practices must be significantly expanded. These include both watershed protection through planning, zoning, buffer zones, and appropriate building densities as well as increased use of stormwater retention ponds, street cleaning and perhaps eventual limitations on pesticide and fertilizer usage.

It is clear that local governments and industries, even with well funded efforts, cannot fully address the challenges of toxic substances and nonpoint source pollution control. Citizens must individually and collectively be part of the solution to these challenges. The main focus is to achieve full public acceptance of the fact that some of everything put on the ground or street ends up in a stream. Individuals are littering, driving cars which drip oils and antifreeze, applying fertilizers and pesticides and participating in a variety of other activities contributing to toxic and nonpoint source pollution. If streams and lakes are to be pollutant free, then some of the everyday human practices must be modified. The GAEPD will be emphasizing public involvement; not only in decision-making but also in direct programs of stream improvement. The first steps are education and adopt-a-stream programs.

Georgia is one of the fastest growing states in the nation. The burgeoning population is making considerable demands on Georgia's ground and surface water resources. The problems and issues are further complicated by the fact that surface water resources are limited in South Georgia and groundwater resources are limited in North Georgia. In some locations, the freshwater resources are approaching their sustainable limits.

CHAPTER 2
River Basin Management Planning

General Background

River Basin Management Planning is the framework used in Georgia to implement water resource protection programs. Georgia has adopted a river basin management planning (RBMP) approach to watershed protection as defined in State law (O.C.G.A. 12-5-520) passed by the Georgia General Assembly in 1992 which requires that the GAEPD develop river basin management plans for the major rivers in Georgia. The law designated the Chattahoochee, Flint, Coosa, and Oconee Rivers as the first basins to be addressed. The law requires each plan include a description of the basin or watershed, identification of local governments in each basin, land use inventories, and a description of plan goals which may include providing environmental education, improving water quality, reducing pollution at the source, improving aquatic habitat, reestablishing native species of fish, restoring and protecting wildlife habitat, and providing recreational benefits. A description of the strategies and measures necessary to accomplish the goals is also to be a part of each management plan. The law also requires a seven person local advisory committee be appointed to provide advice and council to GAEPD during the plan development.

The river basin planning law focuses on surface water quality and provides five years for the development of one river basin plan for each major basin. The program being implemented by the GAEPD and partners provides for updates of each river basin plan on a five year basis thus establishing a long-term vision for the basin planning program. The program also goes beyond the law by incorporating groundwater and water supply/drinking water issues in the basin planning process. This comprehensive approach to water resource management and protection is a cornerstone of Georgia's program for RBMP. The program also provides for the development of the initial plan for each basin on a faster track than envisioned by the law.

The U. S. Environmental Protection Agency provided funding in 1994 for the Cadmus Group, a consultant with experience in basin wide planning, to help GAEPD develop a framework for implementing RBMP in Georgia. The consultant helped facilitate the efforts of a GAEPD workgroup made up of representatives of the Water Protection and Water Resources Branches and the Wildlife Resources Division. The workgroup developed a basin planning cycle, basin plan outline, basin groupings, planning schedules, issue prioritization strategies, task assignments, and resource needs. A number of the initial efforts

of the workgroup are described below. USEPA provided funding in 1997-1999 for Tetra Tech to support the Georgia river basin planning program by helping to facilitate work of the basin planning team in the compilation of the Chattahoochee and Flint River Basin Management Plans in 1997, the Coosa, Tallapoosa, and Oconee River Basin Management Plans in 1998, and work on various stages of the remaining plans in 2001.

Stakeholder Participation

The local advisory committees for the Chattahoochee, Flint, Coosa, and Oconee River Basins were convened in 1993 and consist of a cross section of stakeholder interests, including local governments, agriculture, industry, forestry, environmental groups, and landowners. The four basin committees met together in January, 1994 in a facilitated meeting and finalized the proposed mission statement and goals for the statewide program (Table 2-1). The local advisory committee for the Tallapoosa River was established in 1996. Local advisory committees for the Satilla, St. Marys, Suwannee, and Ochlockonee Rivers were established in 1998 and Savannah and Ogeechee local advisory committees were established in 1999.

In addition to local advisory committees, GAEPD has incorporated stakeholder involvement in the RBMP program. GAEPD envisions stakeholder involvement as one of the key components of the RBMP program. Stakeholder meetings are planned to facilitate public input at important stages of the planning process. GAEPD planned and hosted initial stakeholder meetings in Albany, Griffin, Helen, Atlanta, and Columbus in late 1994, to invite and encourage stakeholder input early in the planning process for the Chattahoochee and Flint River basins. A second and third set of stakeholder meetings were held in these locations in the Chattahoochee and Flint River Basins in 1996 to discuss priority issues and in 1997 to present the final draft plans for review and input. A public hearing was then held in 1997 to formally receive comments on each draft plan. Stakeholder input was used in the formulation of the final plans and the plans were completed in December, 1997. The Chattahoochee and Flint River Basin Management Plans were adopted by the Board of Natural Resources in February, 1998.

In the summer of 1995 initial stakeholder meetings were held in Rome, Cartersville, Dalton, Athens, Dublin, and Carrollton for the Coosa, Oconee, and Tallapoosa River basins. A second and third set of stakeholder meetings were held in the Coosa, Oconee and Tallapoosa in February, 1998 to discuss priority issues and in September, 1998 to present the final draft plans for review and input. A public hearing was also held in September, 1998 to formally receive comments on each draft plan. The stakeholder input was used in the formation,

Table 2-1.
River Basin Management Planning Version, Mission, Goals

What is the VISION for the Georgia RBMP Approach?

Clean water to drink, clean water for aquatic life, and clean water for recreation, in adequate amounts to support all these uses in all river basins in the State of Georgia.

What is the Mission of the Georgia RBMP Approach?

To develop and implement a river basin planning program to protect, enhance, and restore the waters of the State of Georgia, that will provide for effective monitoring, allocation, use, regulation, and management of water resources.

What are the Goals guiding the Georgia RBMP Approach?

1. To meet or exceed local, State, federal laws, rules, and regulations, and be consistent with other applicable plans.
2. To identify existing and future water quality issues, emphasizing nonpoint sources of pollution.
3. To propose water quality improvement practices encouraging local involvement to reduce pollution, and monitor and protect water quality.
4. To involve all interested citizens and appropriate organizations in plan development and implementation.
5. To coordinate with other river plans and regional planning.
6. To facilitate local, State, and federal activities to monitor and protect water quality.
7. To identify existing and potential water availability problems and to coordinate development of alternatives.
8. To provide for education of the general public on matters involving the environment and ecological concerns specific to each river basin.
9. To provide for improving aquatic habitat and exploring the feasibility of reestablishing native species of fish.
10. To provide for restoring and protecting wildlife habitat.
11. To provide for recreational benefits.
12. To identify and protect flood prone areas within each river basin, and encourage local and State compliance with Federal floodplain management guidelines.

[Established January 1994 by a joint basin advisory committee workgroup]

of the final plans and the plans were completed in October, 1998. The Coosa Oconee, and Tallapoosa Plans were adopted by the Board of Natural Resources in November 1998.

Initial stakeholder meetings were held in the Savannah and Ogeechee River basins in January, 1997 in the Satilla, St. Marys, Suwannee and Ochlockonee River basins in January, 1998 and in the Ocmulgee, Oconee, and Altamaha in December, 1998 to solicit early input on problem issues and ideas on monitoring. GAEPD considers stakeholder involvement as a continuous process, not limited to scheduled meetings, and encourages stakeholders to provide input and assistance at any time. In addition to providing input it is likely that stakeholders will play a major role in implementation of non-regulatory water resource protection strategies.

Governmental Agency Partnerships

Federal, State, and Local governments and agencies play a major role in all water resource protection and enhancement programs across Georgia. Creating and supporting governmental partnerships is another guiding principle of the river basin management planning program in Georgia. Initial efforts to foster partnerships culminated in a governmental partners meeting in January, 1995 hosted by GAEPD. Federal, State, and Local government representatives participated in presentations of the national and Georgia watershed protection approaches and discussed ways to work together on RBMP in Georgia. The Georgia Soil and Water Conservation Commission, Natural Resources Conservation Service and the Georgia Forestry Commission are major partners in the planning process and are conducting the basin planning work on agricultural and forestry issues. Two other significant partners are the USEPA and the United States Geologic Survey. Local governments throughout Georgia play a pivotal role in the protection and enhancement of water resources. One major project (described later) involving a number of agencies s the delineation of watersheds within each river basin in Georgia.

Major River Basins

The major river basins provide the geographical framework and focus for RBMP. Fourteen major river basins have been defined in the State of Georgia and are shown on Figure 2-1. These river basins are the Altamaha, Chattahoochee, Coosa, Flint, Ochlockonee, Ocmulgee, Oconee, Ogeechee, Saint Marys, Satilla, Savannah, Suwannee, Tallapoosa, and Tennessee. River basin management plans will be prepared for each of these major river basins. State regulatory programs and support activities, normally allocated statewide, will be

FIGURE 2-1
MAJOR RIVER BASINS IN GEORGIA

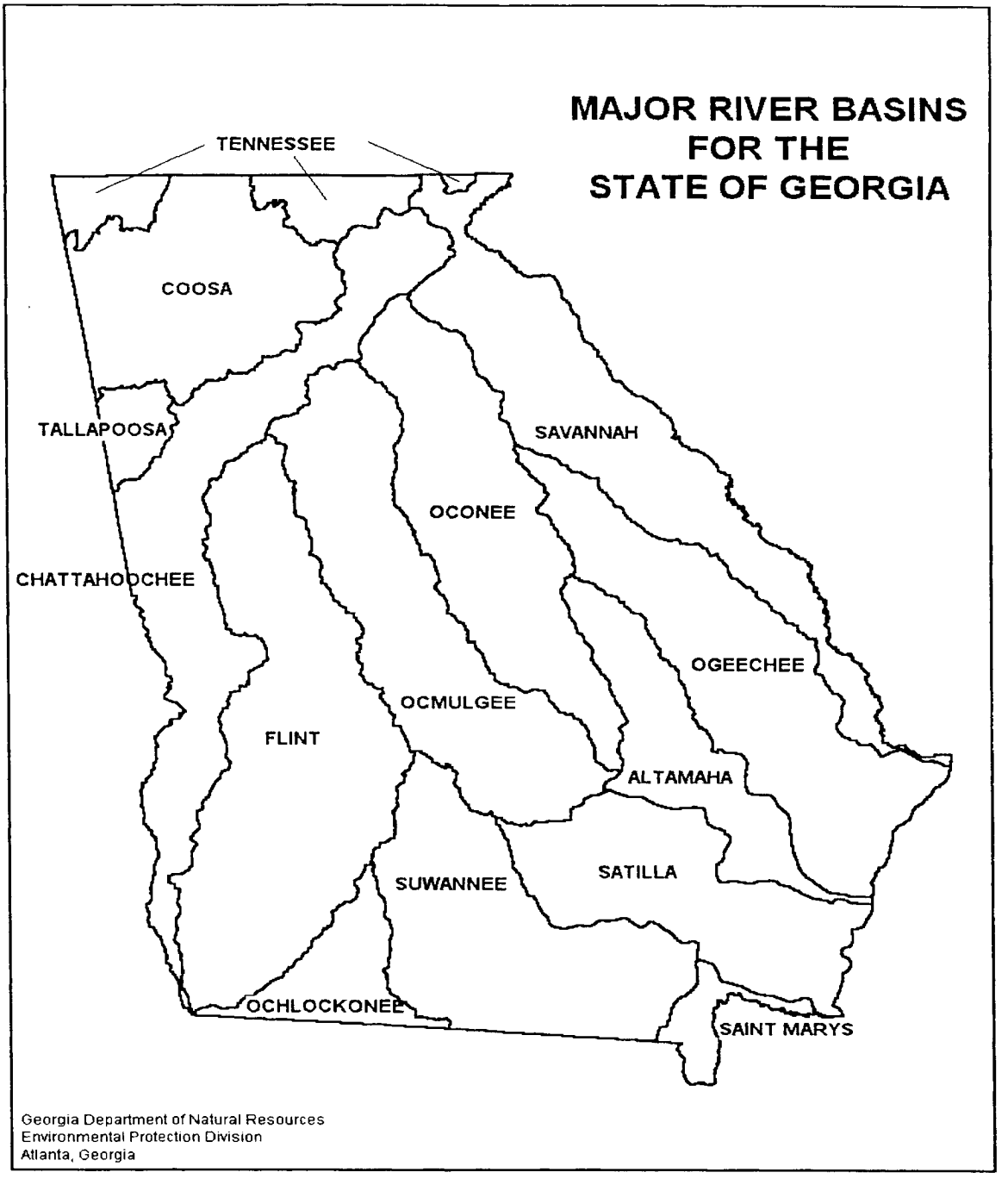
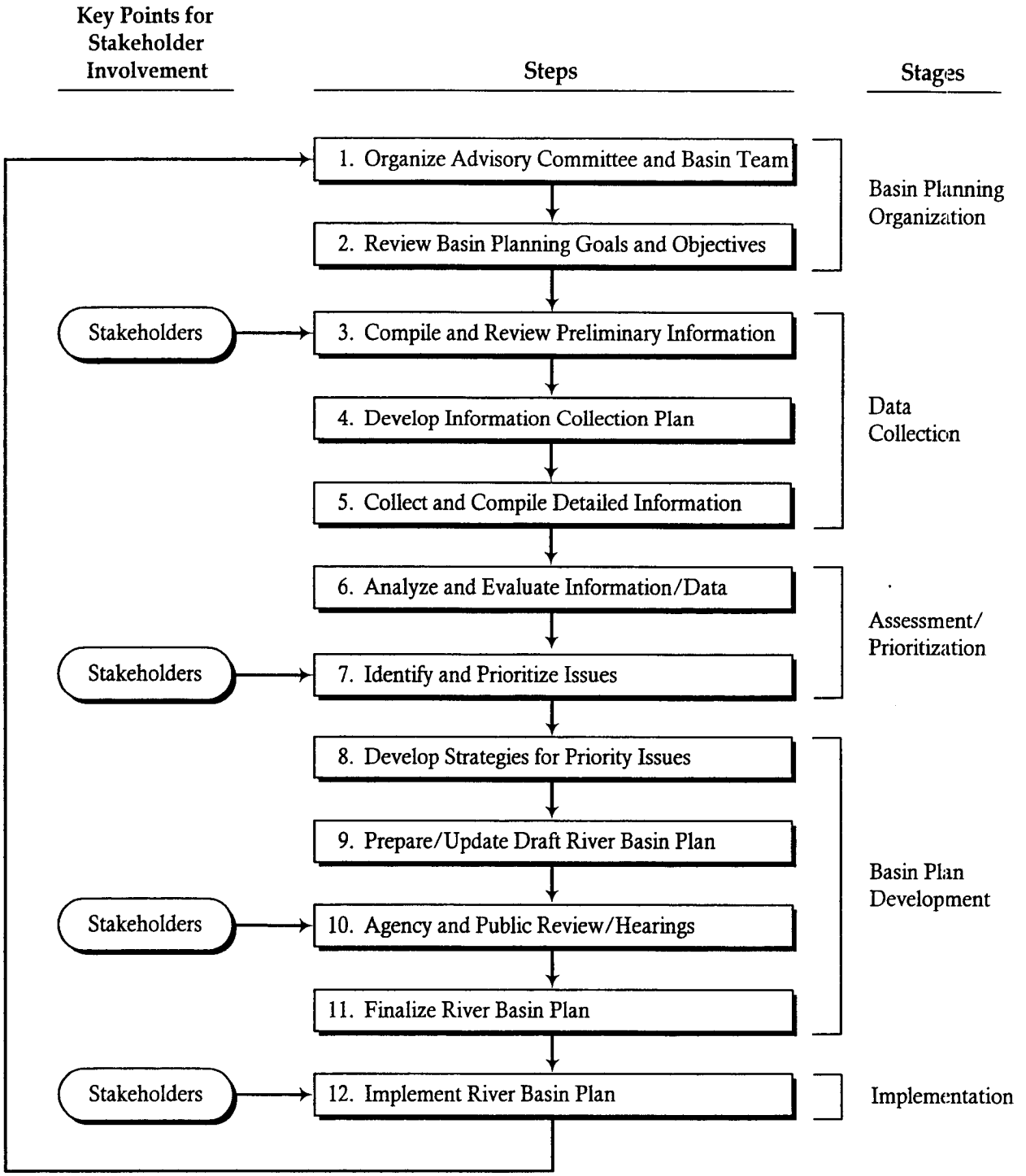


FIGURE 2-2. RIVER BASIN MANAGEMENT PLANNING CYCLE



focused in each major river basin on a rotating schedule to achieve the following objectives:

- Facilitate efficient use of limited financial and personnel resources for water resource activities.
- Provide opportunities for intergovernmental resource sharing.
- Improve spatial detail of water quality assessments resulting from increased monitoring coverage within river basins (a set of core trend monitoring sites will be maintained statewide).
- Improve basic knowledge of the watershed as well as cumulative impacts within a watershed.
- Provide a framework for centralized data management.
- Improve opportunities for management strategy implementation by increasing stakeholder involvement within the watershed.
- Provide consistent and integrated decision making for water resource issues.

Focusing State regulatory programs on basins represents an alternative approach to water resources management in the State of Georgia.

River Basin Management Planning Cycle

A RBMP cycle (Figure 2-2) has been developed to provide the process for the development and implementation of river basin management plans. The RBMP cycle consists of twelve elements organized into five phases designed to develop and implement RBMP over a five year period. The objectives of the individual cycle elements are described on the following pages.

1. Organize River Basin Advisory Committee. Public participation or stakeholder involvement is an important aspect of the program. The river basin management planning law requires the Director of GAEPD to appoint at least seven citizens and a chairman to a local advisory committee to provide advice and counsel to the Director during the development of the management plans.

   In addition to the local advisory committee, basin stakeholders will be encouraged to participate in developing and implementing the river basin management plan. GAEPD will host meetings to familiarize the stakeholders with the progress of the individual basin plans and seek input on issues and actions at important points in the planning process.

2. Review River Basin Management Goals and Objectives. The overall Mission, Goals, and Objectives for RBMP were drafted by GAEPD in 1993. In January, 1994, GAEPD hosted a combined meeting of the local advisory committees for the Chattahoochee, Flint, Coosa, and Oconee River basins for the purpose of reviewing and reaching consensus on the Mission, Goals, and Objectives. These goals and objectives will be reviewed in the initial steps of each basin planning cycle and goals and objectives specific to the individual basin may be added.

   **Stakeholder Involvement* will be encouraged at this point in the cycle to introduce RBMP and receive information and comments from all interested stakeholders, and to solicit input on water resource issues in the river basin. The major objective of this initial stakeholder involvement is to encourage early involvement in the RBMP process.

3. Compile and Review Preliminary Information/Data. Readily available information and data will be compiled and analyzed to begin characterizing each river basin. This initial information and data review will help identify deficiencies in the available information, and provide input to the strategic monitoring plan and future RBMP activities.

4. Develop and Implement Monitoring Plan. A strategic monitoring plan will be implemented to collect data to characterize basin water quality and to monitor the effectiveness of river basin management actions or implementation strategies. The monitoring plan will be developed based on watershed units, review of preliminary information/data, and stakeholder recommendations. The plan will describe specific station locations, water quality parameters, and sampling frequency.

Some water resource issues may require detailed assessments to evaluate the magnitude and define causal relationships. Such detailed assessments or intensive surveys, may include water availability and use studies, assimilative capacity studies, Total Maximum Daily Load (TMDL) evaluations, or use attainment studies.

5. Compile Detailed Information/Data. Existing information and data of varying types will be available for each basin. GAEPD will use its information resources and databases, and request information from other agencies, organizations, and stakeholders where appropriate. Information and data will be sought for basin characterization (e.g., land use, hydrology, water availability, population and demographics, water supply demand, economics, water quality, resource manage-ment). Information

and data collected for each river basin may be entered into databases and GIS coverages to facilitate its longterm management.

6. Analyze and Evaluate Information/Data. Analysis of basin wide monitoring data and stakeholder information will focus on issue identification and resource management strategies. Information and data limitations will be identified so that initial findings can be appropriately qualified. Some assessment and quantification of water availability and use requirements, loading estimates, and assimilative capacity may be performed to develop causal relationships.

7. Identify Issues and Prioritize Watersheds. Basin wide water resource issues identified during the initial stakeholder involvement and those identified during the monitoring, information/data collection, and analysis will be prioritized. GAEPD will develop methods for prioritizing river basin water resource issues, and identify those needing corrective actions. The priority issues identified during the RBMP process may require additional study to facilitate decision making. A variety of assessment tools such as numerical modeling may be used. The results of the assessments will be factored into the management strategies for the particular priority issue.

   **Stakeholder Involvement* will be encouraged at this point in the RBMP cycle to receive input on the water resource issues and priorities.

8. Develop Strategies For Priority Watersheds. GAEPD will propose strategies to address the issues identified in the river basin. Potential strategies include water supply alternatives, point source and nonpoint source controls, best management practices, stormwater management, erosion and sedi-ment control, and habitat restoration. Where applicable, strategies will be evaluated for their effectiveness in achieving water resource goals using predictive modeling or other methods. Regulatory constraints and procedures will be considered and stakeholder cooperation will be encouraged where voluntary efforts are needed to meet water supply and water quality goals.

9. Prepare/Update Draft River Management Basin Plan. GAEPD will prepare a draft river basin management plan documenting the results of the planning process including a comprehensive basin characterization including information on data collected, analyses results and the methods used, issue identification and prioritization, water resource management goals, and management and implementation strategies. For successive river basin management plans, the existing plan will be updated to reflect plan progress and changing conditions in the river basin.

10. Agency and Public Review/Meetings. The draft river basin management plan will be distributed to the local advisory committee, the governmental partners, and made accessible to interested stakeholders. Stakeholder meetings will be conducted to explain the content of the river basin management plan and to solicit stakeholder comments and recommendations to the plan.

    **Stakeholder Involvement* will be encouraged at this point in the RBMP process to obtain comments and recommendations on the plan.

11. Finalize River Basin Management Plan. Appropriate modifications will be made to the draft river basin management plan based on the comments and recommendations received during the review process. The final plan will be reviewed and adopted by the Board of the Georgia Department of Natural Resources.

12. Implement River Basin Management Plan. The RBMP cycle concludes with the implementation of management strategies. Potential activities during this period may include TMDL implementation, National Pollutant Discharge Elimination System (NPDES) point source and stormwater permitting activities, surface water and groundwater withdrawal permitting, nonpoint source best management practices implementation, voluntary self-monitoring programs, adopt-a-stream programs, compliance monitoring, and enforcement actions. GAEPD will consider implementation strategies that are both within its regulatory capacity, and those that will be voluntary.

    **Stakeholder Involvement* will be encouraged to support and implement the river basin management plan strategies. Some management strategies may be voluntary and their successful implementation can only be achieved by the appropriate stakeholders.

River Basin Groups and Planning Schedule

The major river basins previously described have been organized into five groups for RBMP. Grouping was necessary to accomplish the following:

- Complete river basin management plans for each major river basin in a timely manner.
- Repeat RBMP activities in each basin every five years.
- Coordinate NPDES permitting (including wasteload allocations) which has a five year renewal period.

The five river basin groups are shown in Figure 2-3 and are: Chattahoochee-Flint, Coosa-Tallapoosa-Tennessee, Oconee-Ocmulgee-Altamaha, Savannah-Ogeechee, and Suwannee-Satilla, Ochlockonee-Saint Marys. These river basin groups were determined based on river basin location, contributing drainage, physiographic features, and related water resource issues. The basin groups are critical to the scheduling of RBMP efforts.

A schedule (Figure 2-4) has been developed to complete plans for each major river basin and to establish a longterm basin planning process involving detailed reassessments of each river basin on a five year rotating basis. For instance, the initial Chattahoochee and Flint River basin plans were completed in 1997. These basins will be reassessed beginning in 1999. Similarly, plan implementation for each river basin will be based on a rotating schedule. This approach will provide needed long-term perspectives and a defined schedule. This is a key issue, since the long-term, defined schedule offers the opportunity for many governmental agencies and stakeholders to plan partnerships and participation in the planning and implementation processes.

The initial scheduling process was complicated by several issues. First, the State law requires plans for the Coosa and Oconee River basins, which are in different basin groups (as previously defined), be the second set of plans to be started. Second, there was a significant opportunity to coordinate Georgia's RBMP work with the ongoing Tri-State (Alabama, Florida, Georgia)/U. S. Army Corps of Engineers (USACE) Comprehensive Study of the Alabama-Coosa-Tallapoosa and Appalachicola - Chattahoochee - Flint (ACT-ACF) basins which involves the Chattahoochee, Flint, Coosa, and Tallapoosa River basins. Thus, the Tallapoosa River basin plan was scheduled with the Coosa and Oconee River basin plans. However, program resources were not adequate to develop plans for the Tennessee, Ocmulgee, and Altamaha River basins at the same time. Third, an additional objective is to coordinate planning work with South Carolina on the Savannah River basin. In addition, the USACE, in coordination with other Federal agencies, planned to initiate a Comprehensive Study of the Savannah River basin in 1997. Thus, the schedule placed the Savannah and Ogeechee River basins in the rotation beginning in 1996. Scheduling Georgia's RBMP to coincide with these other basin initiatives provides opportunities for resource, data, and information sharing. As shown in the schedule, once the initial complications are worked out, the program will converge into a long term rotating schedule. The schedule also shows beginning in 2000 RBMP will be ongoing in all river basins in Georgia.

It should be noted that under the scheduling provisions of the RBMP law it would take approximately sixteen years to complete the plans for all fourteen river basins. The schedule proposed by the GAEPD provides for the fourteen plans to

FIGURE 2-3
MAJOR RIVER BASIN GROUPS FOR
RIVER BASIN MANAGEMENT PLANNING

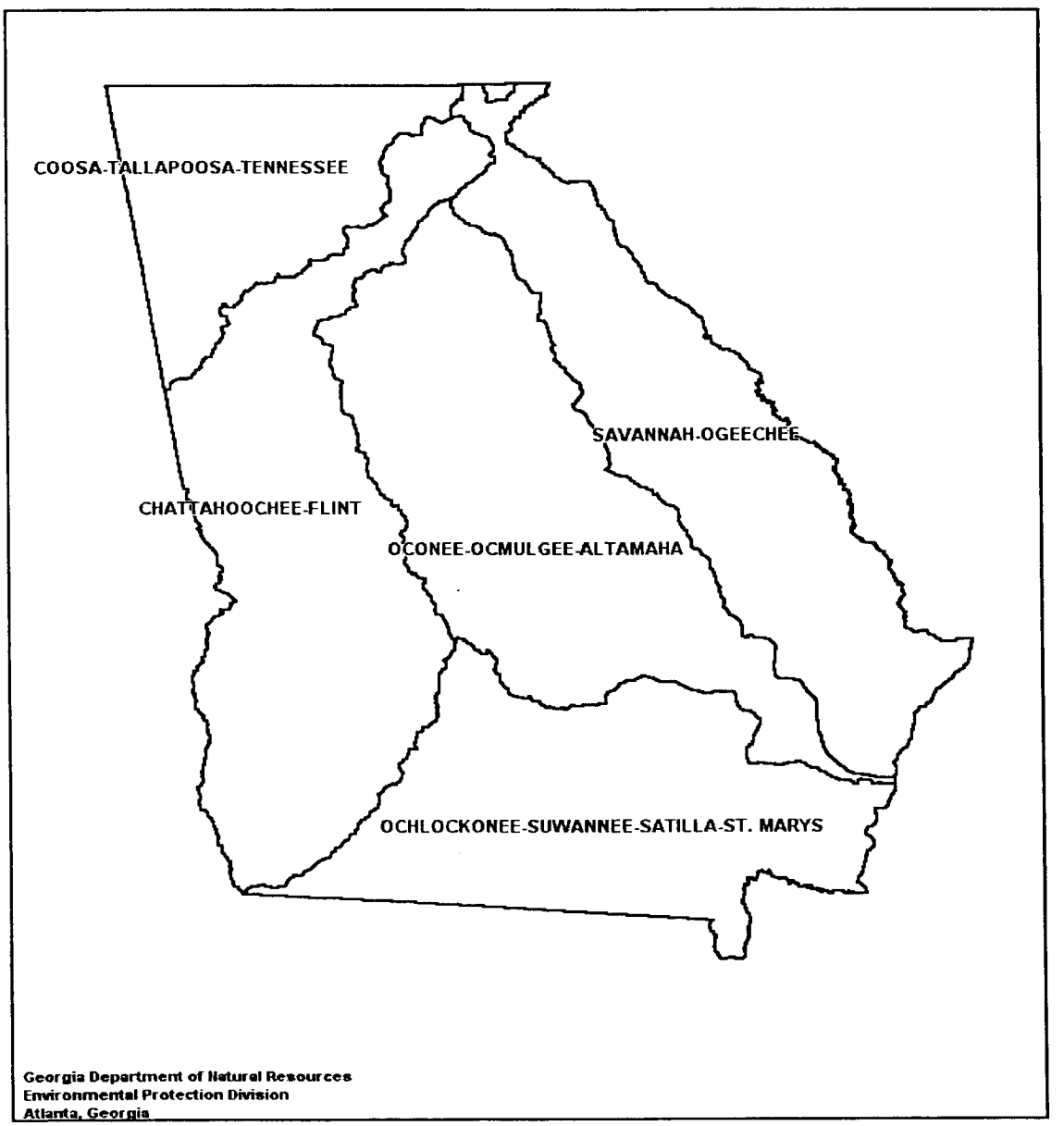
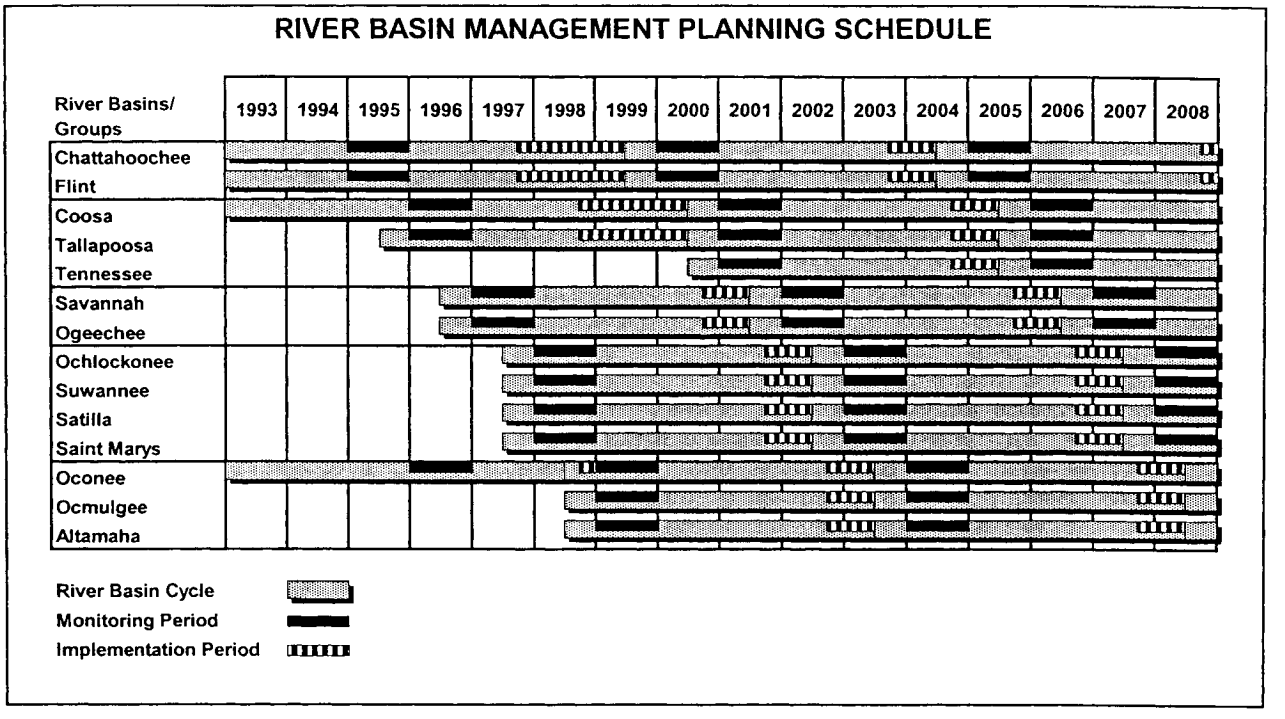


FIGURE 2-4
RIVER BASIN MANAGEMENT PLANNING SCHEDULE



be completed in approximately ten years. Secondly, the law does not require the river basin plans to be updated on a rotating basis as is currently planned by the GAEPD.

CHAPTER 3

Surface Water Quality Monitoring And Assessment

Background

Water Resources Atlas. In an effort to move toward national consistency in estimating river miles and lake acreage, the U.S. Environmental Protection Agency in cooperation with the U.S. Geological Survey (USGS) developed and provided to the States in 1992 new estimates for use in this report. The estimates were based on the USGS 1:100,000 Digital Line Graph (DLG) which provides the first national database of hydrologic traces. The DLG in coordination with the USEPA River Reach File provided a consistent computerized methodology for summing river miles and lake acreage for each State. The estimates are based on hydrologic features on the USGS 1:100,000 scale map series. The 1:100,000 scale map series is the most detailed scale available nationally in digital form and includes 75 to 90 percent of the hydrologic features on the USGS 1:24,000 scale topographic map series. Included in river mile estimates are perennial streams (streams that flow all year), intermittent streams (streams that stop flowing during dry weather), and ditches and canals (waterways constructed by man). Since 1992, USEPA enhanced the database from which the original estimates were made. The miles of streams were reduced by nearly 1,000 miles while the total acreage estimate for lakes increased by nearly 4000 acres.

The estimates for Georgia which are used in this report are 44,056 miles of perennial streams, 23,906 miles of intermittent streams, and 603 miles of ditches and canals for a total of 70,150 geological stream miles. The information provided by the USEPA estimates the number of lakes in Georgia to be 11,813 with a total acreage of 425,382. This information is summarized in Table 3-1.

Georgia has 14 major river basins. These are the Altamaha, Chattahoochee, Coosa, Flint, Ochlockonee, Ocmulgee, Oconee, Ogeechee, St. Marys, Satilla, Savannah, Suwannee, Tallapoosa, and the Tennessee (Figure 2-1). The rivers in Georgia provide the water needed by humans and animals to sustain life. Water also provides significant recreational opportunities, is used for industrial purposes, drives turbines to provide electricity, and assimilates our wastes.

Water Use Classifications and Water Quality Standards. The Board of Natural Resources was authorized through the Rules and Regulations for Water Quality Control promulgated under the Georgia Water Quality Control Act of 1964, as amended, to establish water use classifications and water quality standards for the waters of the State. The water use classifications and standards were first established by the

TABLE 3-1. WATER RESOURCES ATLAS

State Population	8,383,915
State Surface Area	58,910 square miles
Number of Major River Basins	14
Number of Perennial River Miles	44,056 miles
Number of Intermittent River Miles	23,906 miles
Number of Ditches and Canals	603 miles
Total River Miles	70,150 miles
Number of Lakes Over 500 Acres	48
Acres of Lakes Over 500 Acres	265,365 acres
Number of Lakes Under 500 Acres	11,765
Acres of Lakes Under 500 Acres	160,017 acres
Total Number of Lakes & Reservoirs, Ponds	11,813
Total Acreage of Lakes, Reservoirs, Ponds	425,382 acres
Square Miles of Estuaries	854 square miles
Miles of Coastline	100
Acres of Freshwater Wetlands	4,500,000 acres
Acres of Tidal Wetlands	384,000 acres

Georgia Water Quality Control Board in 1966. Georgia was the second State in the nation to have its water use classifications and standards for intrastate waters approved by the federal government in 1967. For each water use classification, water quality standards or criteria were developed which established a framework to be used by the Water Quality Control Board and later the Environmental Protection Division in making water use regulatory decisions. The water use classification system was applied to interstate waters in 1972 by the GAEPD. Georgia was again one of the first states to receive federal approval of a statewide system of water use classifications and standards. Table 3-2 provides a summary of water use classifications and criteria for each use.

In the latter 1960s through the mid-1970s there were many water quality problems in Georgia. Many stream segments were classified for the uses of navigation, industrial, or urban stream. Major improvements in wastewater treatment over the years have allowed the stream segments to be raised to the uses of fishing or coastal fishing which include more stringent water quality standards. The final two segments in Georgia were upgraded as a part of the triennial review of standards completed in 1989. All of Georgia's waters are currently classified as either fishing, recreation, drinking water, wild river, scenic river, or coastal fishing. This action represented the culmination of 25 years of effort to improve and protect water quality in order that all waters in Georgia

TABLE 3-2
GEORGIA WATER USE CLASSIFICATIONS AND INSTREAM WATER QUALITY STANDARDS FOR EACH USE

	Bacteria (fecal coliform)		Dissolved Oxygen (other than trout streams)[1]		pH	Temperature (other than trout streams)[1]	
Use Classification	**30-Day Geometric Mean[2] (no./100 ml)**	**Maximum (no./100ml)**	**Daily Average (mg/l)**	**Minimum (mg/l)**	**Std. Units**	**Maximum Rise (°F)**	**Maximum (°F)**
Drinking Water requiring treatment	1,000 (Nov-April) 200 (May-Oct)	4,000 (Nov-April)	5.0	4.0	6.0-8.5	5	90
Recreation	200 (Freshwater) 100 (Coastal)	--	5.0	4.0	6.0-8.5	5	90
Coastal Fishing[3]							
Fishing	1,000 (Nov-April) 200 (May-Oct)	4,000 (Nov-April)	5.0	4.0	6.0-8.5	5	90
Wild River		No alteration of natural water quality					
Scenic River		No alteration of natural water quality					
Agriculture[4]	5,000	--	--	3.0	6.0-8.5	5	90
Industrial[4]	--	--	--	3.0	6.0-8.5	5	90
Navigation[4]	5,000	--	--	3.0	6.0-8.5	5	90
Urban Stream[4]	2,000	5,000	--	3.0	6.0-8.5	--	--

[1]Standards for Trout Streams for dissolved oxygen are an average of 6.0 mg/l and a minimum of 5.0 mg/l. No temperature alteration is allowed in Primary Trout Streams and a temperature change of 2°F is allowed in Secondary Trout Streams.
[2]Geometric means should be "based on at least four samples collected from a given sampling site over a 30-day period at Intervals not less than 24 hours." The geometric mean of a series of N terms is the Nth root of their product. Example: the geometric mean of 2 and 18 is the square root of 36.
[3]Standards are same as fishing with the exception of dissolved oxygen which is site specific.
[4]Improvements in water quality since the water use classifications and standards were originally adopted in 1972 provided the opportunity for Georgia to upgrade all stream classifications and eliminate these use designations in 1993.

could be classified for uses in accordance with goals in the Federal Clean Water Act which provides for "the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water. This goal had been interpreted by the USEPA to be achieved if waters of the State achieved standards associated with the classifications of fishing (including secondary contact recreation) or recreation. Based on Georgia's progress to achieve this goal, the USEPA had reviewed and approved Georgia standards every three years since 1972.

However, in the 1989 triennial review, the USEPA changed its interpretation of the Clean Water Act goal to include the requirement that all waters be classified to protect the use of swimming or primary contact recreation. In order to comply with this change in Federal requirements, the Board of Natural Resources adopted in December 1989, revised standards which established a fecal coliform standard of a geometric mean of 200 per 100 ml for all waters with the use designations of fishing or drinking water to apply during the months of May - October (the recreational season). This standard provides the regulatory framework to support the USEPA requirement that States protect all waters for the use of primary contact recreation.

In addition, Congress made changes in the Clean Water Act in 1987 which required each State to adopt numeric limits for toxic substances for the protection of aquatic life and human health. In order to comply with these requirements, the Board of Natural Resources adopted 31 numeric standards for protection of aquatic life and 90 numeric standards for the protection of human health. Table 3-3 provides a summary of toxic substance standards that apply to all waters in Georgia.

In 1995, the Board of Natural Resources adopted additional water quality standards for West Point Lake. Additional standards for Lakes Jackson and Walter F. George were adopted in 1996. Standards were adopted for chlorophyll a, pH, total nitrogen, phosphorus, fecal coliform bacteria, dissolved oxygen, and temperature. Also, standards for major tributary phosphorus loading were established. Water quality standards were adopted by the Board for Lakes Lanier and Allatoona in 2000. The standards for the five lakes are summarized in Table 3-4.

Water Quality Monitoring

Goals. The goal of the water protection program in Georgia is to effectively manage, regulate, and allocate the water resources of Georgia. In order to achieve this goal, it is necessary to monitor the water resources of the State to establish baseline and trend data, document existing conditions, study impacts of specific discharges, determine improvements resulting from upgraded water pollution control plants, support enforcement actions, establish wasteload allocations for new and existing facilities, develop TMDLs, verify water pollution control plant compliance, and document water use impairment and reasons for problems causing less than full support of designated water uses. Trend monitoring, intensive surveys, lake, estuary, biological, and toxic substance monitoring, aquatic toxicity testing, and facility compliance sampling are the major monitoring tools used by the GAEPD.

Trend/River Basin/TMDL Monitoring. Long term monitoring of streams at strategic locations throughout Georgia, trend or ambient monitoring, was initiated by the GAEPD during the late 1960s. This work was and continues to be accomplished to a large extent through cooperative agreements with federal, state, and local agencies who collect samples from groups of stations at specific, fixed locations throughout the year.

TABLE 3-3

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 the acute criteria indicated below under 1-day, 10-year minimum flow (1Q10) or higher stream flow conditions and shall not exceed the chronic 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. Unless otherwise specified, the criteria below are listed in their total recoverable form. Because most of the numeric criteria for the metals below are listed as the dissolved form, total recoverable concentrations of metals that are measured instream will need to be translated to the dissolved form in order to compare the instream data with the numeric criteria. This translation will be performed using guidance found in "Guidance Document of Dynamic Modeling and Translators August 1993" found in Appendix J of EPA's Water Quality Standards Handbook: Second Edition, EPA-823-B-94-005a or by using other appropriate guidance from EPA.

		Acute	Chronic
1.	Arsenic		
	(a) Freshwater	340 µg/l [1]	150 µg/l [1]
	(b) Coastal and Marine Estuarine Waters	69 µg/l [1]	36 µg/l [1]
2.	Cadmium		
	(a) Freshwater	2.0 µg/l [1,3]	1.3 µg/l [1,3]
	(b) Coastal and Marine Estuarine Waters	42 µg/l [1]	9.3 µg/l [1]
3.	Chromium III		
	(a) Freshwater	320 µg/l [1,3]	42 µg/l [1,3]
	(b) Coastal and Marine Estuarine Waters	--	--
4.	Chromium VI		
	(a) Freshwater	16 µg/l [1]	11 µg/l [1]
	(b) Coastal and Marine Estuarine Waters	1,100 µg/l [1]	50 µg/l [1]
5.	Copper		
	(a) Freshwater	7.0 µg/l [1,2*,3]	5.0 µg/l [1,2*,3]
	(b) Coastal and Marine Estuarine Waters	4.8 µg/l [1,2]	3.1 µg/l [1,2]
6.	Lead		
	(a) Freshwater	30 µg/l [1,3]	1.2 µg/l [1,2*,3]
	(b) Coastal and Marine Estuarine Waters	210 µg/l [1]	8.1 µg/l [1]
7.	Mercury		
	(a) Freshwater	1.4 µg/l	0.012 µg/l [2]
	(b) Coastal and Marine Estuarine Waters	1.8 µg/l	0.025 µg/l [2]
8.	Nickel		
	(a) Freshwater	260 µg/l [1,3]	29 µg/l [1,3]
	(b) Coastal and Marine Estuarine Waters	74 µg/l [1]	8.2 µg/l [1]
9.	Selenium		
	(a) Freshwater	--	5.0 µg/l
	(b) Coastal and Marine Estuarine Waters	290µg/l [1]	71 µg/l [1]
10.	Silver	-- [4]	-- [4]
11.	Zinc		
	(a) Freshwate	65 µg/l [1,3]	65 µg/l [1,3]
	(b) Coastal and Marine Estuarine Waters	90 µg/l [1]	81 µg/l [1]
12.	Lindane [Hexachlorocyclohexane (g-BHC-Gamma)]		
	(a) Freshwater	0.95 µg/l	
	(b) Coastal and Marine Estuarine Waters	0.16 µg/l	

[1] The in-stream criterion is expressed in terms of the dissolved fraction in the water column . Conversion factors used to calculate dissolved criteria are found in the EPA document – National Recommended Water Quality Criteria – Correction, EPA 822-Z-99-001, April 1999.

[2] The in-stream criterion is lower than the EPD laboratory detection limits (A "*" indicates that the criterion may be higher than or lower than EPD laboratory detection limits depending upon the hardness of the water).
[3] The aquatic life criteria for these metals are expressed as a function of total hardness (mg/l) in a water body. Values in the table above assume a hardness of 50 mg/l CaCO3. For other hardness values, the following equations from the EPA document – National Recommended Water Quality Criteria – Correction, EPA 822-Z-99-001, April 1999 should be used. The minimum hardness allowed for use in these equations shall not be less than 25 mg/l, as calcium carbonate and the maximum shall not be greater than 400 mg/l as calcium carbonate.

Cadmium
acute criteria = $(e^{(1.128[\ln(\text{hardness})] - 3.6867)})(1.136672-[(\ln \text{hardness})(0.041838)]$ µg/l
chronic criteria = $(e^{(0.7852[\ln(\text{hardness})] - 2.715)})(1.101672-[(\ln \text{hardness})(0.041838)]$ µg/l

Chromium III
acute criteria = $(e^{(0.8190[\ln(\text{hardness})] + 3.7256)}(0.316)$ µg/l
chronic criteria = $(e^{(0.8190[\ln(\text{hardness})] + 0.6848)})(0.860)$ µg/l

Copper
acute criteria = $(e^{(0.9422[\ln(\text{hardness})] - 1.700)})(0.96)$ µg/l
chronic criteria = $(e^{(0.8545[\ln(\text{hardness})] - 1.702)})(0.96)$ µg/l

Lead
acute criteria = $(e^{(1.273[\ln(\text{hardness}) - 1.460)})(1.46203 - [(\ln \text{hardness})(0.145712)])$ µg/l
chronic criteria = $(e^{(1.273[\ln(\text{hardness}) - 4.705)})(1.46203 - [(\ln \text{hardness})(0.145712)])$ µg/l

Nickel
acute criteria = $(e^{(0.8460[\ln(\text{hardness})] + 2.255)})(.998)$ µg/l
chronic criteria = $(e^{(0.8460[\ln(\text{hardness})] + 0.0584)})(.997)$ µg/l

Zinc
acute criteria = $(e^{(0.8473[\ln(\text{hardness})] + 0.884)})(0.978)$ µg/l
chronic criteria = $(e^{(0.8473[\ln(\text{hardness})] + 0.884)})(0.986)$ µg/l

[4] 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 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.	Chlordane	
	(a) Freshwater	0.0043 µg/l*
	(b) Coastal and Marine Estuarine Waters	0.004 µg/l*
2.	Cyanide	
	(a) Freshwater	5.2 µg/l*
	(b) Coastal and Marine Estuarine Waters	1.0 µg/l*
3.	Dieldrin	
	(a) Freshwater	0.056 µg/l*
	(b) Coastal and Marine Estuarine Waters	0.0019 µg/l*
4.	4,4'-DDT	0.001 µg/l*
5.	a-Endosulfan	
	(a) Freshwater	0.056 µg/l*
	(b) Coastal and Marine Estuarine Waters	0.0087 µg/l*
6.	b-Endosulfan	
	(a) Freshwater	0.056 µg/l*
	(b) Coastal and Marine Estuarine Waters	0.0087 µg/l*
7.	Endrin	
	(a) Freshwater	0.036 µg/l*
	(b) Coastal and Marine Estuarine Waters	0.0023 µg/l*
8.	Heptachlor	
	(a) Freshwater	0.0038 µg/l*
	(b) Coastal and Marine Estuarine Waters	0.0036µg/l*
9.	Heptachlor Epoxide	
	(a) Freshwater	0.0038 µg/l*

	(b) Coastal and Marine Estuarine Waters	0.0036 µg/l*
10	Pentachlorophenol	
	(a) Freshwater	2.1 µg/l*
	(b) Coastal and Marine Estuarine Waters	7.9 µg/l*
11.	PCBs	
	(a) Freshwater	0.014 µg/l*
	(b) Coastal and Marine Estuarine Waters	0.03 µg/l*
12.	Phenol	300 µg/l
13.	Toxaphene	0.0002 µg/l*

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

(iv) 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	2700 µg/l
2.	Acenaphthylene	**
3.	Acrolein	780 µg/l
4.	Acrylonitrile	0.66 µg/l
5.	Aldrin	0.00014 µg/l
6.	Anthracene	110000 µg/l
7.	Antimony	4300 µg/l
8.	Arsenic	50 µg/l
9.	Benzidine	0.00054 µg/l
10.	Benzo(a)Anthracene	0.049µg/l
11.	Benzo(a)Pyrene	0.049µg/l
12.	3,4-Benzofluoranthene	0.049µg/l
13.	Benzene	71 µg/l
14.	Benzo(ghi)Perylene	**
15.	Benzo(k)Fluoranthene	0.049µg/l
16.	Beryllium	**
17.	a-BHC-Alpha	0.013 µg/l
18.	b-BHC-Beta	0.046 µg/l
19.	Bis(2-Chloroethyl)Ether	1.4 µg/l
20.	Bis(2-Chloroisopropyl)Ether	170000 µg/l
21.	Bis(2-Ethylhexyl)Phthalate	5.9 µg/l
22.	Bromoform (Tribromomethane)	360 µg/l
23.	Butylbenzyl Phthalate	5200
24.	Carbon Tetrachloride	4.4 µg/l
25.	Chlorobenzene	21000 µg/l
26.	Chlorodibromomethane	34 µg/l
27.	2-Chloroethylvinyl Ether	**
28.	Chlordane	0.0022 µg/l
29.	Chloroform (Trichloromethane)	470 µg/l
30.	2-Chloronaphthalene	4300 µg/l
31.	2-Chlorophenol	400 µg/l
32.	Chrysene	0.049 µg/l
33.	Dibenzo(a,h)Anthracene	0.049 µg/l
34.	Dichlorobromomethane	46 µg/l
35.	1,2-Dichloroethane	99 µg/l
36.	1,1-Dichloroethylene	3.2 µg/l
37	1,2 – Dichloropropane	39 µg/l
38.	1,3-Dichloropropylene	1700 µg/l
39.	2,4-Dichlorophenol	790 µg/l
40.	1,2-Dichlorobenzene	17000 µg/l
41.	1,3-Dichlorobenzene	2600 µg/l
42.	1,4-Dichlorobenzene	2600 µg/l
43.	3,3'-Dichlorobenzidine	0.077 µg/l
44.	4,4'-DDT	0.00059 µg/l
45.	4,4'-DDD	0.00084 µg/l
46.	4,4'-DDE	0.00059 µg/l
47.	Dieldrin	0.00014 µg/l

48.	Diethyl Phthalate	120000 µg/l
49.	Dimethyl Phthalate	2900000 µg/l
50.	2,4-Dimethylphenol	2300 µg/l
51.	2,4-Dinitrophenol	14000 µg/l
52.	Di-n-Butyl Phthalate	12000 µg/l
53.	2,4-Dinitrotoluene	9.1 µg/l
54.	1,2-Diphenylhydrazine	0.54 µg/l
55.	Endrin	0.81 µg/l
56.	Endrin Aldehyde	0.81 µg/l
57.	alpha – Endosulfan	240 µg/l
58.	beta – Endosulfan	240 µg/l
59.	Endosulfan Sulfate	240 µg/l
60.	Ethylbenzene	29000 µg/l
61.	Fluoranthene	370 µg/l
62.	Fluorene	14000 µg/l
63.	Heptachlor	0.00021 µg/l
64.	Heptachlor Epoxide	0.00011 µg/l
65.	Hexachlorobenzene	0.00077 µg/l
66.	Hexachlorobutadiene	50 µg/l
67.	Hexachlorocyclopentadiene	17000 µg/l
68.	Hexachloroethane	8.9 µg/l
69.	Indeno(1,2,3-cd)Pyrene	0.049 µg/l
70.	Isophorone	2600 µg/l
71.	Lindane [Hexachlorocyclohexane (g-BHC-Gamma)]	0.063 µg/l
72.	Methyl Bromide (Bromomethane)	4000 µg/l
73.	Methyl Chloride (Chloromethane)	**
74.	Methylene Chloride	1600 µg/l
75.	2-Methyl-4,6-Dinitrophenol	765 µg/l
76.	3-Methyl-4-Chlorophenol	**
77.	Nitrobenzene	1900 µg/l
78.	N-Nitrosodimethylamine	8.1 µg/l
79.	N-Nitrosodi-n-Propylamine	1.4 µg/l
80.	N-Nitrosodiphenylamine	16 µg/l
81.	PCBs	0.00017 µg/l
82.	Pentachlorophenol	8.2 µg/l
83.	Phenanthrene	**
84.	Phenol	4,600,000 µg/l
85.	Pyrene	11,000 µg/l
86.	1,1,2,2-Tetrachloroethane	11 µg/l
87.	Tetrachloroethylene	8.85 µg/l
88.	Thallium	6.3 µg/l
89.	Toluene	200000 µg/l
90.	Toxaphene	0.00075 µg/l
91.	1,2-Trans-Dichloroethylene	140000
92.	1,1,2-Trichloroethane	42 µg/l
93.	Trichloroethylene	81 µg/l
94.	2,4,6-Trichlorophenol	6.5 µg/l
95.	1,2,4-Trichlorobenzene	940 µg/l
96.	Vinyl Chloride	525 µg/l

**These pollutants are addressed in 391-3-6-.06.

(v) 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:

1. Asbestos

(vi) 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.

(f) Applicable State and Federal requirements and regulations for the discharge of radioactive substances shall be met at all times.

TABLE 3-4. WATER QUALITY STANDARDS FOR MAJOR LAKES

(16) **Specific Criteria for Lakes and Major Lake Tributaries**. In addition to the general criteria, the following lake specific criteria are deemed necessary and shall be required for the specific water usage as shown:

(a) West Point Lake: Those waters impounded by West Point Dam and downstream of U.S. 27 at Franklin.

(i) Chlorophyll a: For the months of April through October, the average of monthly photic zone composite samples shall not exceed 27 µg/l at the LaGrange Water Intake.

(ii) pH: Within the range of 6.0 - 9.5.

(iii) Total Nitrogen: Not to exceed 4.0 mg/l as Nitrogen in the photic zone.

(iv) Phosphorus: Total lake loading shall not exceed 2.4 pounds per acre foot of lake volume per year.

(v) Fecal Coliform Bacteria:

1. U.S. 27 at Franklin to New River: Fecal coliform bacteria shall not exceed the Fishing criterion as presented in 391-3-6-.03(6)(c).

2. New River to West Point Dam: Fecal coliform bacteria shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b).

(vi) Dissolved Oxygen: A daily average of 5.0 mg/l and no less than 4.0 mg/l at all times at the depth specified in 391-3-6-.03(5)(f).

(vii) Temperature: Not to exceed 90°F. At no time is the temperature of the receiving waters to be increased more than 5°F above intake temperature.

(viii) Major Lake Tributaries: For the following tributaries, the annual total phosphorus loading to West Point Lake shall not exceed the following:

1.	Yellow Jacket Creek at Hammet Road:	11,000 pounds.
2.	New River at Hwy 100:	14,000 pounds.
3.	Chattahoochee River at U.S. 27:	1,400,000 pounds.

(b) Lake Walter F. George: Those waters impounded by Walter F. George Dam and upstream to Georgia Highway 39 near Omaha.

(i) Chlorophyll a: For the months of April through October, the average of monthly photic zone composite samples shall not exceed 18 ug/l at mid-river at U.S. Highway 82 or 15 ug/l at mid-river in the dam forebay.

(ii) pH: Within the range of 6.0-9.5 standard units.

(iii) Total Nitrogen: Not to exceed 3.0 mg/l as nitrogen in the photic zone.

(iv) Phosphorous: Total lake loading shall not exceed 2.4 pounds per acre-foot of lake volume per year.

(v) Fecal Coliform:

1. Georgia Highway 39 to Cowikee Creek: Fecal coliform bacteria shall not exceed the Fishing criterion as presented in 391-3-6-.03(6)(c)(iii).

2. Cowikee Creek to Walter F. George Dam: Fecal coliform bacteria shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(I).

(vi) Dissolved Oxygen: A daily average of no less than 5.0 mg/l and no less than 4.0 mg/l at all times at the depth specified in 391-3-6-.03(5)(f).

(vii) Temperature: Water temperature shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(iv).

(viii) Major Lake Tributary: The annual total phosphorous loading to Lake Walter F. George, monitored at the Chattahoochee River at Georgia Highway 39, shall not exceed 2,000,000 pounds.

(c) Lake Jackson: Those waters impounded by Lloyd Shoals Dam and upstream to Georgia Highway 36 on the South and Yellow Rivers, upstream to Newton Factory Bridge Road on the Alcovy River and upstream to Georgia Highway 36 on Tussahaw Creek.

(i) Chlorophyll a: For the months of April through October, the average of monthly mid-channel photic zone composite samples shall not exceed 20 ug/l at a location approximately 2 miles downstream of the confluence of the South and Yellow Rivers at the junction of Butts, Newton and Jasper Counties.

(ii) pH: Within the range of 6.0-9.5 standard units.

(iii) Total Nitrogen: Not to exceed 4.0 mg/l as nitrogen in the photic zone.

(iv) Phosphorous: Total lake loading shall not exceed 5.5 pounds per acre-foot of lake volume per year.

(v) Fecal Coliform: Fecal coliform bacteria shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(I).

(vi) Dissolved Oxygen: A daily average of 5.0 mg/l and no less than 4.0 mg/l at all times at the depth specified in 391-3-6-.03(5)(f).

(vii) Temperature: Water temperature shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(iv).

(viii) Major Lake Tributaries: For the following major tributaries, the annual total phosphorous loading to Lake Jackson shall not exceed the following:

1.	South River at Island Shoals:	179,000 pounds
2.	Yellow River at Georgia Highway 212:	116,000 pounds
3.	Alcovy River at Newton Factory Bridge Road:	55,000 pounds
4.	Tussahaw Creek at Fincherville Road.:	7,000 pounds

(d) Lake Allatoona: Those waters impounded by Allatoona Dam and upstream to State Highway 5 on the Etowah River, State Highway 5 on Little River, the Lake Acworth dam, and the confluence of Little Allatoona Creek and Allatoona Creek. Other impounded tributaries to an elevation of 840 feet mean sea level corresponding to the normal pool elevation of Lake Allatoona.

(i) Chlorophyll a: For the months of April through October, the average monthly mid-channel photic zone composite samples shall not exceed the chlorophyll a concentrations at the locations listed below:

1.	Upstream from the Dam	10 ug/l
2.	Allatoona creek upstream form I-75	10 ug/l
3.	Mid-Lake downstream from Kellogg Creek	10 ug/l
4.	Little River upstream from Highway 205	15 ug/l
1.	Etowah River upstream from Sweetwater Creek	12 ug/l

(ii) pH: within the range of 6.0-9.5 standard units

(iii) Total Nitrogen: Not to exceed 4 mg/l as nitrogen in the photic zone.

(iv) Phosphorous: Total lake loading shall not exceed 1.3 pounds per acre-foot of lake volume per year.

(v) Fecal Coliform:

1. Etowah River, State Highway 5 to State Highway 20: Fecal coliform bacteria shall not exceed the Fishing Criterion as presented in 391-3-6-.03(6)(c)(iii).

2. Etowah River, State Highway 20 to Allatoona Dam; Fecal coliform bacteria shall not exceed the Recreation criteria as presented in 391-3-6-.03(6)(b)(i).

(vi) Dissolved Oxygen: A daily average of 5.0 mg/l and no less than 4.0 mg/l at all times at the depth specified in 391-3-6-.03(5)(g).

(vii) Temperature:

1. Etowah River, State Highway 5 to State Highway 20: Water temperature shall not exceed the Fishing criterion as presented in 391-3-6-.03(6)(b)(iv).

2. Etowah River State Highway 20 to Allatoona Dam: Water temperature shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(iv).

(viii) Major Lake Tributaries: For the following major tributaries, the annual total phosphorous loading to Lake Allatoona shall not exceed the following:

1.	Etowah River at State Highway 5 spur and 140, at the USGS gage	340,000 lbs/yr
2.	Little River at State Highway 5 (Highway 754)	42,000 lbs/yr
3.	Noonday Creek at North Rope Mill Road	38,000 lbs/yr
4.	Shoal Creek at State Highway 108 (Fincher Road)	9,200 lbs/yr

(e) Lake Sidney Lanier. Those waters impounded by Buford Dam and upstream to Belton Bridge Road on the Chattahoochee River, 0.6 miles downstream from State Road 400 on the Chestatee River, as well as other impounded tributaries to an elevation of 1070 feet mean sea level corresponding to the normal pool elevation of Lake Sidney Lanier.

(i) Chlorophyll a: For the months of April through October, the average of monthly mid-channel photic zone composite samples shall not exceed the chlorophyll a concentrations at the locations listed below:

1.	Upstream from the Buford Dam forebay	5 ug/l
2.	Upstream from the Flowery Branch confluence	5 ug/l
3.	At Browns Bridge Road (State Road 369)	5 ug/l
4.	At Bolling Bridge (State Road 53) on Chestatee River	10 ug/l
5.	At Lanier Bridge (State Road 53) on Chattahoochee River	10 ug/l

(ii) pH: Within the range of 6.0-9.5 standard units.

(iii) Total Nitrogen: Not to exceed 4 mg/l as nitrogen in the photic zone.

(iv) Phosphorous: Total lake loading shall not exceed 0.25 pounds per acre-foot of lake volume per year.

(v) Fecal Coliform: Fecal coliform bacteria shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(I).

(vi) Dissolved Oxygen: A daily average of 5.0 mg/l and no less than 4.0 mg/l at all times at the depth specified in 391-3--6-.03(5)(g).

(vii) Temperature: Water temperature shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(iv).

(viii) Major Lake Tributaries: For the following major tributaries, the annual total phosphorous loading to Lake Sidney Lanier shall not exceed the following:

1.	Chattahoochee River at Belton Bridge Road	178,000 pounds
2.	Chestatee River at Georgia Highway 400	118,000 pounds
3.	Flat Creek at McEver Road	14,400 pounds

The cooperating agencies conduct certain tests in the field and ship stream samples to the GAEPD or USGS laboratories for additional laboratory analyses. Although there have been a number of changes over the years, much of the trend monitoring is still accomplished through similar cooperative agreements.

Today the GAEPD contracts with the United States Geological Survey (USGS) for the statewide trend sampling work, and with the Columbus Water Works for samples on the Chattahoochee below Columbus. In addition to monthly stream sampling, a portion of the work with the USGS involves continuous monitoring at several locations across the State. Automatic monitors which continuously record dissolved oxygen, temperature, pH and conductivity data are located on the Chattahoochee and South Rivers downstream of Atlanta, the Conasauga River below Dalton, the Coosa River at the State line and the Ocmulgee River downstream of Macon.

In addition to work done through cooperative agreements, GAEPD associates collect monthly samples from a number of locations across the state as part of the trend monitoring program. In 2000-2001 the GAEPD added two trend monitoring sampling teams. One team works from the Brunswick District Office and the second team works from the EPD Atlanta Office. The Brunswick sampling team conducts monthly sampling at more than thirty locations across south Georgia in the Ochlockonee, Suwannee, Satilla, Altamaha, Savannah and Ogeechee River basins. The Atlanta sampling team conducts monthly sampling at sixty stations across the Coosa, Tallapoosa, Chattahoochee, Flint, Oconee and Ocmulgee River basins. The work of the two sampling teams adds significantly to the number of locations sampled each year which compliments the rotating basin trend monitoring program.

The trend monitoring network in place in 1994 is shown in Figure 3-1. In 1995, the GAEPD adopted and implemented significant changes to the strategy for trend monitoring in Georgia. The changes were implemented to support River Basin Management Planning and TMDL programs. The number of fixed stations statewide was reduced in order to focus resources for sampling and analysis in a particular group of basins in any one year in accordance with the basin planning schedule. Statewide trend monitoring was continued at the core station locations, in the Chattahoochee in the Atlanta and Columbus areas, and at all continuous monitoring locations. The remainder of the trend monitoring resources were devoted to the basins of focus each year. As a result, more sampling was conducted along the mainstem and in the smaller tributaries of each river. In 1995 the Chattahoochee and Flint River basins were the basins of monitoring focus and in 1996 the Coosa, Tallapoosa and Oconee. In 1997 the Savannah and Ogeechee River basins were the basins of monitoring focus; in 1998 the Ochlockonee, Suwannee, Satilla, and the St. Marys; in 1999 the Ocmulgee, Oconee, and Altamaha. This completed the initial five year cycle of focused river basin monitoring. In 2000 the cycle was initiated again with the Chattahoochee and Flint River basins followed by the Coosa, Tallapoosa and Tennessee in 2001. Figure 3-2 shows the monitoring network stations for the period 1995-2001. Figures 3-3 and 3-4

FIGURE 3-1
GEORGIA TREND MONITORING NETWORK
STATION LOCATIONS 1994

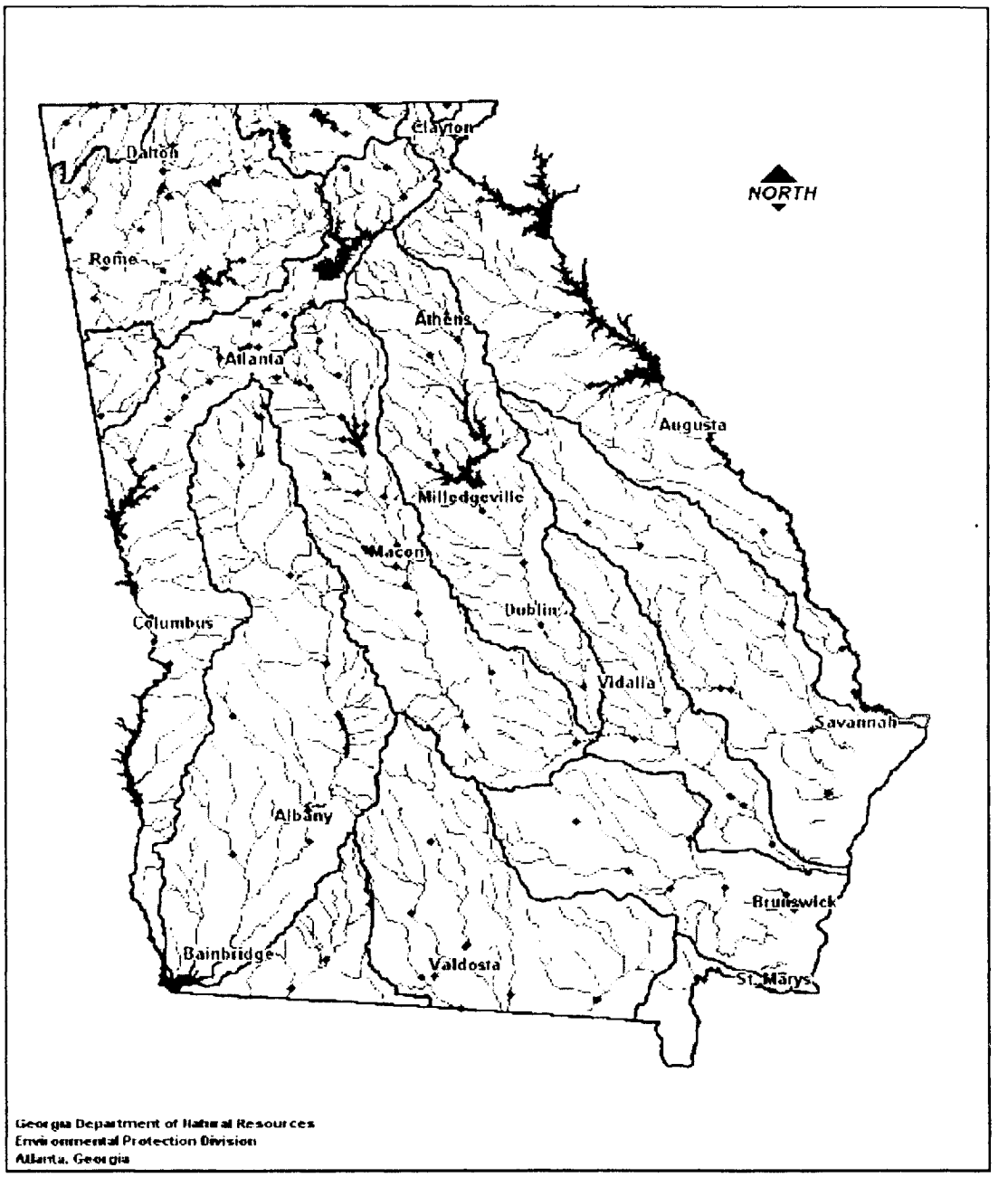
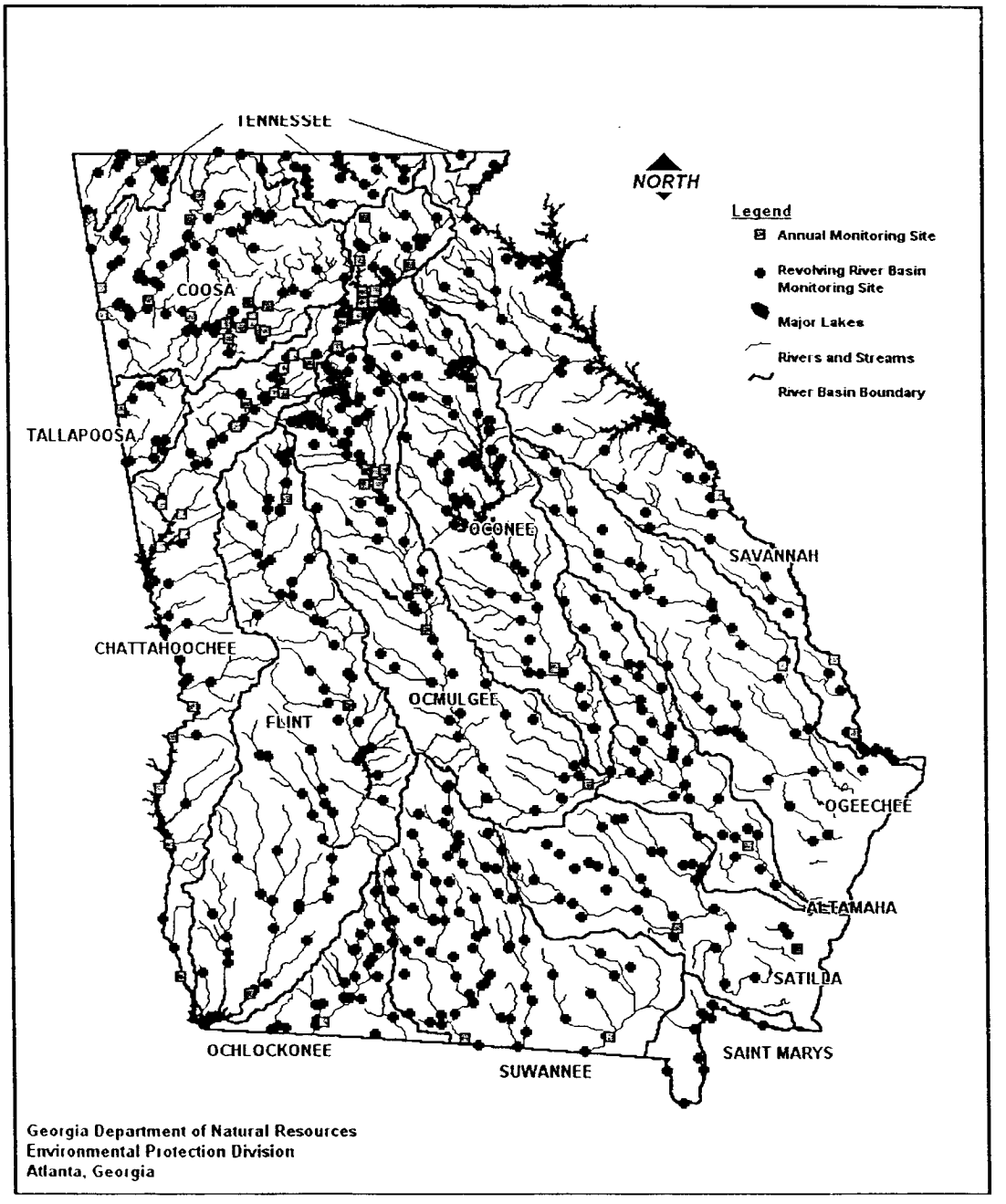


FIGURE 3-2
GEORGIA TREND MONITORING NETWORK
STATION LOCATIONS 1995-2001



show the trend monitoring station locations, and Tables 3-5 and 3-6 provide a list of stations and parameters for the 2000 and 2001 monitoring networks.

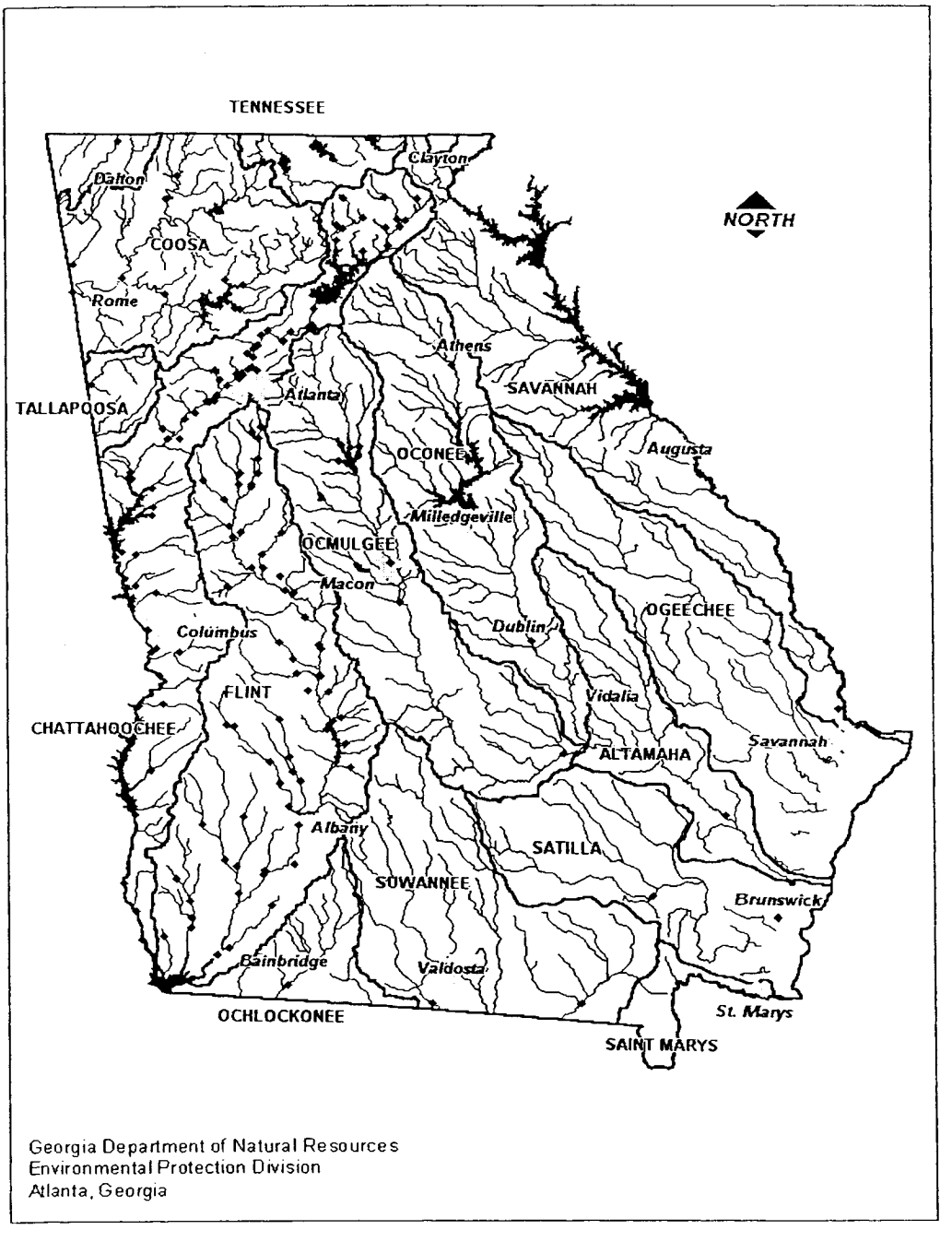
Intensive Surveys. Intensive surveys complement long term fixed station monitoring as these studies focus intensive monitoring on a particular issue or problem over a shorter period of time. Several basic types of intensive surveys are conducted including model calibration surveys and impact studies. The purpose of a model calibration survey is to collect data to calibrate a mathematical water quality model. Models are used for wasteload allocations and/or TMDLs and as tools for use in making regulatory decisions. Impact studies are conducted where information on the cause and effect relationships between pollutant sources and receiving waters is needed. In many cases biological information is collected along with chemical data for use in assessing environmental impacts.

Intensive surveys in 2000-2001 included a model calibration study of Big Indian Creek in Perry and an impact study to document nutrient loading to Blankets Creek, a tributary to the Little River arm of Lake Allatoona. Special studies were conducted in the summer of 2000 at selected locations in the Chattahoochee and Flint River basins in south Georgia as a part of the Southwest Georgia Drought Flow Monitoring Study.

Lake Monitoring. The GAEPD has maintained monitoring programs for Georgia's public access lakes for many years. In the late 1960's, lake water quality studies were conducted on Lake Lanier and Jackson Lake. Also at that time a comprehensive statewide study was conducted to assess fecal coliform levels at public beaches on major lakes in Georgia as the basis for water use classifications and establishment of water quality standards for recreational waters. In 1972, GAEPD staff participated in the USEPA National Eutrophication Survey which included fourteen lakes in Georgia. Additional lake monitoring continued through the 1970s. The focus of these studies was primarily problem/solution oriented and served as the basis for regulatory decisions. Georgia's water quality monitoring network has collected long term data from sites in four major lakes including Lake Lanier, West Point Lake, Lake Harding, and Jackson Lake.

In 1980-1981, the GAEPD conducted a statewide survey of public access freshwater lakes. The study was funded in part by USEPA Clean Lakes Program funds. The survey objectives were to identify freshwater lakes with public access, assess each lake's trophic condition, and develop a priority listing of lakes as to need for restoration and/or protection. In the course of the survey, data and information were collected on 175 identified lakes in 340 sampling trips. The data collected included depth profiles for dissolved oxygen, temperature, pH, and specific conductance, Secchi disk transparency, and chemical analyses for chlorophyll a, total phosphorus, nitrogen

FIGURE 3-3
GEORGIA TREND MONITORING NETWORK
STATION LOCATIONS 2000



Georgia Department of Natural Resources
Environmental Protection Division
Atlanta, Georgia

FIGURE 3-4
GEORGIA TREND MONITORING NETWORK
STATION LOCATIONS 2001

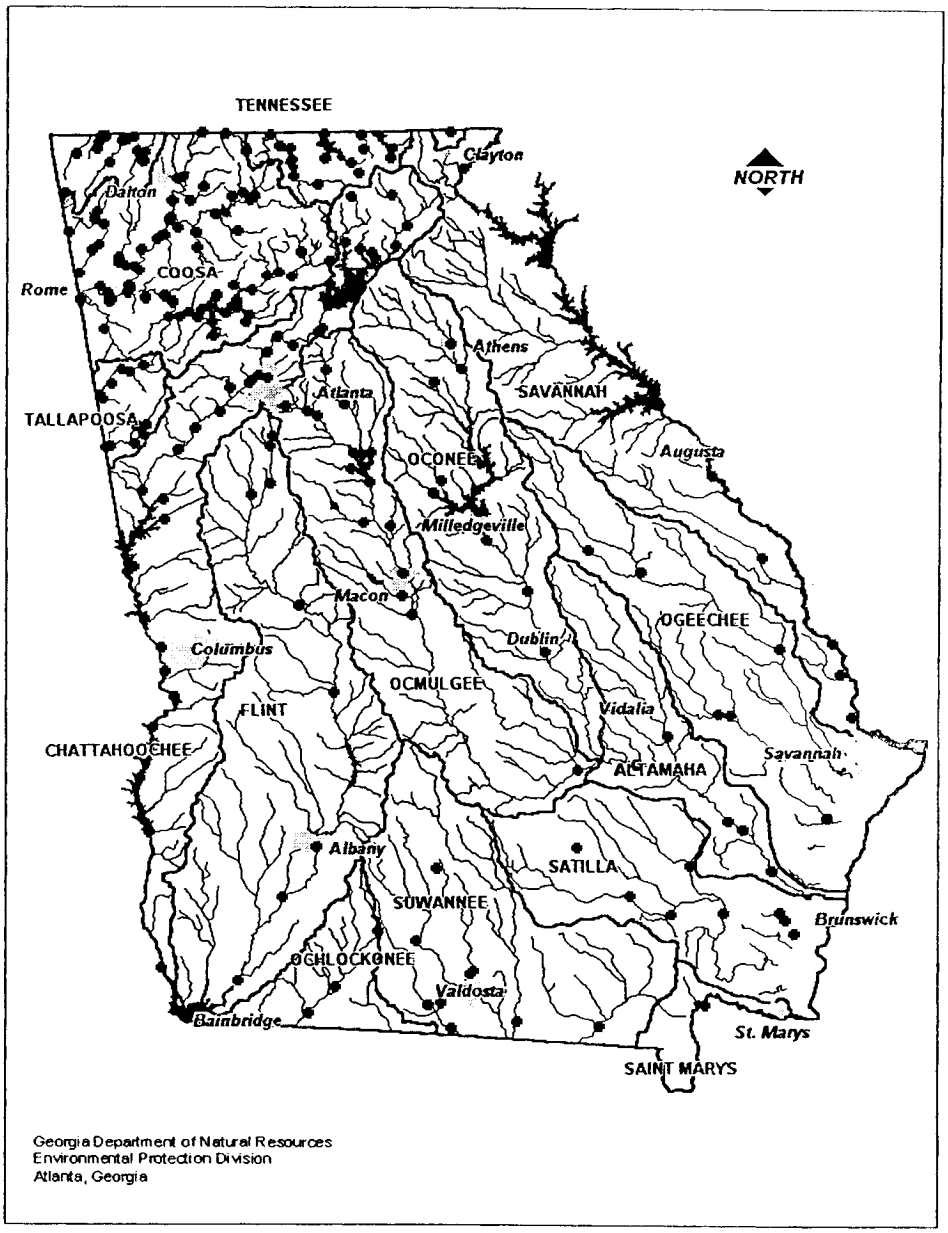


TABLE 3-5. GEORGIA TREND MONITORING NETWORK 2000

STATION NUMBER	LOCATION	TYPE[1]	PARAMETERS[2]
01001001	Chattooga River at U.S. Highway 76 near Clayton, Georgia	C	Standard
01011001	Savannah River at 0.5 Mile Downstream from Spirit Creek near Augusta	C	Standard
01014001	Savannah River at Seaboard Coast Line Railway near Clyo, Georgia	C	Standard
01015001	Savannah River - U.S. Highway 17	C	Standard
02023001	Ogeechee River at State Road 24 near Oliver, Georgia	C	Standard
03035001	Oconee River at FAS 1086 near Watkinsville, Georgia	C	Standard
03051001	Oconee River at Interstate Highway 16 near Dublin, Georgia	C	Standard
04140001	South River at Island Shoals Road near Snapping Shoals, Georgia	A	Standard
04220001	Yellow River at State Road 212 near Stewart, Georgia	C	Standard
04250001	Ocmulgee River - 1.1 Miles Downstream From Yellow and South	C	Standard + Chlorophyll
04310001	Alcovy River at Newton Factory Bridge Road near Stewart, Georgia	C	Standard
04450001	Tussahaw Creek at Fincherville Road near Jackson, Georgia	A	Standard
05010001	Ocmulgee River at Macon Water Intake near Macon, Georgia	C	Standard
05015001	Ocmulgee River - 6.0 Miles D/S from Tobesofkee Creek	C	Standard
05025001	Ocmulgee River at U.S. Highway 341 at Lumber City, Georgia	C	Standard
06016001	Altamaha River - 6.0 Miles Downstream From Doctortown near Gardi	C	Standard
07005801	Brunswick River - U.S. Highway 17	C	Standard
07021001	Satilla River at State Roads 15/121 near Hoboken, Georgia	C	Standard
09001001	Suwannee River at U.S. Highway 441 near Fargo, Georgia	C	Standard
09044501	Withlacoochee River at Clyattville-Nankin Road near Clyattville, Georgia	C	Standard
10017001	Ochlockonee River - Bridge 3.2 Miles North of State Line near Calvary	C	Standard
11011001	Flint River at State Road 138 near Jonesboro, Georgia	BM	Standard, Metals
11013001	Flint River at State Road 54 near Fayetteville, Georgia	BM	Standard, Metals
11013401	Camp Creek at State Road 85 near Fayetteville, Georgia	BM	Standard, Metals
11015001	Flint River at Ackert Road near Inman, Georgia	BM	Standard, Metals
11018001	Flint River at State Road 92 near Griffin, Georgia	C	Standard, Metals
11019801	Wildcat Creek at Moon Road near Griffin, Georgia	BM	Standard, Metals
11020001	Flint River at State Road 16 near Griffin, Georgia	BM	Standard, Metals
11024501	Whitewater Creek at Morgan Mill Road near Brooks, Georgia	BM	Standard, Metals
11025001	Line Creek at State Road 16 near Digbey, Georgia	BM	Standard, Metals
11027201	White Oak Creek at State Road 54 near Sharpsburg, Georgia	BM	Standard, Metals
11028001	White Oak Creek at State Road 85 near Alvaton, Georgia	BM	Standard, Metals
11031201	Red Oak Creek at Harman Hall Road near Imlac, Georgia	BM	Standard, Metals
11031801	Flint River at State Road 18 near Molena, Georgia	BM	Standard, Metals
11032301	Elkins Creek at State Road 109 near Molena, Georgia	BM	Standard, Metals
11035501	Flint River at State Road 36 near Thomaston, Georgia	BM	Standard, Metals
11036501	Lazer Creek at State Road 41 near Talbotton, Georgia	BM	Standard, Metals
11039001	Potato Creek at Alabama Road near Piedmont, Georgia	BM	Standard, Metals
11040001	Potato Creek at State Road 74 near Thomaston, Georgia	BM	Standard, Metals
11041501	Bell Creek at Gordon School Road near Lincoln Park, Georgia	BM	Standard, Metals
11045501	Swift Creek at State Road 3 near Thomaston, Georgia	BM	Standard, Metals
11050001	Flint River at U.S. Highway 19 near Culloden, Georgia	BM	Standard, Metals
11051001	Ulcohatchee Creek at Charlie Reeves Road near Roberta, Georgia	BM	Standard, Metals
11054651	Patsiliga Creek at Patsiliga Creek Bridge Road (CR 128) near Reynolds	BM	Standard, Metals
11056401	Horse Creek at Miona Springs Road near Marshallville, Georgia	BM	Standard, Metals
11056501	Flint River at State Road 127 near Marshallville, Georgia	BM	Standard, Metals
11058401	Whitewater Creek at State Road 3 near Butler, Georgia	BM	Standard, Metals

TABLE 3-5. GEORGIA TREND MONITORING NETWORK 2000

STATION NUMBER	LOCATION	TYPE[1]	PARAMETERS[2]
11058501	Whitewater Creek at State Road 195 near Ideal, Georgia	BM	Standard, Metals
11059801	Buck Creek at State Road 240 near Ideal, Georgia	BM	Standard, Metals
11060001	Flint River at State Roads 26/49 near Montezuma, Georgia	C	Standard, Metals
11060191	Camp Creek at State Road 49 near Oglethorpe, Georgia	BM	Standard, Metals
11060201	Beaver Creek at State Road 49 near Montezuma, Georgia	BM	Standard, Metals
11060501	Hogcrawl Creek at River Road near Montezuma, Georgia	BM	Standard, Metals
11061101	Pennahatchee Creek at Baggs Road near Vienna, Georgia	BM	Standard, Metals
11061201	Turkey Creek at State Road 230 at Drayton, Georgia	BM	Standard, Metals
11061301	Flint River at State Road 27 near Vienna, Georgia	BM	Standard, Metals
11061421	Lime Creek at Spring Hill Church Road near Cobb, Georgia	BM	Standard, Metals
11061901	Gum Creek at U.S. Highway 280 at Coney, Georgia	BM	Standard, Metals
11062771	Swift Creek at Jamestown Road near Warwick, Georgia	BM	Standard, Metals
11064001	Muckalee Creek at State Road 30 near Americus, Georgia	BM	Standard, Metals
11064201	Muckalee Creek at State Road 118 near Smithville, Georgia	BM	Standard, Metals
11064451	Muckaloochee Creek at Smithville Road near Starksville, Georgia	BM	Standard, Metals
11064501	Muckalee Creek at State Road 195 near Leesburg, Georgia	BM	Standard, Metals
11065001	Kinchafoonee Creek at State Road 41 near Preston, Georgia	BM	Standard, Metals
11065501	Lanahassee Creek at State Road 153 near Preston, Georgia	BM	Standard, Metals
11067501	Kinchafoonee Creek at State Road 118 near Smithville, Georgia	BM	Standard, Metals
11068001	Kinchafoonee Creek at Prison Farm Road near Dawson, Georgia	BM	Standard, Metals
11079501	Fowltown Creek at Palmyra Road near Albany, Georgia	BM	Standard, Metals
11090401	Flint River at State Road 234 near Albany, Georgia	BM	Standard, Metals
11101001	Raccoon Creek at State Road 3 near Baconton, Georgia	BM	Standard, Metals
11101801	Cooleewahee Creek at State Road 91 at Newton, Georgia	BM	Standard, Metals
11102001	Flint River at State Road 37 at Newton, Georgia	BM	Standard, Metals
11105501	Pachitla Creek at State Road 37 near Edison, Georgia	BM	Standard, Metals
11106001	Ichawaynochaway Creek at State Road 216 near Milford, Georgia	BM	Standard, Metals
11106201	Chickasawhatchee Creek at State Road 234 near Albany, Georgia	BM	Standard, Metals
11106301	Chickasawhatchee Creek at State Road 37 near Elmodel, Georgia	BM	Standard, Metals
11106501	Ichawaynochaway Creek at State Road 91 near Newton, Georgia	BM	Standard, Metals
11107501	Big Slough at State Road 65 near Camilla, Georgia	BM	Standard, Metals
11107801	Big Slough at State Road 97 near Bainbridge, Georgia	BM	Standard, Metals
11109001	Flint River at U.S. Highway 27-B near Bainbridge, Georgia	BM	Standard, Metals
11430001	Dry Creek at County Road 279 near Hentown, Georgia	BM	Standard, Metals
11450001	Spring Creek at State Road 91 near Colquitt, Georgia	BM	Standard, Metals
11470001	Aycocks Creek at Holmes Road near Boykin, Georgia	BM	Standard, Metals
11490001	Spring Creek near Iron City, Georgia	BM	Standard, Metals
11780501	Fishpond Drain at State Road 39 near Donalsonville, Georgia	BM	Standard, Metals
12010001	Chattahoochee River at State Roads 17/75 near Nacooche, Georgia	BM	Standard, Metals
12020001	Chattahoochee River at State Road 115 near Leaf, Georgia	BM	Standard, Metals
12024001	Soque River at State Road 197 near Clarkesville, Georgia	BM	Standard, Metals
12028001	Soque River at State Road 105 near Demorest, Georgia	BM	Standard, Metals
12030001	Chattahoochee River at Duncan Bridge Road near Cornelia, Georgia	BM	Standard, Metals
12030021	Mossy Creek at State Road 254 near Cleveland, Georgia	BM	Standard, Metals
12030085	Chattahoochee River at Belton Bridge Road near Lula, Georgia	A	Standard, Metals
12030141	West Fork Little River at Jess Helton Road near Clermont, Georgia	BM	Standard, Metals
12030201	Lake Sidney Lanier at Lanier Bridge (SR 53) on Chattahoochee River	A	Standard, Chlorophyll
12033201	Dicks Creek at Forest Service Road 144-1 near Neels Gap, Georgia	C	Standard, Metals
12034681	Tesnatee Creek at County Road 200 near Cleveland, Georgia	BM	Standard, Metals
12035001	Chestatee River at Georgia Highway 52 near Dahlonega, Georgia	BM	Standard, Metals

TABLE 3-5. GEORGIA TREND MONITORING NETWORK 2000

STATION NUMBER	LOCATION	TYPE[1]	PARAMETERS[2]
12035071	Yahoola Creek at State Road 60 near Dahlonega, Georgia	BM	Standard, Metals
12035101	Yahoola Creek at Georgia Highway 52 near Dahlonega, Georgia	BM	Standard, Metals
12035401	Chestatee River at State Road 400 near Dahlonega, Georgia	A	Standard, Metals
12037001	Lake Sidney Lanier at Boling Bridge (State Road 53) on Chestatee River	A	Standard, Chlorophyll
12038001	Lake Sidney Lanier at Browns Bridge Road (State Road 369)	A	Standard, Chlorophyll
12038501	Flat Creek at McEver Road near Gainesville, Georgia	A	Standard, Metals
12039401	Lake Sidney Lanier upstream from Flowery Branch Confluence	A	Standard, Chlorophyll
12040001	Lake Sidney Lanier upstream from the Buford Dam Forebay	A	Standard, Chlorophyll
12043001	Chattahoochee River at State Road 20 near Buford, Georgia	BM	Standard, Metals
12048001	Chattahoochee River at McGinnis Ferry Road	BM	Standard, Metals
12050001	Chattahoochee River - Gwinnett County Water Intake	BM	Standard, Metals
12050301	Suwanee Creek at U.S. Highway 23 near Suwanee, Georgia	BM	Standard, Metals
12054401	Johns Creek at Old Alabama Road near Alpharetta, Georgia	BM	Standard, Metals
12055001	Chattahoochee River - DeKalb County Water Intake	BM	Standard, Metals
12055361	Crooked Creek at Spalding Drive near Norcross, Georgia	BM	Standard, Metals
12060001	Big Creek at Roswell Water Intake near Roswell, Georgia	BM	Standard, Metals
12064001	Willeo Creek at State Road 120 near Roswell, Georgia	RC	Standard, Metals
12070001	Chattahoochee River at Cobb County Water Intake near Roswell	RC	Standard, Metals
12070011	Chattahoochee River at Johnson Ferry Road near Atlanta, Georgia	BM	Standard, Metals
12072101	Sope Creek at Columns Drive near Marietta, Georgia	BM	Standard, Metals
12073201	Long Island Creek at Northside Drive near Atlanta, Georgia	BM	Standard, Metals
12073901	Rottenwood Creek at Interstate North Parkway near Smyrna, Georgia	BM	Standard, Metals
12080001	Chattahoochee River - Atlanta Water Intake	RC	Standard, Metals
12090001	Peachtree Creek at Northside Drive near Atlanta, Georgia	RC	Standard, Metals
12090901	Nancy Creek at West Wesley Road near Atlanta, Georgia	BM	Standard, Metals
12105001	Chattahoochee River - I-285 Upstream from Proctor Creek	RC	Standard, Metals
12105701	Proctor Creek at Northwest Drive near Atlanta, Georgia	BM	Standard, Metals
12106001	Chattahoochee River at Bankhead Highway	BM	Standard, Metals
12109001	Nickajack Creek at Bankhead Highway (U.S. 78) near Mableton, Georgia	BM	Standard, Metals
12109451	Sandy Creek at Bolton Road near Atlanta, Georgia	BM	Standard, Metals
12113051	Utoy Creek at Great Southwest Parkway near Atlanta, Georgia	BM	Standard, Metals
12118001	Sweetwater Creek at Powder Springs Road near Austell, Georgia	BM	Standard, Metals
12120001	Sweetwater Creek at Interstate Highway 20	RC	Standard, Metals
12130001	Chattahoochee River at State Road 166 near Ben Hill, Georgia	BM	Standard, Metals
12134501	Camp Creek at Cochran Road near Fairburn, Georgia	BM	Standard, Metals
12138501	Deep Creek at Cochran Road near Fairburn, Georgia	BM	Standard, Metals
12140001	Chattahoochee River - Georgia Highway 92	RC	Standard, Metals
12140201	Anneewakee Creek at State Road 166 near Douglasville, Georgia	BM	Standard, Metals
12140501	Chattahoochee River at Capps Ferry Road near Rico, Georgia	C	Standard, Metals
12141511	Bear Creek at State Road 70 near Rico, Georgia	BM	Standard, Metals
12145001	Snake Creek at Banning Mill Road near Whitesburg, Georgia	BM	Standard, Metals
12148001	Cedar Creek at Brimer Road near Roscoe, Georgia	BM	Standard, Metals
12150001	Chattahoochee River at State Road 16 near Whitesburg, Georgia	BM	Standard, Metals
12169801	Centralhatchee Creek at U.S. Highway 27 near Franklin, Georgia	BM	Standard, Metals
12170001	Chattahoochee River at U.S. Highway 27 near Franklin, Georgia	A	Standard, Metals
12171201	Hillabahatchee Creek at State Road 34 near Franklin, Georgia	BM	Standard, Metals
12174301	New River at State Road 100 near Corinth, Georgia	A	Standard, Metals
12180001	Chattahoochee River at LaGrange Water Intake near LaGrange, Georgia	A	Standard, Chlorophyll
12181601	Yellow Jacket Creek at Hammet Road near Hogansville, Georgia	A	Standard, Metals
12181801	Beech Creek at Hammett Road near LaGrange, Georgia	BM	Standard, Metals

TABLE 3-5. GEORGIA TREND MONITORING NETWORK 2000

STATION NUMBER	LOCATION	TYPE[1]	PARAMETERS[2]
12190001	Long Cane Creek at Webb Road near West Point, Georgia	BM	Standard, Metals
12200001	Chattahoochee River - 1.0 Mile U/S from U.S. Hwy. 29 near West Point	BM	Standard, Metals
12201301	Flat Shoals Creek at State Road 18 near West Point, Georgia	BM	Standard, Metals
12201901	Mountain Oak Creek at State Road 103 near Hamilton, Georgia	BM	Standard, Metals
12210001	Chattahoochee River - Upstream from Bartletts Ferry Dam	BM	Standard, Metals
12211201	Mulberry Creek at Hamilton-Mulberry Grove Road near Mulberry Grove	BM	Standard, Metals
12212001	Chattahoochee River at Columbus Water Intake near Columbus, Georgia	BM	Standard, Metals
12214651	Bull Creek at U.S. Highway 27 near Columbus, Georgia	BM	Standard, Metals
12216001	Chattahoochee River - Downstream from Columbus WTF	BM	Standard, Metals
12216701	Upatoi Creek at Red Arrow Road (Fort Benning) near Columbus, Georgia	BM	Standard, Metals
12218001	Chattahoochee River - Downstream Oswichee Creek	C	Standard, Chlorophyll
12218901	Hannahatchee Creek at Toby Road near Union, Georgia	BM	Standard, Metals
12219001	Chattahoochee River at Spur 39 near Omaha, Georgia	A	Standard, Metals
12219101	Chattahoochee River/Walter F. George Lake at U.S. Highway 82	A	Standard, Chlorophyll
12219301	Pataula Creek at State Road 50 near Georgetown, Georgia	BM	Standard, Metals
12219501	Chattahoochee River/Walter F. George Lake at Dam Forebay	A	Standard, Chlorophyll
12219601	Chattahoochee River at State Road 37 near Fort Gaines, Georgia	BM	Standard, Metals
12219801	Chattahoochee River at State Road 62 near Hilton, Georgia	BM	Standard, Metals
12220001	Chattahoochee River at U.S. Highway 84 near Alaga, Georgia	BM	Standard, Metals
12230001	Chattahoochee River at State Road 91 near Steam Mill, Georgia	C	Standard, Metals
13030001	Tallapoosa River at U.S. Highway 78 near Tallapoosa, Georgia	A	Standard
14010051	Coosa River at U.S. Highway 76 near Dalton, Georgia	C	Standard
14030001	Conasauga River at Tilton Bridge near Tilton, Georgia	C	Standard
14250001	Oostanaula River at Rome Water Intake near Rome, Georgia	C	Standard
14300001	Etowah River at State Road 5 spur near Canton, Georgia	C	Standard
14300601	Shoal Creek at State Road 108 near Waleska, Georgia	A	Standard
14302001	Lake Allatoona - Off Fields Landing - 44E-45E	A	Standard
14304001	Little River at State Road 5 near Woodstock, Georgia	A	Standard
14304221	Noonday Creek at North Rope Mill Road near Woodstock, Georgia	A	Standard
14304801	Lake Allatoona - Little River Emb - Upstream Highway 205	A	Standard
14305801	Lake Allltoona - North Of Galts Ferry Landing	A	Standard
14307501	Lake Allatoona At Highway 293	A	Standard
14309001	Lake Allatoona 300 Meters Upstream Dam	A	Standard
14330001	Etowah River at FAS 829 near Euharlee, Georgia	C	Standard
14450001	Coosa River at Georgia/Alabama State Line near Coosa, Georgia	C	Standard
14560001	Chattooga River at FAS 1363 near Chattoogaville, Georgia	C	Standard
15090001	West Chickamauga Creek at State Road 146 near Lakeview, Georgia	C	Standard

[1]There are three major types of stations: core(C), annual (A), and basin monitoring (BM).

[2]Standard parameters include gage height, air temperature, water temperature, dissolved oxygen, turbidity, conductivity, BOD5, pH, alkalinity, hardness, ammonia, nitrite+nitrate, phosphorus, TOC, and fecal coliform bacteria.

TABLE 3-6. GEORGIA TREND MONITORING NETWORK 2001

STATION NUMBER	LOCATION	TYPE[1]	PARAMETERS[2]
01001001	Chattooga River at U.S. Highway 76 near Clayton, Georgia	C	Standard
01011001	Savannah River 0.5 Mile d/s from Spirit Creek near Augusta, Georgia	C	Standard
01013001	Brier Creek near Millhaven, Georgia	A	Standard
01014001	Savannah River at Seaboard Coast Line Railway near Clyo, Georgia	C	Standard
01014501	Ebenezer Creek at Half Moon Landing	A	Standard
02010001	Ogeechee River at Georgia Highway 78 near Wadley, Georgia	A	Standard
02011701	Williamson Swamp Creek at Georgia Highway 231	A	Standard
02023001	Ogeechee River at State Road 24 near Oliver, Georgia	C	Standard
02027001	Canoochee River at U.S. Highway 301	A	Standard
02027201	Canoochee River near Daisy, Georgia	A	Standard
02029501	Canoochee River at Georgia Highway 67	A	Standard
02350001	North Newport River at Halfmoon Landing	A	Standard
03015001	North Oconee River - Athens Water Intake	A	Standard
03035001	Oconee River at FAS 1086 near Watkinsville, Georgia	C	Standard
03036701	Apalachee River - Near Bostwick	A	Standard
03041701	Little River at State Road 16 near Eatonton, Georgia	A	Standard
03043401	Murder Creek at New Glenwood Springs Road (FAS 777) nr Eatonton	A	Standard
03045001	Oconee River - Milledgeville Water Intake	A	Standard
03046001	Oconee River - 1 Mile Downstream Central State Hospital	A	Standard
03047501	Oconee River at Georgia Highway 57	A	Standard
03051001	Oconee River at Interstate Highway 16 near Dublin, Georgia	C	Standard
04108001	South River - Bouldercrest Road	A	Standard
04111001	South River - Georgia Highway 155	A	Standard
04111701	South River - Klondike Road	A	Standard
04140001	South River at Island Shoals Road near Snapping Shoals, Georgia	C	Standard
04205001	Yellow River - Killian Hill Road	A	Standard
04210001	Yellow River - Conyers Water Intake	A	Standard
04220001	Yellow River at State Road 212 near Stewart, Georgia	C	Standard
04310001	Alcovy River at Newton Factory Bridge Road near Stewart, Georgia	C	Standard
04350051	Lake Jackson – Confluence of South, Alcovy & Yellow Rivers	A	Standard, Chlorophyll
05005001	Ocmulgee River - Georgia Highway 16	A	Standard
05007001	Towaliga River - Georgia Highway 83	A	Standard
05007501	Falling Creek - FAS 1640 Near East Juliet	A	Standard
05010001	Ocmulgee River at Macon Water Intake near Macon, Georgia	C	Standard
05013601	Tobesofkee Creek - U.S. Highways 41 and 129	A	Standard
05015001	Ocmulgee River - 6.0 Miles D/S from Tobesofkee Creek near Warner Robins	C	Standard
05025001	Ocmulgee River at U.S. Highway 341 at Lumber City, Georgia	C	Standard
06010001	Ohoopee River at Georgia Highway 56	A	Standard
06014001	Altamaha River at U.S. Highway 301	A	Standard
06016001	Altamaha River - 6.0 Miles Downstream From Doctortown near Gardi	C	Standard
06017001	Altamaha River at Seaboard Railway at Everett	A	Standard
07004001	Turtle River off Hermitage Island	A	Standard
07005201	Turtle River at Georgia Highway 303	A	Standard
07005801	Brunswick River at U.S. Highway 17	C	Standard
07016601	Seventeen Mile Creek at Georgia Highway 64	A	Standard
07019001	Satilla River at FAS 598 North of Waycross	A	Standard
07021001	Satilla River at State Roads 15/121 near Hoboken, Georgia	C	Standard
07025001	Little Satilla River at Seaboard Railroad at Offerma	A	Standard
07026001	Satilla River at U.S. Highway 84	A	Standard

TABLE 3-6. GEORGIA TREND MONITORING NETWORK 2001

STATION NUMBER	LOCATION	TYPE[1]	PARAMETERS[2]
08010001	Saint Marys River at U.S. Highway 301	A	Standard
09001001	Suwannee River at U.S. Highway 441 near Fargo, Georgia	C	Standard
09012001	Alapaha River at Georgia Highway 94 nr Statenville	A	Standard
09018301	New River at U.S. Highway 82 near Tifton, Georgia	A	Standard
09029501	Withlacoochee River at McMillian Road near Bemiss, Georgia	A	Standard
09036001	Withlacoochee River at Georgia Highway 94	A	Standard
09038401	Indian Creek at FAS 1753 near Berlin, Georgia	A	Standard
09040001	Withlacoochee River at U.S. Highway 84	A	Standard
09042001	Okapilco Creek at U.S. Highway 84	A	Standard
09044501	Withlacoochee River at Clyattville-Nankin Road near Clyattville, Georgia	C	Standard
10003001	Ochlockonee River at FAS 1205 near Moultrie, Georgia	A	Standard
10010001	Ochlockonee River at U.S. Highway 84	A	Standard
10017001	Ochlockonee River - Bridge 3.2 Miles North of State Line near Calvary	C	Standard
11011001	Flint River at State Road 138 near Jonesboro, Georgia	A	Standard
11013001	Flint River at State Road 54 near Fayetteville, Georgia	A	Standard
11018001	Flint River - Georgia Highway 92	C	Standard
11025001	Line Creek at State Road 16 near Digbey, Georgia	A	Standard
11050001	Flint River at U.S. Highway 19 near Culloden, Georgia	A	Standard
11060001	Flint River - Georgia Highways 26 and 49	C	Standard
11090401	Flint River at State Road 234 near Albany, Georgia	A	Standard
11102001	Flint River at State Road 37 at Newton, Georgia	C	Standard
11109001	Flint River at U.S. Highway 27-B near Bainbridge, Georgia	C	Standard
12010001	Chattahoochee River at State Roads 17/75 near Nacooche, Georgia	A	Standard
12030001	Chattahoochee River at Duncan Bridge Rd. near Cornelia, Georgia (Hwy 384)	A	Standard
12030085	Chattahoochee River at Belton Bridge Road near Lula, Georgia	A	Standard
12030141	West Fork Little River at Jess Helton Rd. near Clermont	A	Standard
12030151	East Fork Little River at Honeysuckle Rd. near Clermont	A	Standard
12030161	Lake Sidney Lanier – Little River Embayment between M1WC & 3LR	A	Standard, Chlorophyll
12030171	Wahoo Creek at Ben Parks Road near Murrayville, GA	A	Standard
12030201	Lake Sidney Lanier at Lanier Bridge (SR 53) on Chattahoochee River	A	Standard, Chlorophyll
12033201	Dicks Creek at Forest Service Road 144-1 near Neel Gap, Georgia	C	Standard
12035401	Chestatee River at State Road 400 near Dahlonega, Georgia	A	Standard
12037001	Lake Sidney Lanier at Boling Rd. (SR 53) on Chestatee River	A	Standard, Chlorophyll
12038001	Lake Sidney Lanier at Browns Bridge Rd. (SR 369)	A	Standard, Chlorophyll
12038501	Flat Creek at McEver Road near Gainesville, Georgia	A	Standard
12038610	Balus Creek at McEver Road near Oakwood, Georgia	A	Standard
12038651	Lake Sidney Lanier - Flat Creek Embayment, 100' U/S M7FC	A	Standard, Chlorophyll
12038681	Lake Sidney Lanier – Balus Creek Embayment, 0.34 mi. SE M6FC	A	Standard, Chlorophyll
12038781	Mud Creek at McEver Road near Flowery Branch, GA	A	Standard
12038801	Lake Sidney Lanier – Mud Creek Embayment, between Marina and Ramp	A	Standard, Chlorophyll
12039401	Lake Sidney Lanier upstream from Flowery Branch confluence	A	Standard, Chlorophyll
12039601	Six Mile Creek at Burrus Mill Road near Coal Mountain, GA	A	Standard
12039621	Lake Sidney Lanier – Six Mile Creek Embayment, 300' E M9SM	A	Standard, Chlorophyll
12040001	Lake Sidney Lanier upstream from the Buford Dam Forebay	A	Standard, Chlorophyll
12048001	Chattahoochee River at McGinnis Ferry Road	A	Standard
12055001	Chattahoochee River at DeKalb County Water Intake	A	Standard
12060001	Big Creek at Roswell Water Intake near Roswell, Georgia	A	Standard
12070001	Chattahoochee River at Cobb County Water Intake	C	Standard
12080001	Chattahoochee River at Atlanta Water Intake	A	Standard

TABLE 3-6. GEORGIA TREND MONITORING NETWORK 2001

STATION NUMBER	LOCATION	TYPE[1]	PARAMETERS[2]
12090001	Peachtree Creek at Northside Drive near Atlanta, Georgia	A	Standard
12106001	Chattahoochee River at Bankhead Highway	A	Standard
12120001	Sweetwater Creek at Interstate Highway 20	A	Standard
12140001	Chattahoochee River at Georgia Highway 92	C	Standard
12140501	Chattahoochee River at Capps Ferry Road near Rico, Georgia	A	Standard
12150001	Chattahoochee River at State Road 16 near Whitesburg, Georgia	A	Standard
12170001	Chattahoochee River at U.S. Highway 27 near Franklin, Georgia	A	Standard
12174301	New River at State Road 100 near Corinth, Georgia	A	Standard
12180001	West Point Lake at LaGrange Water Intake near LaGrange, Georgia	C	Standard, Chlorophyll
12181601	Yellow Jacket Creek at Hammet Road near Hogansville, Georgia	A	Standard
12190001	Long Cane Creek at Webb Road near West Point, Georgia	A	Standard
12200001	Chattahoochee River - 1.0 Mile U/S from U.S. Highway 29 near West Point	A	Standard
12210001	Chattahoochee River upstream from Bartletts Ferry Dam	A	Standard
12212001	Chattahoochee River at Columbus Water Intake	A	Standard
12216001	Chattahoochee River d/s from Columbus Wastewater Treatment Plant	A	Standard
12218001	Chattahoochee River downstream from Oswichee Creek near Columbus	C	Standard
12219001	Chattahoochee River at Spur 39 near Omaha, Georgia	A	Standard
12219101	Lake Walter F. George at U.S. Hwy. 82 near Georgetown, Georgia	A	Standard, Chlorophyll
12219501	Lake Walter F. George 300 Meters Upstream Dam	A	Standard, Chlorophyll
12230001	Chattahoochee River at Georgia Highway 91	C	Standard
13010001	Little Tallapoosa River at Georgia Highway 100 near Bowdon, Georgia	BM	Standard, Metals
13012001	Indian Creek at State Line Road near Bowdon, Georgia	BM	Standard, Metals
13013001	Buffalo Creek at Bethesda Church Road near Roopville, Georgia	BM	Standard, Metals
13014101	Buffalo Creek at Martin Cemetery Road near Carrollton, Georgia	BM	Standard, Metals
13015701	Little Tallapoosa River at U.S. Highway 27 near Carrollton, Georgia	BM	Standard, Metals
13017001	Buck Creek at State Road 16 near Carrollton, Georgia	BM	Standard, Metals
13020501	Tallapoosa River at Rockmart Road near Draketown, Georgia	BM	Standard, Metals
13020901	Little River at East Church Road near Buchanan, Georgia	BM	Standard, Metals
13021001	Tallapoosa River at U.S. Highway 27 near Felton, Georgia	BM	Standard, Metals
13028001	Tallapoosa River at Jacksonville Road near Tallapoosa, Georgia	BM	Standard, Metals
13030001	Tallapoosa River at Georgia Highway 8 near Tallapoosa, Georgia	BM	Standard, Metals
13030501	Walker Creek at Providence Church Road near Tallapoosa, Georgia	BM	Standard, Metals
14005951	Jacks River at County Road 187 near Higdon, Georgia	BM	Standard, Metals
14006001	Jacks River at Old Highway 2 near Alaculsy, Georgia	BM	Standard, Metals
14007021	Conasauga River at Carlton Petty Road near Gregory, Georgia	BM	Standard, Metals
14010051	Conasauga River at U.S. Highway 76 near Dalton, Georgia	C	Standard, Metals
14015401	Coahulla Creek at U.S. Highway 76 near Dalton, Georgia	BM	Standard, Metals
14018501	Holly Creek at State Road 61 near Chatsworth, Georgia	BM	Standard, Metals
14020501	Holly Creek at Georgia Highway 225 near Chatsworth, Georgia	BM	Standard, Metals
14030001	Conasauga River at Tilton Bridge near Tilton, Georgia	C	Standard, Metals
14040001	Conasauga River at State Road 136 near Resaca, Georgia	BM	Standard, Metals
14056901	Ellijay River at State Road 5 near Ellijay, Georgia	BM	Standard, Metals
14079011	Cartecay River at State Road 2 Connector near Ellijay, Georgia	BM	Standard, Metals
14109901	Coosawattee River at Georgia Highway 5 near Ellijay, Georgia	BM	Standard, Metals
14115001	Mountaintown Creek at State Road 282 near Ellijay, Georgia	BM	Standard, Metals
14116001	Tails Creek at State Road 282 near Ellijay, Georgia	BM	Standard, Metals
14119301	Carters Lake (CR1) - Upper Lake, Coosawattee Arm	A	Standard, Chlorophyll
14119401	Carters Lake (CR3) - Midlake	A	Standard, Chlorophyll
14119901	Talking Rock Creek at Georgia Highway 136 near Blaine, Georgia	BM	Standard, Metals

TABLE 3-6. GEORGIA TREND MONITORING NETWORK 2001

STATION NUMBER	LOCATION	TYPE[1]	PARAMETERS[2]
14120001	Coosawattee River at U.S. Highway 411 near Carters, Georgia	BM	Standard, Metals
14125001	Pine Log Creek at Georgia Highway 53 near Sonoraville, Georgia	BM	Standard, Metals
14125501	Salacoa Creek at Lovebridge Road NE near Redbud, Georgia	BM	Standard, Metals
14130001	Coosawattee River at State Road 225 near Calhoun, Georgia	BM	Standard, Metals
14220001	Oostanaula River at U.S. Highway 41 near Resaca, Georgia	BM	Standard, Metals
14230031	Oothkalooga Creek at State Road 156 near Calhoun, Georgia	BM	Standard, Metals
14230101	Oostanaula River at Georgia Highway 156 near Calhoun, Georgia	BM	Standard, Metals
14234001	Johns Creek at State Road 156 near Curryville, Georgia	BM	Standard, Metals
14237001	Little Armuchee Creek at Big Texas Valley Road NW near Armuchee, Georgia	BM	Standard, Metals
14237501	Heath Creek at Texas Valley Road NW near Rome, Georgia	BM	Standard, Metals
14238001	Lavendar Creek at Little Texas Valley Road NW near Rome, Georgia	BM	Standard, Metals
14239001	Armuchee Creek at Old Dalton Road near Rome, Georgia	BM	Standard, Metals
14239501	Woodward Creek at Bells Ferry Road NE near Rome, Georgia	BM	Standard, Metals
14250001	Oostanaula River at Rome Water Intake near Rome, Georgia	C	Standard, Metals
14270001	Etowah River at State Road 53 near Dawsonville, Georgia	BM	Standard, Metals
14271001	Amicalola Creek at State Road 53 near Dawsonville, Georgia	BM	Standard, Metals
14281001	Etowah River at Yellow Creek Road near Ball Ground, Georgia	BM	Standard, Metals
14290501	Long Swamp Creek at Conn's Creek Road near Ball Ground, Georgia	BM	Standard, Metals
14295001	Sharp Mountain Creek at State Road 5 near Ball Ground, Georgia	BM	Standard, Metals
14300001	Etowah River at State Road 5 spur near Canton, Georgia	A	Standard, Metals
14300601	Shoal Creek at State Road 108 near Waleska, Georgia	A	Standard, Metals
14302001	Lake Allatoona at Etowah River upstream from Sweetwater Creek	A	Standard, Chlorophyll
14304001	Little River at State Road 5 near Woodstock, Georgia	A	Standard, Metals
14304101	Noonday Creek at Georgia Highway 92 near Woodstock, Georgia	A	Standard, Metals
14304801	Lake Allatoona at Little River upstream from Highway 205	A	Standard, Chlorophyll
14305801	Lake Allatoona downstream from Kellogg Creek	A	Standard, Chlorophyll
14306471	Stamp Creek at State Road 20 near Cartersville, Georgia	BM	Standard, Metals
14307001	Allatoona Creek at Stilesboro Lane near Kennesaw, Georgia	BM	Standard, Metals
14307501	Lake Allatoona at Allatoona Creek upstream from Interstate 75	A	Standard, Chlorophyll
14309001	Lake Allatoona Upstream from Dam	A	Standard, Chlorophyll
14310011	Etowah River at U.S. Highway 41 near Cartersville, Georgia	BM	Standard, Metals
14317501	Etowah River at State Road 61 near Cartersville, Georgia	BM	Standard, Metals
14325001	Pumpkinvine Creek at County Road 636 near Emerson, Georgia	BM	Standard, Metals
14326001	Raccoon Creek at State Road 113 near Stilesboro, Georgia	BM	Standard, Metals
14329501	Euharlee Creek at County Road 32 near Stilesboro, Georgia	BM	Standard, Metals
14330001	Etowah River at Hardin Bridge near Euharlee, Georgia	C	Standard, Metals
14340201	Two Run Creek at Reynolds Bridge Road near Kingston, Georgia	BM	Standard, Metals
14340991	Spring Creek at State Road 20 near Rome, Georgia	BM	Standard, Metals
14350011	Etowah River at Turner Mccall Boulevard near Rome, Georgia	BM	Standard, Metals
14357551	Silver Creek at Crescent Avenue near Rome, Georgia	BM	Standard, Metals
14401011	Coosa River at Blacks Bluff Road near Rome, Georgia	BM	Standard, Metals
14401501	Webb Creek at Blacks Bluff Road SW near Rome, Georgia	BM	Standard, Metals
14403901	Beech Creek at Mays Bridge Road SW near Rome, Georgia	BM	Standard, Metals
14407901	Cabin Creek at State Road 20 near Rome, Georgia	BM	Standard, Metals
14425001	Cedar Creek at Cave Springs Road near Cedartown, Georgia	BM	Standard, Metals
14450001	Coosa River - Georgia/Alabama State Line Monitor	C	Standard, Metals
14491001	Duck Creek at State Road 337 near LaFayette, Georgia	BM	Standard, Metals
14540001	Spring Creek at State Road 337 near Trion, Georgia	BM	Standard, Metals
14544001	Cane Creek at Club Drive near Trion, Georgia	BM	Standard, Metals

TABLE 3-6. GEORGIA TREND MONITORING NETWORK 2001

STATION NUMBER	LOCATION	TYPE[1]	PARAMETERS[2]
14550001	Chattooga River - 600 Feet Below U.S. Highway 27 near Summerville	BM	Standard, Metals
14555001	Raccoon Creek at State Road 114 near Summerville, Georgia	BM	Standard, Metals
14560001	Chattooga River at Holland-Chattoogaville Road near Summerville, Georgia	C	Standard, Metals
14565001	East Fork Little River at State Road 48 near Cloudland, Georgia	BM	Standard, Metals
15006001	Little Tennessee River at Georgia Highway 246 near Dillard, Georgia	BM	Standard, Metals
15019901	Mill Creek at Mill Creek Road near Presley, Georgia	BM	Standard, Metals
15019991	Hiawassee River at Streak Hill Road near Presley, Georgia	BM	Standard, Metals
15026001	Lake Chatuge (LMP 12) - at State Line	BM	Standard, Chlorophyll
15026501	Brasstown Creek at U.S. Highway 76 near Blairsville, Georgia	BM	Standard, Metals
15027001	Brasstown Creek at State Road 66 near Young Harris, Georgia	BM	Standard, Metals
15030000	Lake Nottely (LMP 15A) - at Reece Creek	BM	Standard, Chlorophyll
15034001	Nottely River at State Road 180 near Blairsville, Georgia	BM	Standard, Metals
15035001	Nottely River at Morgan Bridge near Blairsville, Georgia	BM	Standard, Metals
15037001	Youngcane Creek at Byers Road near Youngcane, Georgia	BM	Standard, Metals
15039801	Lake Nottely (LMP 15) - at Dam Pool	BM	Standard, Chlorophyll
15040000	Lake Blue Ridge (LMP18A) - 4 Miles Upstream Dam	BM	Standard, Chlorophyll
15040051	Nottely River at John Smith Road near Ivylog, Georgia	BM	Standard, Metals
15048701	Cooper Creek at State Road 60 near Suches, Georgia	BM	Standard, Metals
15058001	Toccoa River at Shallowford Bridge near Dial, Georgia	BM	Standard, Metals
15059901	Lake Blue Ridge (LMP 18) - Dam Pool	BM	Standard, Chlorophyll
15060401	Hemptown Creek at State Road 245 near Mineral Bluff, Georgia	BM	Standard, Metals
15060501	Toccoa River at Curtis Switch Road near Mineral Bluff, Georgia	BM	Standard, Metals
15061001	Fighting Town Creek at West Tennessee Road near McCaysville, Georgia	BM	Standard, Metals
15072001	Little Chickamauga Creek at Hackett Mill Road near Ringgold, Georgia	BM	Standard, Metals
15073001	East Chickamauga Creek at Bandy Road near Ringgold, Georgia	BM	Standard, Metals
15074001	Dry Creek at Houston Valley Road near Ringgold, Georgia	BM	Standard, Metals
15075001	Tiger Creek at State Road 3 near Ringgold, Georgia	BM	Standard, Metals
15080001	South Chickamauga Creek at FAS 819 near Graysville, Georgia	BM	Standard, Metals
15081001	Peavine Creek at Old Dixie Highway near Graysville, Georgia	BM	Standard, Metals
15089001	West Chickamauga Creek at Glass Mill Road near Chickamauga, Georgia	BM	Standard, Metals
15090001	West Chickamauga Creek at Georgia Highway 146 near Lakeview, Georgia	C	Standard, Metals
15099001	Chattanooga Creek at State Road 341 near Chattanooga, Tennessee	BM	Standard, Metals
15099501	Rock Creek at State Road 193 at Flintstone, Georgia	BM	Standard, Metals
15100001	Chattanooga Creek at Burnt Mill Road at St. Elmo, Tennessee	BM	Standard, Metals
15299951	Dry Creek at Maple Street near Chattanooga, Tennessee	BM	Standard, Metals
15300001	McFarland Branch at State Line Road near Chattanooga, Tennessee	BM	Standard, Metals
15350001	Lookout Creek at Old Cloverdale Road near Sulphur Springs, Georgia	BM	Standard, Metals
15400001	Lookout Creek at Creek Road near New England, Georgia	BM	Standard, Metals

[1]There are three major types of stations: core(C), annual (A), and basin monitoring (BM).

[2]Standard parameters include gage height, air temperature, water temperature, dissolved oxygen, turbidity, conductivity, BOD5, pH, alkalinity, hardness, ammonia, nitrite+nitrate, phosphorus, TOC, and fecal coliform bacteria.

compounds, and turbidity. The three measures of Carlson'sTrophic State Index were combined into a single trophic state index (TTSI) and used with other field data and observations to assess the trophic condition of each lake and to establish categories of

lakes relative to need for restoration and/or protection. Eight lakes were determined to have the a need for restoration and/or protection (Category A), twenty-eight lakes were found to have moderate need for protection (Category B), and one hundred twenty-seven lakes were found to have few water quality problems (Category C).

Monitoring efforts have continued since the 1980-1981 Lake Classification Survey with a focus on Category A lakes and major lakes (those with a surface area greater than 500 acres). Five lakes (Hillsboro Lake, Floyd State Park Upper and Lower Lakes, Rome City Park Pond, and Heath Park Lake) were removed from Category A and placed in Category B in 1984. Even though their trophic condition remained unchanged, the lake management authorities for these lakes indicated no conflict between the lake condition and intended uses. Three lakes remained as Category A lakes: Jackson Lake, High Falls Lake, and Williams Public Fishing Area Lake. Point source nutrient reduction has been implemented in the Jackson Lake and High Falls Lake watersheds and these lakes have been changed to Category B. Williams Public Fishing Area Lake was drained in the early 1990s due to problems with the dam and there are no plans to fill the lake.

The monitoring of major lakes (> 500 acres) since 1984 has continued to use the TTSI as a tool to mark trophic state trends. The major lakes are listed in Table 3-7 are ranked according to the TTSI for the period 1984-2001. Work on major lakes is now conducted as a part of the river basin planning process. Quarterly major lakes monitoring was conducted in 2000 and 2001 according to the river basin monitoring schedule. Basin major lakes monitored in 2000 were lakes Harding, Goat Rock, Oliver, Andrews, Seminole (Chattahoochee) and Blackshear and water (Flint). In 2001 major lakes sampled included Carters (Coosa) and Blue Ridge, Chatuge and Nottley (Tennessee).

A Clean Lakes Phase I Diagnostic/ Feasibility study was conducted for Jackson Lake in 1989 and 1990. This study documented reductions in phosphorus loading. Despite this, the lake remains nutrient sensitive. Consequently, it was recommended that the total phosphorus loading from all sources be held constant or reduced. This study also documented an approximate 40% reservoir storage loss since inundation in 1910 due to sedimentation. Since sedimentation in the upper reaches of the lake interferes with recreation, sediment removal was offered as a management option.

A joint GAEPD-USEPA study of West Point Lake was conducted in 1987-1988. Sufficient data were available at the end of 1988 for the GAEPD to document nutrient problems and implement a control strategy. Because the nutrient loading was point source dominated, all major point sources were directed to reduce total phosphorus to 0.75 mg/l by 1992 with a 50% reduction by the middle of 1990. The phosphorus reduction process was aided in the 1990 when the Georgia General Assembly adopted legislation for a statewide ban on high phosphate detergents. This action along with the

TABLE 3-7. MAJOR LAKES RANKED BY SUM OF TROPHIC STATE INDEX VALUES 1985-1993 and 1997-2001

1985		1986		1987		1988		1989	
Sinclair	188	Harding	177	Harding	184	Harding	178	Blackshear	209
Seminole	184	Oliver	176	Oliver	177	High Falls	177	WF George	192
Blackshear	181	Seminole	175	Goat Rock	174	Blackshear	177	Harding	191
Worth	177	Goat Rock	171	Jackson	170	Seminole	174	High Falls	191
Jackson	172	Jackson	170	Worth	167	Goat Rock	173	Jackson	188
Harding	171	Worth	164	Blackshear	<167	Oliver	171	Oliver	184
Oconee	169	High Falls	163	Carters	166	Banks	169	Tobesofkee	180
High Falls	168	WF George	162	Tugalo	166	West Point	169	Goat Rock	179
WF George	161	Blackshear	162	Seminole	<160	WF George	168	Carters	179
Oliver	161	Oconee	161	High Falls	157	Oconee	164	Seminole	174
West Point	157	West Point	160	Banks	<157	Worth	164	Allatoona	171
Goat Rock	155	Allatoona	157	West Point	<156	Jackson	<158	Worth	170
Tobesofkee	152	Tobesofkee	155	Sinclair	<154	Sinclair	<152	Sinclair	169
Nottely	148	Sinclair	152	Clarks Hill	151	Tobesofkee	<151	Banks	166
Chatuge	145	Tugalo	148	Tobesofkee	<146	Russell	<145	Oconee	165
Tugalo	144	Chatuge	147	Oconee	<145	Allatoona	<141	West Point	164
Allatoona	136	Carters	144	Allatoona	<143	Chatuge	139	Nottely	158
Banks	135	Nottely	142	WF George	<141	Tugalo	<133	Tugalo	156
Carters	134	Banks	140	Nottely	<137	Lanier	<132	Russell	156
Blue Ridge	125	Juliette	135	Russell	<133	Nottely	<132	Clarks Hill	153
Juliette	125	Russell	131	Chatuge	<132	Carters	<127	Chatuge	151
Lanier	123	Lanier	128	Rabun	<130	Juliette	<123	Juliette	141
Clarks Hill	123	Clarks Hill	123	Hartwell	<126	Burton	<120	Hartwell	138
Rabun	122	Hartwell	121	Lanier	<123	Blue Ridge	<119	Blue Ridge	133
Russell	122	Blue Ridge	119	Burton	<119	Clarks Hill	<118	Rabun	128
Burton	121	Rabun	117	Blue Ridge	<117	Hartwell	<114	Lanier	<128
Hartwell	116	Burton	114	Juliette	<108	Rabun	111	Burton	123

1990		1991		1992		1993		1997-2001 Basin Cycle		
										Year
Sinclair	182	Blackshear	193	High Falls	194	High Falls	195	High Falls	169	1999
Blackshear	178	High Falls	190	Seminole	183	Blackshear	185	West Point	164	2000
Oliver	177	Harding	185	WF George	181	Seminole	175	Tobesofkee	164	1999
Harding	174	Seminole	181	Tobesofkee	176	Goat Rock	173	WF George	163	2000
Tobesofkee	173	Worth	176	Blackshear	176	Jackson	173	Oconee	162	1999
Jackson	168	Goat Rock	174	Goat Rock	173	Sinclair	172	Jackson	161	1999
Goat Rock	167	WF George	172	Sinclair	172	Worth	172	Blackshear	160	2000
Oconee	166	West Point	171	Oliver	168	Oconee	172	Sinclair	160	1999
Worth	163	Allatoona	167	Harding	166	Harding	170	Worth	157	2000
Chatuge	161	Banks	164	Jackson	166	Oliver	170	Carters	155	2001
Tugalo	161	Jackson	162	Oconee	163	Tobesofkee	169	Harding	155	2000
High Falls	159	Oconee	161	West Point	163	WF George	169	Tugalo	154	1997
Seminole	154	Oliver	157	Nottely	161	West Point	163	Goat Rock	153	2000
Allatoona	146	Sinclair	150	Tugalo	157	Allatoona	158	Seminole	152	2000
WF George	145	Tobesofkee	149	Worth	157	Russell	156	Oliver	152	2000
Clarks Hill	145	Clarks Hill	146	Banks	156	Carters	154	Russell	141	1997
Rabun	142	Russell	141	Allatoona	156	Banks	154	Allatoona	139	2001
West Point	141	Nottely	141	Chatuge	155	Clarks Hill	153	Rabun	136	1997
Burton	138	Chatuge	138	Burton	149	Hartwell	146	Chatuge	135	2001
Hartwell	136	Blue Ridge	136	Russell	147	Nottely	145	Juliette	131	1999
Blue Ridge	135	Carters	135	Carters	143	Chatuge	145	Burton	129	1997
Nottely	132	Juliette	133	Rabun	143	Burton	145	Clarks Hill	129	1997
Juliette	132	Tugalo	133	Blue Ridge	141	Tugalo	143	Nottely	127	2001
Russell	128	Hartwell	132	Hartwell	138	Blue Ridge	140	Lanier	127	2000
Lanier	126	Burton	130	Lanier	138	Rabun	140	Hartwell	127	1997
Banks	<122	Rabun	122	Clarks Hill	131	Juliette	136	Blue Ridge	119	2001
Carters	118	Lanier	121	Juliette	131	Lanier	122			

implementation of phosphorus reduction at the majority of the major metropolitan Atlanta water pollution control plants has resulted in a significant reduction in phosphorus reaching West Point Lake In March 1990, the Georgia General Assembly passed Senate Bill 714 which mandated the State conduct comprehensive studies of publicly owned lakes (in excess of 1000 acres) and develop water quality standards for pH, fecal coliform bacteria, chlorophyll a, total nitrogen, total phosphorus loading, and epilimnion dissolved oxygen. The Bill also requires that nutrient limits be established for major tributary streams to the lakes. The Bill mandated that comprehensive studies of Lake Lanier, Lake Walter F. George and West Point Lake be initiated in 1990, and three additional studies be performed each subsequent year on the remaining lakes of 1,500 acres or more, providing funds were available.

In March 1990, the GAEPD applied to and received from the USEPA Clean Lakes Phase I funds to be used to initiate studies of Lakes Lanier, Walter F. George, and West Point. Studies were begun in late 1990 and early 1991. Subsequently, EPD applied for funding for Lakes Allatoona and Blackshear. These were funded and sampling was initiated in April, 1992. Supplemental funding was awarded by Congress for the Lake Allatoona and Lake Lanier Phase I studies. Reports on these studies were completed in 1999. The GAEPD applied for Clean Lakes funds to conduct a Phase I Diagnostic-Feasibility study for Carters Lake in 1995. The application was approved and the field work for the Carters Lake project was completed in 1998. The Carters lake Phase I Diagnostic Feasibility Report was completed in 2000. Water quality standards are to be developed for Carters Lake in 2002.

The Lake Walter F. George Phase I Diagnostic/Feasibility study was conducted by the GAEPD in 1990 and 1991. In 1992 and 1993, the work was continued by the Alabama Department of Environmental Management (ADEM) and Auburn University. These studies found the lake in relatively good condition. No water use (i.e. recreation or fishing) impacts were documented. The trophic status was documented as eutrophic (characterized by an accumulation of nutrients that support elevated algal productivity without the problems associated with hypereutrophic overproduction). Therefore, the management of nutrient loading, particularly phosphorus, is an important longterm objective in maintaining the water quality of Lake Walter F. George. The Lake Walter F. George Phase I Diagnostic Feasibility Study Report was submitted to and approved by the USEPA in 1997.

The West Point Lake Clean Lakes study was completed in 1994 and the GAEPD proposed water quality standards for the lake which, after public review, were adopted by the Board of Natural Resources in 1995. The lake water quality standards for Walter F. George and Jackson Lakes were proposed and adopted by the Board of Natural Resources in October, 1996. The Clean Lakes studies for Lakes Allatoona and Lanier, conducted by Kennesaw State College and the University of Georgia, respectively, were completed in 1999 and water quality standards adopted by the Board of Natural Resources in 2000.

In 2000 and 2001, lake standards monitoring was conducted April through October, at the specified lake locations on Lakes West Point, Jackson, Walter F. George, Allatoona and Lanier in accordance with the lakes standards law. In addition, tributary sampling was conducted monthly. In addition to monitoring for the required parameters of chlorophyll a, pH, total nitrogen, phosphorus and fecal coliform bacteria, water quality profile data were collected at each lake monitoring station.

Fish Tissue Monitoring. The DNR fish tissue monitoring and consumption guidelines program is described in Chapter 6. This assessment project is focused on fish tissue sampling and analyses, risk-based data assessment, and annual publication of consumption guidance in Georgia's Freshwater & Saltwater Sport Fishing Regulations and in Guidelines for Eating Fish from Georgia Waters. Fish tissue samples are collected in the fall from Georgia lakes and rivers, and analyzed in the winter and spring. Site-specific sampling in Georgia estuaries occurs between the spring and fall on a case specific basis. The sampling is conducted by either the GADNR Wildlife Resources Division (WRD), or the Coastal Resources Division (CRD), depending on whether the site is freshwater (WRD), or estuarine/marine waters (CRD). Samples are catalogued and transported to GAEPD or University of Georgia laboratories and results are reported to the GAEPD the following late summer or early fall. The data are assessed in the fall and winter and consumption guidance is updated each spring. The first risk-based consumption guidance was published in 1995.

In the fall of 2000 sampling was focused in the Coosa, Tallapoosa, Savannah and Ogeechee River basins. In the fall of 2001 sampling was focused in the Ocmulgee, Oconee, and Flint River basins. During the summer of 2001 site-specific sampling was conducted in Terry and Dupree Creeks, and the Back River in the Brunswick area. The data from the annual collections are utilized in reassessments that are incorporated annually into the Guidelines for Eating Fish For Georgia Waters and Georgia's Freshwater and Saltwater Sport Fishing Regulations.

Toxic Substance Stream Monitoring. The GAEPD has focused resources on the management and control of toxic substances in the State's waters for many years. Toxic substance analyses have been conducted on samples from selected trend monitoring stations since 1973. Wherever discharges were found to have toxic impacts or to include toxic pollutants, the GAEPD has incorporated specific limitations on toxic pollutants in NPDES discharge permits. In 1983 the GAEPD intensified toxic substance stream monitoring efforts. This expanded toxic substance stream monitoring project included facility effluent, stream, sediment, and fish sampling at specific sites downstream of selected industrial and municipal discharges. From 1983 through 1991, ten to twenty sites per year were sampled as part of this project. Future work will be conducted as a part of the River Basin Planning process.

Aquatic Toxicity Testing. In 1982 the GAEPD incorporated biomonitoring or aquatic toxicity testing in selected industrial NPDES permits. Biomonitoring requirements are currently addressed in all municipal and industrial NPDES permits. In January 1995, the GAEPD issued approved NPDES Reasonable Potential Procedures which further delineated required conditions for conducting whole effluent toxicity (WET) biomonitoring for municipal and industrial discharges. The GAEPD started conducting aquatic toxicity tests on municipal and industrial water pollution control plant effluents in 1985. In 1988, the GAEPD constructed laboratory facilities to support chronic and acute testing capabilities. All toxicity testing was conducted in accordance with appropriate USEPA methods. The aquatic biomonitoring project (ABP) was initially funded with Federal CWA Section 205(j) Grant money, and later under Section 604(b). Requests for State funding were proposed annually and were unsuccessful. Continued funding under Section 604(b) met with difficulties and absorption of costs into the State budget not possible with the State government redirection priorities and privatization initiatives that were implemented in 1995. When reorganization of the Water Protection Branch was finalized in June 1996, the resources of the ABP were redirected into monitoring and TMDL areas. It was decided that the ABP would be phased out over the FY1997 period with the aquatic toxicity testing laboratory to be closed down by July 1, 1997. In addition to funding and redirection issues, it was decided that toxicity testing work would be required of the individual permittee in the future.

Coastal Monitoring. Coastal monitoring is conducted as a part of the monitoring programs supporting the River Basin Management Planning process. In 1997, the Coastal Monitoring Project was conducted in cooperation with the Coastal Resources Division, at the eight fixed stations located in the Savannah and Ogeechee River Basins. The Savannah and Ogeechee were the river basins of focus for monitoring in calendar year 1997 and the Satilla, St. Marys and Altamaha in 1998. Data collection included field water quality parameters, water column samples for basic parameters, chlorophyll a, nutrients, and priority pollutant metals and organic scans. In addition, sediment samples were collected and analyzed for nitrogen, phosphorus and priority pollutant metals and organics. Oyster tissues were also collected and analyzed for toxic substances. At this time the majority of the monitoring of coastal waters is being conducted by the Coastal Resources Division. Their work is described in Chapter 5.

Facility Compliance Sampling. In addition to surface water quality monitoring, the GAEPD conducts evaluations and compliance sampling inspections of municipal and industrial water pollution control plants and on industrial pretreatment systems. Compliance sampling inspections include the collection of 24-hour composite samples, and an evaluation of the permittee sampling and flow monitoring operations. In excess of 350 sampling inspections were conducted by the GAEPD staff in 2000-2001. The results were used, in part, to verify the validity of permittee self-monitoring data and as supporting evidence, as applicable, in enforcement actions. In 2000 this work was focused in the Chattahoochee and Flint River basins and in 2001 in the Coosa, Tallapoosa and Tennessee River basins in support of the River Basin Planning process.

Surface Water Quality Summary

Data Assessment. Water quality data are assessed to determine if standards are met and if the waterbody supports its designated or classified water use. If monitoring data shows that standards are not achieved, depending on the frequency standards are not met, the waterbody is said to be partially or not supporting the designated use. The data reviewed included GAEPD monitoring data, and data from other State, Federal, local governments, contracted Clean Lakes projects, and data from three electrical utility companies. Table 3-8 provides a list of agencies that contributed data for use in assessing water quality in this report.

The majority of coastal monitoring is conducted by the Coastal Resources Division (CRD). This work includes the national coastal assessment program, beach water quality monitoring, estuarine nutrient monitoring, shellfish sanitation monitoring and monitoring for harmful algae including Pfiesteria. Monitoring work conducted by the CRD is discussed in Chapter 5.

Appendix A includes lists of streams and rivers, lakes, and estuaries for which data have been assessed and indications are that designated uses for those waters are not fully supported. The lists are organized by river basin and include information on the location, data source, designated water use classification, criterion violated, potential cause, actions planned to alleviate the problem, and estimates of stream miles affected. The list is further coded to indicate status of each waterbody under several sections of the Federal Clean Water Act (CWA). Different sections of the CWA require states to assess water quality (Section 305(b)), to list waters with water quality standards violations for which no actions have been initiated or actions underway will not be completed in less than two years, and therefore a TMDL is needed (Section 303(d)), and to document waters with nonpoint source problems (Section 319).

The Appendix A waters are described in the following categories: waters supporting designated uses, waters partially supporting designated uses, and waters not supporting designated uses. Waters were placed on the partially or not supporting lists based on the following assessments.

Fecal Coliform Bacteria. Georgia water quality standards establish a fecal coliform criterion of a geometric mean (four samples collected over a 30-day period) of 200 MPN/100 ml for all waters in Georgia during the recreational season of May through October. This is the year-round standard for waters with the water use classification of recreation. For waters classified as drinking water, fishing, or coastal fishing, for the period of November through April, the fecal coliform criterion is a geometric mean (four samples collected over a 30-day period) of 1000 per 100 ml and not to exceed 4000 per 100 ml for any one sample.

TABLE 3-8
CONTRIBUTORS OF WATER QUALITY DATA FOR ASSESSMENT OF GEORGIA WATERS

GAEPD Watershed Planning and Monitoring Program	City of Gainesville
GAEPD Permitting and Compliance Program	City of LaGrange
DNR Coastal Resources Division	Georgia Mountains RDC
DNR Wildlife Resources Division	City of Conyers
State University of West Georgia	Kennesaw State University
Gainesville College	Lake Blackshear Watershed Association
Georgia Institute of Technology	University of Georgia
U.S. Environmental Protection Agency	LaGrange College/Auburn University
U.S. Geological Survey	Georgia Power Company
U.S. Army Corps of Engineers	Oglethorpe Power Company
U.S. Forest Service	South Carolina Electric & Gas Co.
Tennessee Valley Authority	South Carolina DHEC
Cobb County	Jones Ecological Research Center
DeKalb County	Alabama DEM
Douglas County WSA	City of College Park
Fulton County	Columbus Water Works
Gwinnett County	Columbus Unified Government
City of Clayton	St. Johns WMD
Cartersville	Town of Trion
Georgia Ports Authority	Clayton County Water Authority
Cherokee County	City of Atlanta

The goal of fecal coliform sampling in 2000-2001 was to collect four samples in a thirty day period in each of four quarters. If one geometric mean was in excess of the standard then the stream segment was placed on the partial support list. If more than one geometric mean was in excess of the standard the stream was placed on the not support list.

In some cases the number of samples was not adequate to calculate geometric means due to sampling or laboratory differences. In these cases, the USEPA recommends the use of a review criterion of 400 per 100 ml to evaluate sample results. This bacterial density (400 per 100 ml) was used to evaluate data from the months of May through October and the maximum criterion of 4000 per 100 ml was used in assessing the data from the results of November through April when geometric mean data was not available. Thus, where geometric mean data was not available, waters were deemed not supporting uses when 26 percent or more of the samples had fecal coliform bacterial densities greater than the applicable review criteria (400 or 4000 MPN/100 ml) and partially supporting when 11 to 25 percent of the samples were in excess of the review criterion.

Metals. In general, data on metals from any one given site are not frequent. As the data are infrequent, using the general evaluation technique of more than 25%

exceedence to indicate nonsupport and 11%-25% exceedence to indicate partial support was not meaningful. Streams were placed in the not support category if multiple exceedences of state criteria occurred and the data were based on more than four samples per year. With less frequent sampling, streams with exceedences were placed on the partially supporting list. In addition, an asterisk is placed beside metals data in those cases where there is a minimal database. In 2000-2001, the goal was to collect metals samples in the winter and summer in the river basins of monitoring focus for comparison to water quality standards. Clean sampling techniques were used. If one sample was in excess of a standard, the stream segment was placed on the partial support list. If two samples indicated exceedence of water quality standards, the stream segment was placed on the not support list. This is in accordance with USEPA guidance which suggests listing if more than one sample exceeds the criteria.

Toxicity Testing/Toxic Substances. Data from GAEPD toxicity testing of water pollution control plant effluents were used to predict toxicity in the receiving stream at critical 7Q10 low flow conditions. Based on the effluent toxicity, receiving waters were evaluated as not supporting when one or more tests gave a clear indication of instream toxicity and as partially supporting when based on predicted instream toxicity. Effluent data for toxic substances were used to designate either partial support or non-support based on whether instream corroborating data were available. When instream data were available, the stream was determined to be not supporting. When instream data were not available, the stream was listed as partially supporting.

Dissolved Oxygen, pH, Temperature. When available data indicated that these parameters were out of compliance with state standards more than 25% of the time, the waters were evaluated as not supporting the designated use. Between 11% and 25% noncompliance resulted in a partially supporting evaluation. South Georgia blackwater streams were not evaluated for compliance with the state pH standards because these streams have naturally low pH.

Fish/Shellfish Guidelines. USEPA guidance for evaluating fish consumption guidelines formation for 305(b)/303(d) use support determinations has been to assess a water as fully supporting uses if fish can be consumed in unlimited amounts; as partially supporting if consumption needs to be limited; and, as not supporting if no consumption is recommended. Georgia followed this guidance in evaluating the fish consumption guidelines for the 2000 and earlier 305(b)/303(d) lists. This assessment methodology was followed again in developing the 2002 305(b)/303(d) List for all fish tissue contaminants except mercury. Mercury in fish tissue was assessed and a segment or waterbody was listed if the Trophic-Weighted Residue Value (as described in the October 19, 2001 Georgia EPD "Protocol"), was in excess of the new USEPA water quality criterion (*Water Quality Criterion for the Protection of Human Health: Methylmercury*, EPA-823-R-01-001, January 2001). The USEPA criteria represents a national approach to address what mercury levels are protective for fishing waters. For mercury, waters were placed on the partial support list if the calculated Trophic-

mercury, waters were placed on the partial support list if the calculated Trophic-Weighted Residue Value was greater than 0.3 μg/g wet weight total mercury, and less than 2 μg/g wet weight, and on the not support list if the value was greater than 2 μg/g wet weight.

Biotic Data. The "Biota Impacted" designation in the "Criterion Violated" column indicates that studies showed a modification of the biotic community. Communities utilized were fish. Studies of fish populations by the DNR Wildlife Resources Division used the Index of Biotic Integrity (IBI) to identify affected fish populations. The IBI values were used to classify the population as Excellent, Good, Fair, Poor, or Very Poor. Stream segments with fish populations rated as "Poor" or "Very Poor" were included in the partially supporting list.

Evaluation of Use Support. Table 3-9 provides summary information from Appendix A on the total number of stream miles, lake acres, or square miles of estuaries that fall in each use support category. Separate totals are given for waterbodies that were monitored, for which the assessment is based on current water quality data, and waters that were evaluated, for which assessment was made based on older data, location, and/or professional judgment. Many additional streams, particularly in urban areas may not meet all standards, but monitoring resources are not adequate to sample all streams.

Assessment of Causes of Nonsupport of Designated Uses. There are many potential pollutants which may interfere with the designated use of a river, stream, lake, or estuary. These can be termed the causes of use nonsupport. Based on information presented in Appendix A, Table 3-10 summarizes the parameters of concern or the causes which contributed to nonsupport of water quality standards or designated uses of a particular waterbody.

Assessment of Potential Sources of Nonsupport of Designated Uses. Pollutants which impact waterbodies in Georgia may come from point or nonpoint sources. Point sources are discharges into waterways through discrete conveyances, such as pipes or channels. Municipal and industrial wastewater treatment facilities are the most common point sources. Point sources also include overflows of combined storm and sanitary sewers. Nonpoint sources are diffuse sources of pollution primarily associated with run off from the land following a rainfall event. Table 3-11 summarizes detailed information presented in Appendix A concerning the sources of pollutants which prevent achievement of water quality standards and use support in various waterbodies in Georgia.

Priorities for Action. The list of waters includes all waters for which available data indicate that water quality standards are or are not being met and designated uses are supported or not fully supported. This list of waters has become a comprehensive list of waters for Georgia incorporating the information requested by Sections 305(b), 303(d),

314, and 319 of the Federal CWA. As noted, waters listed on the partial and not supporting lists are active 305(b) waters. The list of lakes or reservoirs listed as partial or not supporting designated uses provides the information requested in Section 314 of the CWA. Waters with nonpoint sources identified as a potential cause of a standards violation are considered to provide the information requested in the CWA Section 319 nonpoint assessment. The 303(d) designation is described in the following paragraph.

TABLE 3-9
Evaluation of Use Support By Waterbody Type
2000-2001

Degree of Use Support	Streams/Rivers (miles)			Lakes/Reservoirs (acres)			Estuaries (sq. miles)		
	Assessment Basis			Assessment Basis			Assessment Basis		
	Evaluated	Monitored	Total	Evaluated	Monitored	Total	Evaluated	Monitored	Total
Supported	2,019	2,881	4,900	978	285,452	286,430	741	10	751
Partially Supported	160	3,442	3,602	20	53,163	53,183	0	4	4
Not Supported	120	2,665	2,785	0	57,239	57,239	70	29	99
TOTAL	2,299	8,988	11,287	998	395,854	396,852	811	43	854

The 303(d) list is a subset of the 305(b) listed waters. To develop the 303(d) list, the 305(b) list was reviewed and coded based on the guidance provided by the USEPA. Specifically, the August 13, 1992 and November 26, 1993 Memorandums from the USEPA Washington Office of Water titled, "Supplemental Guidance on Section 303(d) Implementation" and "Guidance for 1994 Section 303(d) Lists", were used. First, segments were identified where enforceable State, local or Federal requirements have led to or will lead to attainment of water quality standards. Segments where improvements were completed in 2000-2001 were assigned a "1" code and segments with ongoing action which will lead to attainment of water quality standards were assigned a "2" code under 303(d) status. A "3" code was assigned to segments where TMDLs have been developed and approved. A "4" code was assigned to segments where TMDLs have been developed and public noticed but not submitted to EPA for final approval. The remaining segments are marked with an "X" and represent 303(d) listed waters for Georgia. In addition to these waters, the USEPA added waters to the Georgia 303(d) list on December 31, 1996, June 25, 1997, and June 18, 1999. Those waters are shown in Appendix B and are 303(d) listed waters. To summarize, the Georgia 303(d) list of waters is made up of those waters with an "X" in the column marked 303(d) in Appendix A and those waters in Appendix B.

TABLE 3-10. Causes of Nonsupport of Designated Uses By Waterbody Type 2000-2001

Cause Cateogry	Rivers/Streams (miles) Contribution to Impairment[1]	
	Major[2]	Moderate/Minor[3]
Fish Guidance	890	696
Toxicity	4	63
Pesticides	0	0
Priority Organics	1	0
Metals	42	98
Ammonia	0	0
PH	19	134
Dissolved Oxygen	801	911
Thermal-Modification	0	9
Pathogens	2,474	1,341
Biota Impacted	589	228
Other Inorganics	0	0
Cause Category	Lakes/Reservoirs (acres) Contribution to Impairment[1]	
	Major[2]	Moderate/Minor[3]
Fish Guidance	107,639	1,939
Toxicity	0	0
Pesticides	0	0
Priority Organics	0	950
Metals	0	0
PH	0	0
Dissolved Oxygen	0	0
Thermal-Modification	650	0
Pathogens	194	1,289
Cause Category	Estuaries (square miles) Contribution to Impairment[1]	
	Major[2]	Moderate/Minor[3]
Priority Organics	0	2
Metals	0	2
Dissolved Oxygen	77	4
Pathogens	0	4
Fish Guidance	20	2

1 A water body may be affected by several different causes or sources and its size is counted in each relevant cause category. Thus totals will be significantly larger and will not sum to totals in Table 3-9 or Appendix A.

2 Major Contribution - A cause or source makes a major contribution to impairment if it is the only one responsible for less than full use support, or if it predominates over others.

3 Moderate/Minor - A cause or source makes a moderate/minor contribution to impairment if it is one of multiple causes responsible for less than full use support.

TABLE 3-11. Potential Sources of Nonsupport of Designated Uses By Waterbody Type 2000-2001

Cause Cateogry	Rivers/Streams (miles) Contribution to Impairment[1]	
	Major[2]	Moderate/Minor[3]
Industrial Point	2	69
Industrial Nonpoint	61	193
Municipal Point	57	135
Municipal Nonpoint	0	0
Combined Sewer/ Overflows	0	93
Urban Runoff/ Stormwater	1,610	351
Hydropower/Habitat/ (Dam Release)	19	18
Thermal Modification	0	0
Nonpoint Source	4,133	194
Agriculture	0	0
Silviculture	0	0
Resource Extraction	0	0
Land Disposal	0	0
Natural Sources	0	0
Cause Category	Lakes/Reservoirs (acres) Contribution to Impairment[1]	
	Major[2]	Moderate/Minor[3]
Industrial Point	650	0
Industrial Nonpoint	55,950	0
Municipal Point	0	0
Municipal Nonpoint	0	0
Urban Runoff/ Stormwater	11,104	29,332
Nonpoint Sources	13,386	29,332
Cause Category	Estuaries (square miles) Contribution to Impairment[1]	
	Major[2]	Moderate/Minor[3]
Industrial Point	1	101
Industrial Nonpoint	1	2
Municipal Point	0	88
Urban Runoff/ Stormwater	0	70
Nonpoint Sources	0	66
Marina	0	0

Georgia is implementing a watershed approach to water resource management through River Basin Management Planning. This approach provides the framework and schedule for actions to address waters on the Georgia 303(d) list. This work is summarized in Chapter 2 of this report. Basin planning provides an opportunity to focus monitoring, assessment, problem prioritization, TMDL development, water resource protection strategy development and implementation resources in specific basins on an orderly five year rotating basis. Of course, significant problems may arise in basins other than the basins of focus and the GAEPD will continue to respond in an appropriate manner. Thus, a discussion for prioritization of the 305(b)/303(d) list must be made in the context of the river basin planning program and in the context of current actions underway to address water quality problems documented in the Georgia 305(b) report. The majority of resources will be directed to insuring the ongoing pollution control actions are completed and water quality improvements are achieved. This work applies to those waters which are identified as 305(b) waters and coded with a "2" in the 303(d) status column of the table. These stream segments while listed on the 305(b) report list are not segments on the Georgia 303(d) list in accordance with USEPA guidance as actions are ongoing which will resolve the issues. However, these streams are the highest priority waters as these segments will continue to require resources to complete actions and insure standards are achieved. These stream segments have been assigned priority one. This is evidenced by the "1" noted in the far right column titled priority on the listing.

Second priority was allocated to segments with multiple data points which showed metals or other toxic substance concentrations in excess of water quality standards and to segments in which dissolved oxygen concentration was an issue.

Third priority was assigned to waters where air deposition, urban runoff or general nonpoint sources caused fish consumption guideline listings, or poor fish communities, or fecal coliform bacteria, ph or temperature standards violations. Waters added to the Georgia 303(d) list by EPA were also assigned to third priority.

Several issues helped forge the rationale for priorities. First, strategies are currently in place to address many of the significant water quality problems across the state and significant resources will be required to ensure that these actions are completed. Second, a large percentage of waters for which no control strategy is currently in place are listed due to fish consumption guidelines or as a result of exceedance of criteria of fecal coliform bacteria due to urban runoff or nonpoint sources or atmospheric deposition. At the present time, the efficacy of the fecal coliform bacteria standard is in question in the scientific community, and there is no national strategy in place to address air deposition of mercury which may be the primary cause of fish consumption guidelines across the southeastern United States.

The Georgia River Basin Management Planning process provides the framework for the long-term schedule for developing TMDLs for 303(d) listed segments. The schedule includes 1) public proposal of TMDLs for the Chattahoochee and Flint River Basins in 303(d) listed segments with impacts from NPDES permitted point sources by June 30, 2002, 2) public proposal of TMDLs for the Coosa, Tallapoosa, and Tennessee River Basins for 303(d) listed segments by June 30, 2003, 3) public proposal of TMDLs for the Savannah, and Ogeechee River Basins for 303(d) listed segments by June 30, 2004. This schedule is in concert with the agreements between the USEPA and the plaintiffs in the recent court case. The USEPA will continue to support the Georgia TMDL efforts and will be specifically responsible for TMDL development for the waters in Appendix B.

The lists in Appendix A and B will continue to reflect the segments where water quality data indicate compliance with or problems with achieving compliance with water quality standards. These segments will be removed when the actions have been taken and compliance attained. The list will grow and shrink based on these considerations and any new standard or approaches implemented in the future. This will also affect the 303(d) list as these entries will undergo changes along with the 305(b) list.

CHAPTER 4
Wetland Programs

Introduction

Various assessments of Georgia's wetlands have identified from 4.9 to 7.2 million acres, including more than 600,000 acres of open water habitat found in estuarine, riverine, palustrine, and lacustrine environments. Estimates of wetland losses since colonial settlement beginning in 1733 and expanding over the next two and one-half centuries are between 20-25% of the original wetland acreage.

Georgia has approximately 100 miles of shoreline along the south Atlantic, with extensive tidal marshes separating the barrier island sequences of Pleistocene and Holocene age from the mainland. Georgia's coastline and tidal marshes are well preserved compared to other South Atlantic states.

Georgia's interior ranges in elevation from sea level to 4,788 feet at Brasstown Bald in the Blue Ridge Mountain Province. At the higher elevations, significant, pristine cool water streams originate and flow down steep to moderate gradients until they encounter lower elevations of the Piedmont Province. Many of the major tributaries originating in the mountains and piedmont have been impounded for hydropower and water supply reservoirs. These man-made lakes constitute significant recreational resources and valuable fishery habitat. At the fall-line, streams flowing southeasterly to the Atlantic, or south-southwesterly to the Gulf, have formed large floodplains as each encounters the soft sediments of the upper Coastal Plain.

Other significant wetlands found in the state are associated with blackwater streams originating in the Coastal Plain, lime sink-holes, spring heads, Carolina bays, and the great Okefenokee Swamp, a bog-swamp measuring approximately one-half million acres in south Georgia and north Florida. The swamp drains to the east by the St. Marys River into the Atlantic, and to the west by the Suwannee River into the Gulf.

The lower Coastal Plain has frequently been referred to as Atlantic Coastal Flatwoods, where seven tidal rivers headwater in the ancient shoreline terraces and sediments of Pleistocene age. Scattered throughout the flatwoods are isolated depressional wetlands and drainageways dominated by needle-leaved and broad-leaved tree species adapted to long hydroperiods.

Due to considerable variation in the landscape in topography, hydrology, geology, soils, and climatic regime, the state has one of the highest levels of biodiversity in the eastern United States. The state provides a diversity of

habitats for nearly 4,000 vascular plant species and slightly less that 1,000 vertebrate species. Numerous plant and animal species are endemic to the state. Many of the rarer species are dependent upon wetlands for survival.

Extent of Wetland Resources

Assessments of wetland resources in Georgia have been carried out with varying degrees of success by the USDA Natural Resources Conservation Service, the USFWS National Wetland Inventory, and the state Department of Natural Resources. The extent and location of specific tidal marsh types have been reported in numerous scientific papers and reports. Estimates of other specific wetlands types, such as bottomland hardwood swamps, are also reported in studies on a regional scale.

Hydric soils as mapped in county soil surveys are useful indicators of the location and extent of wetlands for the majority of Georgia counties with complete surveys. The dates of photography from which the survey maps are derived vary widely across the state. There is an ongoing effort by NRCS to develop digital databases at the soil mapping unit level, but most of these data sets are not yet available. However, soil surveys have proven useful in wetland delineation in the field and in the development of wetland inventories. County acreage summaries provide useful information on the distribution of wetlands across the state.

The National Wetland Inventory (NWI) of the U.S. Fish and Wildlife Service utilizes soil survey information during photo-interpretation in the development of the 7.5 minute, 1:24,000 scale products of this nationwide wetland inventory effort. Wetlands are classified according to the Cowardin system, providing some level of detail as to the characterization of individual wetlands. Draft products are available for the 1,017 7.5 minute quadrangles in the state of Georgia, and many final map products have been produced. All of these quadrangles are available in a digital format, and an effort is underway to combine them into a single, seamless database for Georgia. Although not intended for use in jurisdictional determinations of wetlands, these products are invaluable for site surveys, trends analysis, and landuse planning.

A complementary database was completed by Georgia DNR in 1991 and is based on classification of Landsat TM satellite imagery. Due to the limitations of remote sensing technology, the classification scheme is simplified in comparison to the Cowardin system used with NWI. Integration of this digital information with Geographic Information System technology is straight-forward. The inclusion of other upland landcover classes adds to the utility of this database in environmental analysis and landuse planning.

A summary of wetland acreages derived from this database is as follows: open water = 647,501; emergent wetlands = 351,470; scrub/shrub wetlands = 387,793;

forested wetlands = 3,194,593; salt marshes = 241,242; brackish marshes = 91,951; and tidal flats/beaches = 14,750. The total wetland acreage based on Landsat TM imagery is 4,929,300 acres or 13.1% of Georgia's land area. This data underestimates the acreage of forested wetlands in the Piedmont and Coastal Plain, where considerable acreage may have been classified as hardwood or mixed forest. The data overestimates emergent and scrub/shrub wetlands in the pine flatwoods because of wet surface soils associated with clear-cuts or young pine plantations. The data under-estimates the tidal marshes and tidal flats because of a high tide stage that flooded considerable acreage. The targeted accuracy level for the overall landcover assessment using Landsat imagery was 85%. However, the classification error was not necessarily distributed equally throughout all classes.

Georgia reported landcover statistics by county in 1996 that included acreage occurrences for 15 landcover classes derived from early spring Landsat TM satellite imagery from 1988-1990. This document (Project Report 26) and accompanying landcover map of the state at a scale of 1:633,600 (1 inch = 10 miles) are available to the public from the Georgia Geologic Survey, Map Sales office.

Similar Landsat based landcover databases have been produced with more recent imagery. The Federal government completed mapping in Georgia using imagery form in the mid-1990s as part of the National Landcover Database. The Georgia Gap Analysis Program, supported in part by Georgia DNR, has completed an 18-class database using imagery from 1997-1999. Both these databases include wetland landcover classes, "Wetland Trends In Georgia".

The loss of wetlands has become an issue of increasing concern to the general public because of associated adverse impacts to flood control, water quality, aquatic wildlife habitat, rare and endangered species habitat, aesthetics, and recreation. Historically, we have often treated wetlands as "wastelands" that needed "improvement". Today, "swamp reclamation" acts are no longer funded or approved by Congress and wetland losses are in part lessened. However, we still lack accurate assessments for current and historic wetland acreages. For this reason, we have varying accounts of wetland losses, which provide some confusion in the public's mind as to trends.

The most recent (1991) and precise measure of Georgia's wetland acreage has been developed by the U.S. Fish and Wildlife Service's National Wetland Inventory efforts. This statistically sound study was based upon 206 sample plots of four (4) square miles each that were delineated and measured from 1975 and 1982 aerial photography. The total acreage of wetlands for Georgia was estimated at 7,714,285 acres in 1982 as compared to earlier estimates of 5.2 million acres. This new estimate is considerably higher than the total shown in a 1984 trend study and is due in part to better quality photography.

Georgia's total wetland area covers an estimated 20 percent of the State's landscape. This total (7.7 mil. ac.) includes approximately 367,000 acres of estuarine wetlands and 7.3 million acres of palustrine wetlands (forested wetlands, scrub-shrub, and emergents). A net wetland loss due to conversion of approximately 78,000 acres was estimated for the seven (7) year period, while 455,000 acres were altered by timber harvesting. These latter estimates are less reliable than the total acreage and are slightly higher than the 1984 study. Regardless of the method used to measure total acreage or wetland losses, Georgia still retains the highest percentage of pre-colonial wetland acreage of any southeastern state. The state lacks the resources to conduct an independent monitoring program on the frequency of wetland alterations by class or type.

All dredge and fill activities in freshwater wetlands are regulated in Georgia by the U.S. Army Corps of Engineers (COE). Joint permit procedures between the COE and DNR, including public notices, are carried out in tidally influenced wetlands. Separate permits for alterations to salt marsh and the State's waterbottoms are issued by the Coastal Marshlands Protection Committee, a State permitting authority. Enforcement is carried out by the State, COE and EPA in tidal waters, and by the COE and EPA in freshwater systems. Normal agricultural and silvicultural operations are exempted under Section 404 regulations with certain conditions.

Integrity of Wetland Resources

Wetland Use Support. In Georgia, wetland uses are tied to both the state water quality standards through the definition of "water" or "waters of the state", and to established criteria for wetlands protection (Chap. 391-3-16-03) associated with the Comprehensive Planning Act of 1989 (O.C.G.A. 12-2-8).

The definition of "water" or "waters of the State" (Chap. 391-3-6) means "any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells, wetlands, and all other bodies of surface or subsurface water, natural or artificial, lying within or forming a part of the boundaries of the state which are not entirely confined and retained completely upon the property of a single individual partnership, or corporation". The waters use classifications and general criteria for all waters are discussed elsewhere in this report.

The Comprehensive Planning Act requires all local governments and regional development centers to recognize or acknowledge the importance of wetlands for the public good in the landuse planning process. All local governments (municipalities and county governments) were required, beginning in 1990 and ending in 1995, to meet minimum criteria for wetland use and protection. Each

government is required to map wetlands using DNR or NWI maps, and describe how wetlands will be protected from future development.

The wetlands protection criteria define freshwater "wetlands" as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (33 CFR 32.93)". This definition is not intended to include "coastal marshlands" or tidal salt marshes as defined by the Coastal Marshlands Protection Act. The minimum area of wetlands to be identified in landuse planning is not to exceed five acres.

The categories of freshwater wetlands and aquatic habitats to be identified, defined and mapped by the State and included in landuse planning are open water, non-forested emergent, scrub/shrub, forested and altered wetlands. Landuse plans must address at least the following considerations with regard to wetland classes identified in the database:

- Whether impacts to an area would adversely affect the public health, safety, welfare, or the property of others.

- Whether the area is unique or significant in the conservation of flora and fauna including threatened, rare or endangered species.

- Whether alteration or impacts to wetlands will adversely affect the function, including the flow or quality of water, cause erosion or shoaling, or impact navigation.

- Whether impacts or modification by a project would adversely affect fishing or recreational use of wetlands.

- Whether an alteration or impact would be temporary in nature.

- Whether the project contains significant state historical and archaeological resources, defined as "Properties On or Eligible for the National Register of Historic Places".

- Whether alteration of wetlands would have measurable adverse impacts on adjacent sensitive natural areas.

- Where wetlands have been created for mitigation purposes under Section 404 of the Clean Water Act, such wetlands shall be considered for protection.

The mapping of altered wetlands defined as "areas with hydric soils that have been denuded of natural vegetation and put to other uses, such as pasture, row crops, etc., but that otherwise retain certain wetland functions and values" has not been completed due to a lack of resources. It is unlikely that there will be any significant resources committed at the state or federal levels for monitoring wetland alterations and conversions in the near future.

The acceptable uses of wetlands without long term impairment of function were identified in wetland protection criteria as the following:

Timber production and harvesting. The socio-economic value of wetlands for consumptive uses such as timber and wood products production is extremely high. High quality hardwoods are produced along the major river corridors throughout the state. There are established "best management practices" for harvesting in wetlands; the level of compliance with these voluntary standards is monitored by the Georgia Forestry Commission in cooperation with the DNR-EPD.

Wildlife and fisheries management. Wetlands are an invaluable resource, both ecologically and economically. They are among the state's most biologically productive ecosystems and are crucial as habitats for wildlife. Wetlands function as essential breeding, spawning, nursery, nesting, migratory, and/or wintering habitat for much of the migratory and resident fauna. More than 40% of the state threatened and endangered plant and animal species depend heavily on wetlands. Coastal wetlands function as nursery and spawning grounds for 60-90% of commercial fin and shellfish catches. In addition, high levels of plant productivity in coastal wetlands contribute to corresponding levels of invertebrate organisms upon which fish and other animals feed. Plant decomposition in wetlands is also important for waterfowl production, which contributes to the economy through hunting-related expenditures.

Water Quality Protection. Wetlands help to maintain water quality and improve degraded water by removing, transforming, or retaining nutrients; processing chemical and organic wastes and pollutants; and reducing sediment loads. Wetlands function as sediment, toxic substance, and nutrient traps, performing functions similar to a waste treatment plant. Wetland vegetation filters and retains sediments which otherwise enter lakes, streams, and reservoirs, often necessitating costly maintenance dredging activities. Wetlands may also perform similar purification functions with respect to ground water. Those wetlands hydrologically connected to ground water could also be a source of recharge for underground water supplies, in which case the natural settling and filtering of pollutants would increase the purity of the water resource. As with any filter, wetlands can be damaged, overloaded, or made nonfunctional. Wetlands conservation and careful management of point and non-point pollutants can provide good wetland filtration of materials.

Recreation. The non-consumptive uses of wetlands may contribute most significantly and positively to quality of life, yet these uses are often undervalued or unrecognized altogether. Wetlands are areas of great diversity and beauty and provide open space for recreational and visual enjoyment. They support a myriad of recreational activities including boating, swimming, birdwatching, and photography. In addition, tidal, coastal, and inland wetlands provide educational opportunities for nature observation and scientific study.

Natural water quality treatment or purification. (See wastewater treatment above). Maintaining the biological and ecological integrity of wetlands is essential to the capitalization of these natural systems for the improvement of water quality and quantity. The polluting, filling, silting, channelizing, draining, dredging, and converting to other uses of wetlands are destructive to the ecological functions of wetlands.

Other uses permitted under Section 404 of the Clean Water Act. Such uses must have an overwhelming public interest. Unacceptable uses of wetlands include:

- Receiving areas for toxic or hazardous waste or other contaminants.
- Hazardous or sanitary waste landfills.
- Other uses unapproved by local governments.

The criteria established by the State for freshwater wetlands are designed to assist in the identification and protection of wetlands, and do not constitute a state or local permit program. The protection of coastal marshlands, seashores, and tidal waterbottoms is described under the Estuary and Coastal Assessment section of this report.

Wetland Monitoring. The state maintains monitoring and enforcement procedures for estuarine marshes under authority of the Coastal Marshlands Protection Act of 1970. Monthly or bimonthly over-flights are made of the Georgia coastline for potential violations. Restoration and penalties are provided for in the Act.

The State does not maintain a specific monitoring program for freshwater wetlands because of the size of the area (>37 million acres), lack of resources, and weak public support for a state-managed regulatory program. At this time no assessment of costs has been made for establishing any monitoring of wetland changes for the entire state.

Additional Wetlands Protection Activities

Georgia is protecting its wetlands through aggressive land acquisition, public education, land use planning, regulatory programs, and wetland restoration. Since 1987, the state has acquired roughly 200,000 acres through program expansion and the Preservation 2000 and RiverCare 2000 acquisition efforts. Additional protection to wetlands is provided either directly or indirectly by several statutes listed below, but described elsewhere in this report. These state laws are as follows:

- Coastal Marshlands Protection Act
- Shore Protection Act
- 401 Water Quality Certification
- Water Quality Control Act
- Ground Water Use Act
- Safe Drinking Water Act
- Erosion and Sedimentation Control Act
- Metropolitan Rivers Protection Act

Land Acquisition. Recent land acquisition activities that represent significant protection of wetland acreage include Chickasawhatchee Swamp WMA in southwest Georgia, where combined wetland and upland acreage totals 19,680 acres. In the Altamaha River basin, a total of 3,600 acres containing significant floodplain acreage is jointly managed by DNR and The Nature Conservancy at Moody Forest Natural Area. Preservation by DNR of a Carolina bay at Big Dukes Pond NA added 1,220 acres, including a wood stork rookery site. Other wetland acres have recently been protected through the establishment of Conasauga River Natural Area in northwest Georgia.

Education And Public Outreach. WRD has one full-time person involved in aquatic education, providing training for educators in wetland values and acting as a resource person for developing and coordinating teaching materials. The Aquatic Education Program consists of three key components: Youth Education, Adult Education, and Kids Fishing. Youth Education involves training educators to use Aquatic Project Wild (APW), which consists of instructional workshops and supplementary conservation curriculum materials for teachers of K-12 grade age children. About 1,000 educators are trained annually to use APW in the classroom. Adult Education consists primarily of producing educational materials such as the annual Freshwater and Saltwater Sport Fishing Regulations, Reservoir and Southeast Rivers Fishing Predictions, Small Georgia Lakes Open to Public Fishing, Introduction to Trout Fishing, news releases, brochures, radio Public Service Announcements, videos, and staff presentations to sportsmen and civic organizations, as well as large events. The purpose of Kids Fishing Events (KFEs) is to introduce youth and their families to the joys of recreational fishing. The Aquatic Education Program touches tens of thousands of youths and adults

each year, bringing these people closer to the environment, and teaching them conservation principles that are important to sustaining wetlands and healthy fish populations.

State Protected Species in Wetlands. With assistance from the USFWS, Section 6 Federal Aid Program, and USDA-FS Stewardship Program, WRD developed and published a descriptive handbook of Georgia's 103 protected plant species that include endangered, threatened, unusual, and rare plant species found in the state. Forty percent of the protected species are dependent on wetland or aquatic habitats in the vast majority known occurrences. The "Protected Plants of Georgia" book includes illustrations, descriptions, threats to species or their habitats, range in adjoining states, historical notes, and recommendations for management of protected species habitats. The protected plant book has been distributed to all DNR personnel and wildlife biologists involved in the management of state properties. It has been distributed to the Georgia Forestry Commission, USDA-Natural Resource Conservation Service, Forest Service, USFWS, Corps of Engineers, US EPA, major utility companies, forest products corporations, consulting biologists, educators, and private citizens. The book calls the public's attention to the need to protect wetlands on private property as well as public property in the state. In addition, the following species are subjects of continuing research funded through Section 6 USFWS grant-in-aid programs:

- Loggerhead sea turtle - nest survey and protection, educational material
- Wood stork - aerial surveys of rookeries and educational material
- Bald eagle - nest surveys, monitoring, and management
- Manatee - comprehensive management plan implementation, investigate and analyze habitat use and movements
- Wood stork - ecology of coastal colonies
- Listed aquatic species Catasauqua River corridor identification and mapping of essential habitats
- Listed animal species - protected animal book for the State of Georgia (111 species)
- Goldline darter life history and status in Coosawattee River system
- Tennessee Yellow-eyed Grass - surveys for undocumented populations
- Whorled Sunflower - habitat management plan development
- Pitcherplant Bogs habitat management plan development
- Swamp Buckthorn - status survey

Federal funds made available through USFWS were used to complete an assessment of Carolina bays in Georgia. A combination of aerial photography and field surveys were used to prioritize these wetlands for value in protecting wetland functions and in providing significant habitat to support wetland-dependant ecosystems. A final report on this effort will be available in 2003.

Managing Wetlands on State WMAs, PFAs, Parks, Heritage Preserves, and Natural Areas. M.A.R.S.H. Project. Georgia DNR-WRD has a cooperative agreement with Ducks Unlimited (DU) for the purpose of acquiring, developing, restoring, or enhancing waterfowl habitat. A major aspect of this agreement is the M.A.R.S.H. program (Matching Aid to Restore States Habitat). Under the MARSH program, 7.5% of the money raised by DU in Georgia is made available as matching funds for work to develop, improve, or restore waterfowl habitat.

Since 1985, 1.2 million dollars have been spent on habitat projects in the state of Georgia involving thousands of acres of wetlands. Completed projects include:

Altamaha Waterfowl Management Area - 4,500 acres
Ansley Hodges Memorial Marsh 42 acres
Arrowhead Hatchery - 28 acres
Blanton Creek WMA - 50 acres
B.F. Grant WMA - 45 acres
Clark Hill - 70 acres (goose grazing acres)
Crockford Pigeon Mountain WMA 35 acres
Dyar Pasture 60 acres
Fishing Creek WMA - 50 acres
Grand Bay WMA - 8,730 acres (most acreage is natural wetlands)
Horse Creek WMA - 110 acres
Joe Kurz WMA 50 acres
Mayhaw WMA 45 acres
Oconee WMA - 150 acres
Rum Creek WMA - 25 acres
West Point Lake WMA - 20 acres

Assessment of DNR-Managed Wetlands. In 1990, while developing a state wetland conservation plan and strategy for mitigation of impacts from water supply reservoirs and public fishing lakes, Georgia DNR/WRD made an assessment of wetlands on DNR-managed state-owned lands. As part of this assessment, an effort was made to identify degraded wetland acreage suitable for mitigation. Degraded wetlands were identified as having potentials for restoration or enhancement of wetland functions and values.

Table 4-1 summarizes DNR-managed lands (as of 1990) by various categories. This plan was developed by DNR and Law Environmental, Inc. to mitigate potential impacts from future development of regional water supply reservoirs and public fishing areas. DNR still has under study and evaluation a potential regional water supply reservoir in the Tallapoosa River basin. To date there has been implementation of mitigation on state lands at a mitigation site at Horse

Creek WMA for wetlands losses associated with the construction of the Dodge County PFA. Mitigation is being pursued for wetland impacts associated with the development of a public fishing area at Ocmulgee WMA.

TABLE 4-1
ASSESSMENT OF DNR LANDS (1990).

Categories	Total Acreage	Total Wetland Acreage	Acreage Suitable for Mitigation	
			Restoration	Enhancement
WMA/PFA Sites	128,106	38,754	1,782	9,749
Park Sites	43,850	6,158	509	86
Other Sites*	58,712	12,126	83	2,322
	230,668	57,038	2,374	12,157

*Includes natural areas, heritage preserves, and some barrier islands (Ossabaw, Sapelo)

CHAPTER 5
ESTUARY AND COASTAL PROGRAMS

Background

Monitoring and management of Georgia's coastal environments is primarily conducted by the Georgia Department of Natural Resources (DNR) Coastal Resources Division (CRD). The Coastal Resources Division operates the Coastal Management program and the Shellfish Sanitation program manages recreational and commercial fisheries; and reviews applications for permits under the Coastal Marshlands Protection Act and Shore Protection Act. CRD also oversees several EPA wetland protection development grants. The DNR Wildlife Resources (WRD) and Environmental Protection Divisions (GAEPD) each play additional roles in this effort and interact with various agencies on management of Georgia's coastal areas. The Georgia University System conducts research on estuarine and coastal habitats from Skidaway Oceanographic Institute in Savannah and the University of Georgia Marine Institute on Sapelo Island.

Water Quality Monitoring

The GAEPD monitors estuarine water quality as part of its long term trend monitoring network. Additional intensive surveys have been conducted with major studies for the North River, Satilla River, Brunswick/ Turtle Rivers, North Newport River, and Savannah River and several estuarine sites have been included in the GAEPD toxics monitoring projects. Monitoring of estuaries and coastal waters is also being conducted, as these areas are the focus of monitoring efforts associated with the River Basin Management Planning Program.

The GAEPD monitoring programs have included sampling for the presence of potentially toxic materials in water, sediment, fish, oysters, shrimp, and blue crabs. To date, only one site sampled as part of the toxics monitoring has revealed metals or organic compounds at problem concentrations. Based on the sampling at this site near Brunswick, a seafood consumption advisory was issued. This advisory is noted in Chapter 6.

The water quality monitoring effort at Coastal Resources Division has expanded from the original Shellfish Sanitation Program to include Pfiesteria-like Organism (PLO) / Harmful Algal Bloom (HAB) Monitoring, Beach Water Quality Monitoring, Estuarine Nutrient Monitoring, and the National Coastal Assessment Program. This enhancement of coastal monitoring stations has provided coverage for the

entire coastline and allowed Coastal Resources Division to work in cooperation with other agencies in data collection and information sharing.

The Georgia coast has never experienced a documented Marine Biotoxin event. The depth-to-width ratio of Georgia coastal watersheds combined with daily tidal amplitude of eight vertical feet provides estuarine mixing and flushing rates that preclude algal and dinoflagellate proliferation. Never the less, nutrient loading in these watersheds is projected to increase, thus making the possibility of a future event conceivable. Given recent outbreaks in North Carolina and the discovery of *Pfiesteria piscicida* in South Carolina waters, an event created by a *Pfiesteria*-like organism is foreseeable. In 1999, a Red Tide (*Gymnodinium breve*) event occurred in Northeast Florida from the mouth of the St. Johns River south to Flagler Beach. With the discovery *Pfiesteria piscicida* by our neighboring northern state and the *Gymnodinium breve* outbreak occurring only a short distance to the south of Georgia's state line, it has become imperative that actions be taken to prepare for such events. In 1999, Coastal Resources Division developed a Marine Biotoxin Contingency Plan. This document will provide the Georgia coast with a response mechanism for dealing with the *Gymnodinium breve* marine biotoxin, more commonly known as Red Tide. Blooms of these algae can be accumulated by all filter-feeding mollusks, and can cause them to be toxic to humans. The following components are necessary for the plan to provide an adequate level of protection:

A. An early warning system for *G. breve* blooms that have the potential of affecting Georgia's coastal waters;

B. Procedures to define the severity and extent of the occurrence;

C. Procedures to provide an effective state response with regards to shellfish growing area closures, information dissemination, and adulterated product embargo and recall.

D. Procedures to monitor affected areas until such time as shellfish are determined to be safe for human consumption; and

E. Procedures for reopening bivalve shellfish growing areas.

Georgia began monitoring coastal waters for *Pfiesteria* during October 1999. Dr. Park Rublee, from North Carolina State University, offered to provide laboratory services for the analysis of twenty samples collected from Georgia waters. These samples were divided over three major rivers that have conditions favorable to a *Pfiesteria*-Like Organism (PLO) or Harmful Algal Bloom (HAB) event on the Georgia coast; the Ogeechee River, the Satilla River, and the St.Marys River. A

PLO/HAB Committee composed of scientists, local fishermen, and Coastal Resources Division personnel determined site selection on these rivers.

On February 7, 2000 a meeting was held at Coastal Resources Division that brought the scientific community and the resource managers together to discuss water quality-monitoring issues on the Georgia coast. The result of the meeting was the creation of a Water Quality Monitoring Task Force that included representatives from the University of Georgia, the Skidaway Institute of Oceanography, Sapelo Island National Estuarine Research Reserve, Marine Extension, the United States Geological Survey, and the Environmental Protection Division. Brian McCallum and Steve Lawrence (USGS), Dorsett Hurley (SINERR), Keith Gates (MAREX), Herb Windham, Mark Frisher, and Keith Maruya (SIO), Julie Vann (EPD), Joe Richardson (SSU), and Merryl Alber and Alice Chalmers (UGA) shared their collective knowledge on monitoring and provided insights on *Pfiesteria* monitoring. The information gathered from these experts has been utilized in Georgia's *Pfiesteria*-like Organism and Harmful Algal Bloom monitoring project.

On March 29, 2000 Georgia began sampling on the Ogeechee, Altamaha, and St.Marys Rivers for water quality physical and chemical parameters. Sampling occurs on a semi-monthly basis and extends through the 9 warm-water months. Sampling sites on the Ogeechee and the St. Marys Rivers are consistent with those chosen by our PLO/HAB Committee. The sites on the Altamaha River were selected utilizing the expertise and knowledge of local Hydrologist Doug Shaw from The Nature Conservancy. A partnership between Coastal Resources Division and The Nature Conservancy has been formed to share information and data relative to the Altamaha River.

Twice during the warmest months of the year, a presence/absence study is completed at 40 sites located in all five major coastal rivers (Savannah, Ogeechee, Altamaha, Satilla, and St. Marys). Forty water samples and 20 sediment samples are collected during each presence/absence sampling event.

Coastal Resources began monitoring water quality along public beaches during FY 1998. This weekly monitoring was implemented to maximize the health and safety and minimize the health concerns of people engaging in water activities on or near Georgia's beaches. The year-round testing examines fecal coliform levels in waters adjacent to and surrounding Georgia's beaches, and those waters found to have fecal coliform levels consistently in excess of 100 MPN are considered contaminated and are addressed by the issuance of an advisory or closure. Additionally, a coinciding advisory or closure status is given to beaches adjacent to contaminated waters.

Beginning July 1, 2002 Georgia will begin an enhanced beach monitoring program that includes developmental and implementation phases to provide more thorough coverage of sample sites on Georgia's beaches and a more efficient mechanism for public notification. All water quality data collected from the existing and proposed beach site locations will be downloaded to a centralized database maintained by the Environmental Protection Agency (EPA).

In conjunction with ongoing *Pfiesteria* sampling, Coastal Resources has implemented nutrient sampling as part of its water quality sampling. The aforementioned Water Quality Monitoring Task Force recommended this additional sampling. Parameters including Nitrate/Nitrite, Nitrite, Orthophosphate, Total Dissolved Phosphorus, Ammonia and Silicates are analyzed from water samples collected at 6 sites in the Ogeechee River, 6 sites in the Altamaha River, and 6 sites in the St. Mary's River. These river samples are collected on a monthly basis. In addition, samples are collected monthly from 36 stations located within Georgia's 8 major sound systems, including Wassaw sound, Ossabaw sound, Sapelo sound, Doboy sound, Altamaha sound, St. Simons sound, St. Andrews sound, and Cumberland sound. Finally, monthly samples are collected from 69 shellfish stations located along coastal Georgia. In all, 99 stations receive nutrient monitoring on a year-round basis.

On February 22, 2000, a meeting was held at CRD between EPA and several representatives from the Ecological Services Section. Dr. Kevin Summers, a representative from EPA, presented the Coastal 2000, National Estuarine Survey to Coastal Resources Division personnel. The purpose of this monitoring initiative is to establish a baseline of environmental conditions or the estuaries of the coastal states as part of a national survey of estuarine condition. The EPA will provide funding for this monitoring effort to Georgia in increments of $200,000 per year for five years. Fifty selected sites will be sampled on the Georgia coast for a core suite of indicators including water quality parameters, sediment chemistry, sediment toxicity, benthic community composition, fish community composition, fish pathology, and contaminants in the fish.

These water quality-monitoring efforts will enhance the ability of scientists, resource managers, and the citizens of coastal Georgia to make proper management decisions about coastal resource issues.

Coastal Marshland Protection

The State recognizes that tidal marshes are an invaluable resource, both ecologically and economically. The biological productivity of tidal marshes can exceed that of the best agricultural lands. Wetlands sustain over one half of Georgia's protected species, provide breeding grounds for wildfowl, serve as nursery and spawning grounds for commercial fisheries, play a key role in water

quality and hydrological cycles, and have an enormous impact on Georgia recreation. It is estimated that Georgia has approximately five million acres of wetlands. Of these, over 700,000 acres are tidally affected wetlands.

In 1970, the Georgia General Assembly enacted the Coastal Marshlands Protection Act (CMPA) to protect and conserve vital estuarine marshlands. The CMPA, administered by the CRD, Habitat Management Program, provides a permitting process for certain water related uses, and prohibits or restricts other uses impacting tidal wetlands. Permit applicants must demonstrate that the proposed project is water dependant, minimizes impacts to tidal marshlands, that no feasible alternative sites exist, and that the project is within the public interest in order to receive a permit. Through the permit review process, most applications are either revised to eliminate the need for a permit, or withdrawn because of potential adverse impacts. The CMPA was amended in 1989 to include a requirement that commercial docking facilities pay a fair market value annual lease for use of the State owned tidal waters. In 1992, this act was amended and revised to increase the protection given to jurisdictional waters, and provided for a mechanism to handle permit applications for small projects in a more timely manner. Wetland losses for tidal marshes have been controlled by the Coastal Marshlands Protection Act. Since enactment of the CMPA in 1970, a total of 348 permits have been issued. These 348 permits have authorized the filling of approximately 167 acres of tidal wetlands. During the last five years, the CRD, Habitat Management program has aggressively investigated more than 160 illegal/unauthorized activities impacting tidal wetlands. In each instance, individuals responsible for the tidal areas impacted were required to comply with the CMPA and restore any lost tidal areas to their original state prior to impacts.

Shellfish Sanitation Program

Georgia's one-hundred linear mile coastline contains approximately 700,000 acres of potential shellfish habitat. Only about 10% of that area, however, actually produces viable shellfish stocks. Lack of suitable cultch, tidal amplitudes, littoral slope, and other geomorphologic features contribute to the limited occurrence of natural shellfish resources along the Georgia coast. Most shellfish in Georgia grow in the narrow inter-tidal zone and are exposed between high water and low water tidal periods. Oysters (Crassostrea virginica) and Hard Clams (Mercenaria mercenaria) are harvested both recreationally and commercially from these tidal harvest areas. While the commercial harvest of wild shellfish stocks has declined over the past century, hard clam mariculture has increased significantly and provided shellfish harvesters with an opportunity to culture and harvest shellfish on a year round basis.

Currently, Georgia maintains approximately 31,816 acres approved for the harvest of shellfish for commercial and/or personal consumption. In order to

classify any growing area as "Approved" for the harvest of shellfish, the National Shellfish Sanitation Program's (NSSP) Manual of Operations (Part 1, Section C-3,a) requires that the state show that the growing area "is not subject to contamination from human and/or animal fecal matter in amounts that in the judgment of the SSCA [State Shellfish Control Authority] may present an actual or potential hazard to public health." Standards of the NSSP further require the state to regularly collect water samples from each approved harvest area and to perform certain analytical procedures to ensure that the area is free from fecal matter as indicated by the absence of coliform bacteria. Georgia is vigorous in its approach to protecting the health of shellfish consumers. Although the guidelines of the National Shellfish Sanitation Program call for testing shellfish growing waters for contaminants on six occasions per year, the Coastal Resources Division doubles that effort by testing the waters twelve times per year. Each month, 69 (sixty-nine) sites are monitored in Chatham, Liberty, McIntosh, Glynn, and Camden counties for Fecal Coliform Bacteria.

Georgia currently has twelve (12) commercial harvest areas and eight (8) recreational harvest areas. Table 5-1 indicates the location and size of those areas approved for shellfish harvest. Only those areas designated for Public Recreational Harvest or those areas under commercial lease are classified as "Approved". All other waters of the state are classified "Prohibited and are closed to the taking of shellfish.

During FY01 the Growing Area Element of the Georgia Shellfish Sanitation Project was evaluated by the Federal Food and Drug Administration. The project administered by Coastal Resources Division was found to be in full compliance with the National Shellfish Sanitation Program (NSSP) requirements.

TABLE 5-1
LOCATION AND SIZE OF AREAS
APPROVED FOR SHELLFISH HARVEST

County	Approved	Leased	Public
Chatham	2,903 acres	0	1,403 acres (48.3%)
Bryan/Liberty	Classification in progress.	Classification in progress	Classification in progress
McIntosh	14,902 acres	9,782 acres (65.6%)	5,120 acres (34.4%)
Glynn/Camden	14,011 acres	6,402 acres (45.7%)	7,609 acres (54.3%)

Commercial and Recreational Fisheries Programs

The CRD has several projects whose purpose are to determine the status of exploited stocks of commercially and recreationally important fish, crustaceans, and mollusks. The Commercial Fisheries Program conducts monthly shrimp and blue crab assessment trawls in the Wassaw, Ossabaw, Sapelo, St. Simons, St. Andrew and Cumberland Sound systems. This sampling is used to evaluate the abundance, size composition, and reproductive status of penaeid shrimp and blue crab for the opening and closing of fishing seasons and areas. Information is also obtained on the commercial landings by species of fish and shellfish harvested each month in Georgia's coastal waters. The Recreational Fisheries Program conducts stock assessments on selected marine sportfish (i.e. spotted seatrout and red drum) and conducts fishery-independent monitoring of estuarine species. The Recreational Fisheries Program also conducts the intercept portion of the Marine Recreational Fisheries Statistics Survey in cooperation with the National Marine Fisheries Service.

Total annual commercial landings in Georgia have ranged from 7.56 to 18 .4 million pounds of product over the 30 year period from 1972 to 2001. Commercial fishermen in Georgia have landed an average annual catch of 14.1 million pounds over the period. The species composition of reported landings has varied substantially. For example, prior to 1980 there were no reported landings of whelks (*Busycon* sp.) in coastal Georgia. A market became established in the early 1980's, with landings peaking in the late 80's with over one million pounds of raw meat (3 million pounds of shell stock), making the state the top producer of whelks or conchs in the nation. This fishery developed as an alternative to shrimp trawling for roughly 40 vessels on an annual basis. Landings in 2001 were 325,7610 pounds of raw meat (977,000 million pounds of shell stock). The population dynamics of whelks are poorly understood, but preliminary examinations of landings have shown to be inversely related to shrimp productivity. A slight trend for the fishery to land smaller animals has been noted.

Penaeid shrimps are the most valuable catch in Georgia commercial landings, typically totaling over 16 million dollars (4.5 million pounds of tails) in unadjusted, ex-vessel value during recent years. Catches are composed primarily of white shrimp (*Litopenaeus setiferus*) during the fall, winter and spring, and brown shrimp (*Farfantepenaeus aztecus*) during the summer. These shrimp spawn in oceanic waters, but depend on the salt marsh wetlands to foster their juvenile and sub-adult stages. White shrimp landings have varied over the last 40 years with no overall trend. Research has shown that densities of spawning stock, and to a lesser extent fall harvest, respond strongly to cold air outbreaks during the early winter which produce wide scale kills of white shrimp, and to a suite of environmental variables impacting the salt marsh ecosystem which produce a

range of growing conditions. Landings in 1984 following the Christmas freeze of 1983 were 52% below the long-term average. Stocks recovered during 1985-1989 as evidenced by increased landings and increases in monthly experimental trawl samples. The Christmas freeze of 1989 produced another region wide kill. Following this event, the states of Georgia and South Carolina closed their territorial waters to shrimp harvest, then requested and received a concurrent closure of adjacent federal waters which covered the spawning season. A combination of this spawning closure and favorable growth and survival conditions during the following 13 months produced an excellent fall/winter harvest during 1990/1991 and a record spring harvest during 1991. In 1995, the record shrimp harvest of 7.1 million pounds was recorded. The most recent winter freeze occurred in early 2000, resulting in an early closure of the fishery.

A disease called black gill, caused by a ciliated protozoan, has impacted shrimp in several recent years. It was first observed in 1996 in the southern portion of the state and was speculated to be caused by freshets associated with Hurricane Fran and Tropical Storm Josephine. The disease occurred again in 1999, 2000, and again in 2002. The disease appears to progress from north to south, first appearing in Wassaw Sound in August and being most prevalent in September. The disease seems to dissipate by December. Infection rates in 2002 were the highest ever recorded, with the coast-wide annual rate at 33.6%. The life cycle of this protozoan is not completely understood, and its impact on shrimp survival is uncertain. However, in 2002, spring white shrimp catches were above normal through August, and have been 50% the long-term average since. Although catch rates from fisheries independent monitoring surveys appear to have a negative relationship with infection rates, this relationship is not statistically significant. Research is needed to understand this organism's life cycle and the environmental factors that cause it to proliferate in some years but not others.

Trends in the brown shrimp fishery present a different picture. While recent landings and experimental catches have varied with no apparent pattern, the long term (40 year) trend in brown shrimp landings has been downward. Several alternative hypotheses bear examination. Reported declines in brown shrimp production may reflect the effects of a shrinking range due to land use practices, and climatological changes. Conditions for juvenile growth and survival may have been altered by a changing climate or direct and indirect alteration to nursery grounds (losses or changes in the quality of fresh and salt water wetlands). Additionally, possible misclassification of brown shrimp by Port Agents may be a factor in the earlier time series of the reported landings. Although highly unlikely with current fishing technology and economic conditions, over fishing of the spawning stock may be resulting in poorer recruitment to Georgia's nursery grounds. Some combination of factors may be influencing stock abundance. Economic conditions in all domestic shrimp fisheries are declining, primarily due

to low unit prices kept down by high volumes of imported product, and by increasing costs of operation.

Reported annual blue crab (*Callinectes sapidus*) landings have declined significantly from earlier landings, with landings in recent years being as much as 60% below the historic average. Blue crabs live longer than penaeid shrimps (3-4 years versus 1-2 years), and also exhibit less extreme fluctuations in annual abundance from one year to the next. Reported 2001 commercial landings (2.7 million pounds) were down 66% the 30 average of 8.1 million pounds. The exact cause of these reduced landings is unknown at this time, but is possibly linked to reduced abundance resulting from precipitation variations (five year drought), wetlands drainage patterns which in turn affect discharge rates in the coastal zone, and a disease called *Hematodinium* which is more prevalent in higher salinity waters. In addition, non-reporting of commercial landings is considered to be problematic in evaluating true population declines versus missing landings.

Economic conditions in the crab fishery are poor. With landings since 1996 all below the 30 year average, and the most recent projection for 2002 landings not to exceed 2.5 million pounds, the industry is facing a disaster. As a result, the Marine Fisheries Section has prepared documentation which was forward to, and signed by the governor on December 11, 2002, declaring a blue crab disaster as a result of drought and disease. This declaration will be forwarded to the National Marine Fisheries Service and if approved, may result in economic assistance for crabbers and research funds to better understand the blue crab population dynamics.

Total finfish landings have increased over time. This has been affected by the re-establishment of an offshore fleet in Georgia during the late 1970's. Snapper, grouper, porgy, king mackerel, sharks, wreckfish, and associated species have contributed to the trend. Some of these species are currently in an over-fished state and are under intensive management. Others, such as king mackerel, have responded positively to state and federal management. American shad populations in the Altamaha River have fluctuated over the past 30 years. Research conducted in 1967 and 1968 generated population size estimates, and the shad run of 1.9 million fish in 1968 was the largest of the time series examined. Additional research conducted since 1982 has been able to provide updated population estimates and has shown Altamaha shad runs quadrupling from 70,396 fish in 1991 to 272,556 in 1997. This rebound may be attributable to a statistically significant decrease in commercial fishing effort which occurred from 1982 to 1991. Apparently, as older fishermen have left, there have been few new entrants into the fishery. No effort estimates are available since 1991. Regulations have remained fairly constant over the past 15 years. The only two modifications were a 15-day season extension in 1983, and commercial fishing regulations in 1984 to clarify open and closed areas on the Altamaha River. No

changes were made to shad sportfishing regulations. While the increases in landings and stock size during the early 1990's was significant, they still represent only a fraction of the 1968 run, and recently landings (1999-2001) were about one third the values seen in the early 1990's.

Atlantic sturgeon landings continued to decline to very low levels during the last 20 years, and strict harvest limitations have been unable to rebuild spawning stock. Bycatch of juveniles in the shad and shrimp fisheries may also have hindered this stock's recovery as well as that of the endangered shortnose sturgeon. As a result of the stock crash of the Atlantic sturgeon stocks in Georgia, the commercial season was closed indefinitely in 1997 to allow the stocks to recover. Research on Atlantic sturgeon in the Altamaha River and the endangered shortnose sturgeon in the Altamaha and Savannah Rivers indicated that these species have very specific habitat requirements especially during the summer. The impact of habitat and water quality alterations on the stock is unknown.

Total landings of bivalve molluscs have fluctuated greatly over the last 30 years. During the 1970's landings were totally dominated by oysters (*Crassostrea sp.*), generally over 50,000 pounds of raw meats per annum. During the early 1980's fishermen were increasingly focused on hard clams (*Mercenaria sp.*) due to stock declines in other areas along the east coast and their market value. This combined with increasing acreages available for harvest activities due to water quality certifications, allowed the replacement of oysters by clams as the premier species from 1986-1988. From 1988-1992 clam landings again declined and oyster landings grew. Since 1990, the clam landings have shown a general increase in contrast to the oyster fishery which, after large catches from 1989-92, have shown a steady decline since. In 2001, clam harvest was 24,872 pounds, the sixth highest annual catch since 1972. Oyster harvest in 2001 was only 8,528 pounds – 22.5% of the 30 year average. Labor costs have effected this change in combination with temporary inaccessibility to some grounds because of conflicts over harvest rights. No acreage has been lost to deteriorating water quality. Current research is focusing on improvements in stock genetics (growth and appearance enhancements), cultch substrate comparisons, and establishing new populations.

Recreational fishing effort, in numbers of trips, has exhibited substantial variation from year to year. In 1996 total trips were estimated to be 577,137 with a total catch of 2.0 million finfish. In order to preserve sport fish stocks, regulations establishing seasons, creel limits, and size limits for 17 species were instituted in 1989. Throughout the 1990s and as late as 2002, regulations have been implemented or revised in order to reduce fishing mortality. Ongoing population monitoring efforts with periodic stock assessments allow managers to determine if fish populations are healthy and not being overfished.

Sapelo Island National Estuarine Research Reserve

The Sapelo Island National Estuarine Research Reserve (SINERR) is one of 22 estuarine sites nationwide in the National Estuarine Research Reserve Program. Georgia began efforts to designate the Duplin Estuary as an estuarine sanctuary in 1975 and received designation from the Department of Commerce in 1976.

The SINERR has two primary functions: to protect natural and cultural resources and to allow scientists to investigate how such estuarine systems function. Of the 16,000 acres which make up Sapelo Island, SINERR occupies nearly one third. The DNR, which manages SINERR, also manages more than one half the island as the Richard J. Reynolds Wildlife Management Area and another 2,732-acre tract designated as the Natural Area. Hog Hammock, a 434-acre tract, is privately owned.

The DNR has instituted protective management practices while promoting visitor activities including guided interpretive tours, hunting, fishing, and nature study. DNR activities include managing wildlife and forest resources, enforcing conservation laws, operating the ferry and visitor use facilities, presenting educational programs for visitors, and assisting in scientific monitoring.

The research function of SINERR is largely carried on by the University of Georgia Marine Institute. The Maine Institute employs full-time scientists, technical, and support staff. Its research is centered on how salt-marsh estuaries function. Fully 80% of the Marine Institute research is conducted within the SINERR.

Coastal Zone Management

Recognizing the economic importance of environmentally sensitive coastal areas, the Federal Coastal Zone Management Act of 1972 encourages states to balance sustainable development with resource protection in their coastal zone. As an incentive, the federal government awards states financial assistance to develop and implement coastal zone management (CZM) programs that fulfill the guidelines established by the Act. As further incentive, states with federally-approved CZM programs are granted "federal consistency" authority whereby any federal activity that may impact resources within a state's coastal zone must be consistent with the enforceable policies of that state's federally-approved CZM program. Thus, states with approved programs have a voice in federal activities such as harbor projects; federal permits, federal fisheries management plans, and federally financed construction projects.

To achieve approval, state CZM programs must address the protection of natural resources and fish and wildlife, coastal development, public access to the coast

for recreational purposes, and other aspects of coastal management. State programs must also include public and local government participation in coastal management decision making. States must submit CZM programs to the National Oceanic and Atmospheric Administration (NOAA) for approval in order to receive federal implementation funds. The annual amount of implementation funding available to each state with an approved program is based upon a formula factoring in the linear miles of coastline with coastal population. With an approved CZM program, Georgia is eligible for more than $1 million annually.

Developed over the past five years through an extensive public process, the Georgia Coastal Management Program is a networked program implemented by the CRD and other state agencies with management authority in the coastal area. As lead agency for the program, the CRD conducts several functions including managing saltwater fisheries, monitoring water quality for shellfish, administering Coastal Marshlands Permits and Shore Permits, providing technical assistance, reviewing federal activities for consistency with the state laws that comprise the Coastal Management Program, and other activities. Other state, local, and federal agencies continue to administer their respective authorities, and cooperate with the CRD on coastal issues. Acting as a strategic plan for the coastal area, the Program relies on existing state laws and authorities to fulfill federal resource protection guidelines. The jurisdiction of the Program extends over the first and second tier of coastal counties to encompass all tidally-influenced waters. This eleven-county area includes: Brantley, Bryan, Camden, Charlton, Chatham, Effingham, Glynn, Liberty, Long, McIntosh, and Wayne.

The Georgia Coastal Management Program seeks to balance economic development in Georgia's coastal zone with preservation of natural, environmental, historic, archaeological, and recreational resources for the benefit of Georgia's present and future generations. Several activities will help the CRD achieve these goals in a proactive manner without increasing bureaucracy. The Program will offer Coastal Incentive Grants to local communities to promote grassroots solutions to coastal issues. The Program will promote interagency cooperation through regular meetings and technical assistance. The Program will simplify permitting processes in order to be more customer friendly and allow staff to focus on resource protection rather than paperwork. The Program will open a site office in Savannah for coastal permitting, to better serve the public in that area. Finally, the Program will educate the public on coastal issues by hiring a public outreach specialist, hosting an annual coastal environmental education festival, and implementing the Coastal Ark, a mobile resource training and education unit.

The GAEPD has been an active participant throughout the development of the Georgia Coastal Management Program. The agency has provided guidance and

technical assistance in efforts to improve coastal water quality in general, and in the development of a Coastal NonPoint Source Control Program in particular. Under the Coastal Zone Act Reauthorization Amendments of 1990, Congress added a section entitled "Protecting Coastal Waters." This section directs states with federally-approved CZM programs to develop a Coastal NonPoint Source Program. To that end, the GAEPD is assisting the CRD in I) identifying land uses which may cause or contribute to the degradation of coastal waters, 2) identifying critical coastal areas adjacent to affected coastal waters, 3) identification of appropriate measures related to land use impacts to achieve and maintain water quality standards and designated uses, and 4) identifying management boundaries to more effectively manage land use impacts and water uses to protect coastal waters.

EPA Wetland Protection Development Grants.

Joint General Permit with the U.S. Army Corp of Engineers, Savannah District Development Project. Start 7-1-94, End 6-30-95. The goal of this grant was to simplify the permitting process by reducing unnecessary duplication between involved State and Federal agencies and by reducing permit processing times for the individual applicant for private, recreational docks. This allowed valuable personnel and monetary resources to be more effectively allocated to activities directly affecting the State's coastal resources, such as monitoring and enforcement.

Georgia Wetlands Training and Technical Support Project. Start 7-1-94, End 6-30-97. The goal of this grant was to improve state wetlands management through an in-service training program that would enhance the capabilities of conservation officers to recognize and report violations of current federal and state regulatory laws and permits designed to prevent the loss of wetlands and degradation caused by erosion and sedimentation and non-point source pollution. A second goal of this grant was to enhance the understanding of the ecological value of wetlands and wetlands protection of local government officers, educators, and teachers in the coastal counties by providing training and printed support materials. Digitization was also completed on the National Wetland Inventory maps for the entire coast of Georgia.

EPA Lower Altamaha River Watershed Demonstration Project. Start 7-1-95, End 6-30-97. The main goals of the Demonstration Project were to inventory and analyze wetlands data collected from the Altamaha River watershed using GIS; classify and rank priority wetlands within the watershed; design a wetlands protection strategy; and develop individualized maps and informational packets for landowners. The end result of the two year Lower Altamaha River Watershed Demonstration Project is a comprehensive management plan for the lower watershed based on scientific data collected before and during the project. The

management plan includes an identification of priority wetlands; and analysis of the stresses to the system and the sources of those stresses; and strategies and goals that will serve as recommendations on how to best conserve, preserve and restore the flora, fauna and habitats of the Altamaha River watershed. As a result, State, regional, and local officials will be able to use the management plan to make realistic planning and land use decisions based on sound scientific data; and individual landowners will be well informed about the value of their land and the potential conservation and preservation options available to them.

Consolidating and Streamlining the Permitting Process in Georgia Coastal Counties. Start 7-1-96, End 6-30-99. The goal of this grant is to develop processes to enhance State regulatory authority and policies in regards to wetlands by improving coordination of Section 401 Water Quality Certification with EPD and State Programmatic General Permits for residential docks with the Army Corps of Engineers. The grant will identify and combine various programs, resources, and recommendations into a wetlands protection strategy that reduces duplicative programs to achieve more comprehensive habitat protection in coastal Georgia.

EPA Wetlands Protection Through Partners in Conservation Grant Program. Start 8-1-97, End 7-31-99. The goal of this grant is to develop watershed-based wetland technical assistance, outreach activities, and training opportunities to local government officials within the eleven county coastal area of Georgia. The objectives of this grant enable Coastal Resources Division to foster wetland ecosystem considerations in local land use decisions, to expand local government capacity to become proactive in protecting wetland resources, and to encourage local government officials to take responsible actions regarding environmental issues affecting coastal Georgia. The Coastal Resources Division will establish an information clearing house and coordination function to bring understanding and implementation of currently available wetland management tools and techniques directly to stakeholders, including local government regulators, elected officials, and building inspectors in the eleven coastal counties. A mobile classroom called the Coastal Ark will be used to conduct on-site training, demonstrations, and technical assistance.

CHAPTER 6
Public Health/Aquatic Life Issues

Fish Consumption Guidelines

Background. Fishing is a valuable activity to Georgia's citizens. The ways in which people participate in fishing varies widely. To some people, fishing is an activity associated with family. Teaching children to catch bream off a dock or taking a group of campers at a scout camp for an afternoon of bank fishing are both memorable experiences. Some people participate in fishing purely for the challenge of competition, either competing in an organized club tournament or just competing with the fish to bring to creel and release a limit. Catching fish for the dinner table is also a valuable activity. No matter how a person participates in fishing it should be a fun and safe activity. This also includes eating the fish.

Unfortunately, some fish from a few waterbodies contain substances, which prohibit the safe consumption in unlimited quantities. The Wildlife Resources Division (WRD), the Coastal Resources Division (CRD), and the GAEPD of the Georgia Department of Natural Resources (DNR) work cooperatively to collect and analyze fish samples to provide information for Georgia fishermen.

Fish Monitoring Program. Georgia has more than 44,000 miles of perennial streams and more than 421,000 acres of lakes. It is not possible for the DNR to sample every stream and lake in the state. However, high priority has been placed on the 26 major reservoirs, which make up more than 90% of the total lake acreage. These lakes will continue to be sampled as part of a five year rotating schedule to track any trends in fish contaminant levels. The DNR has also made sampling fish in rivers and streams downstream of urban and/or industrial areas a high priority. In addition, DNR focuses attention on public areas which are frequented by a large number of anglers.

The program includes testing of edible fish and shellfish tissue samples for the substances listed in Table 6-1. Of the 43 constituents tested, only PCBs, chlordane, dieldrin, DDT and its metabolites, and mercury have been found in fish at concentrations above what may be safely consumed at an unlimited amount or frequency.

TABLE 6-1
PARAMETERS FOR FISH TISSUE TESTING

Antimony	Mercury	a-BHC	4,4-DDT	Heptachlor	PCB-1248
Arsenic	Nickel	b-BHC	Dieldrin	Heptachlor Epoxide	PCB-1254
Beryllium	Selenium	d-BHC	Endosulfan I	Toxaphene	PCB-1260
Cadmium	Silver	g-BHC (Lindane)	Endosulfan II	PCB-1016	Methoxychlor
Chromium, Total	Thallium	Chlordane	Endosulfan Sulfate	PCB-1221	HCB
Copper	Zinc	4,4-DDD	Endrin	PCB-1232	Mirex
Lead	Aldrin	4,4-DDE	Endrin Aldehyde	PCB-1242	Pentachloroanisole
					Chlorpyrifos

The use of PCBs, chlordane, DDT and dieldrin have been banned in the United States, and, over time, the levels are expected to continue to decline. Reassessment of data from new fish collections in the only water body having restricted consumption guidance prior to 2002 for chlordane documented that levels had substantially decreased and no restriction of fish consumption is now recommended. One water segment has a restriction in consumption recommended for one species due to dieldrin residues, and one pond has restrictions recommended due to DDT/DDD/DDE residues.

Mercury is a naturally occurring metal that cycles between the land, water, and the air. As mercury cycles through the environment it is absorbed and ingested by plants and animals. It is not known where the mercury in Georgia's fish originates. Mercury may be present due to mercury content in natural environments such as in South Georgia swamps, from municipal or industrial sources, or from fossil fuel uses. It has been shown that mercury contamination is related to global atmospheric transport. States across the southeast and the nation have detected mercury in fish at levels that have resulted in limits on fish consumption. In 1995, the USEPA updated guidance on mercury, which documented increased risks of consuming fish with mercury. The DNR reassessed all mercury data and added reduced consumption guidelines in 1996 for a number of lakes and streams, which had no restrictions in 1995. The Georgia guidance for 2002 reflects the continued use of the more stringent USEPA risk level for mercury.

Evaluation Of Fish Consumption Guidance for Assessment Of Use Support. USEPA guidance for evaluating fish consumption advisory information for 305(b)/303(d) use support determinations has been to assess a water as fully supporting uses if fish can be consumed in unlimited amounts; as partially supporting if consumption needs to be limited; and, as not supporting if no consumption is recommended. Georgia followed this guidance in evaluating the fish consumption guidelines for the 2000 and earlier 305(b)/303(d) lists. This assessment methodology was followed again in developing the 2002 305(b)/303(d) List for all fish tissue contaminants except mercury. Mercury in fish tissue was assessed and a segment or waterbody was listed if the trophic-weighted fish community tissue mercury was in excess of the new USEPA water quality criterion (*Water Quality Criterion for the Protection of Human Health: Methylmercury*, EPA-823-R-01-001, January 2001). For mercury, waters were placed on the partial support list if the calculated trophic-weighted residue value was greater than 0.3 µg/g wet weight total mercury, and less than 2 µg/g wet weight, and on the not support list if the value was greater than 2 µg/g wet weight. For contaminants other than mercury (PCBs, dieldrin, DDT/DDD/DDE) waters were placed on the not support list if the assessment indicated any no consumption of fish, or placed on the partial support list if the assessment indicated any need for reduced consumption rates. The USEPA criteria represents a national approach to address what mercury levels are protective for fishing waters. The existence of risk based recommendations to reduce consumption were used with respect to other contaminants detected in fish tissue.

Risk-Based Assessment For Fish Consumption. In 1995, Georgia began issuing tiered recommendations for fish consumption. Georgia's fish consumption guidelines are "risk-

based" and are conservatively developed using currently available scientific information regarding likely intake rates of fish and toxicity values for contaminants detected. One of four, simple, species-specific recommendations is possible under the guidelines: No Restriction, Limit Consumption to One Meal Per Week, Limit Consumption to One Meal Per Month, or Do Not Eat. In 2002, 58.3 % of recommendations for fish tested in Georgia waters were for No Restriction, 28 % were to Limit Consumption to One Meal Per Week, 12.4 % were to Limit Consumption to One Meal Per Month, and 1.3 % were Do Not Eat Advisories. Eighty-six percent of the recommendations available in 2002 were for no, or only minor restrictions (allowing more than 50 meals to be consumed per year). It should be noted that the dramatic increase of waters not fully meeting designated uses as related to fish consumption was a result of converting to a conservative risk-based approach for evaluating contaminants data, and not a result of increased contaminant concentrations in Georgia's fish.

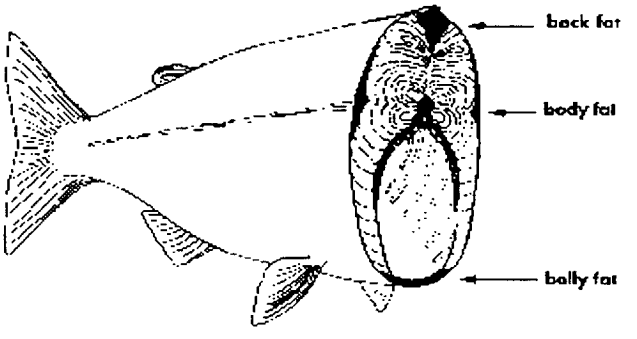
General Guidelines to Reduce Health Risks. The following suggestions may help to reduce the risks of fish consumption:

Keep smaller fish for eating. Generally, larger older fish may be more contaminated than younger, smaller fish. You can minimize your health risk by eating smaller fish (within legal size limits) and releasing the larger fish.

Vary the kinds of fish you eat. Contaminants build up in large predators and bottom-feeding fish, like bass and catfish, more rapidly than in other species. By substituting a few meals of panfish, such as perch, sunfish and crappie, you can reduce your risk.

Eat smaller meals when you eat big fish and eat them less often. If you catch a big fish, freeze part of the catch (mark container or wrapping with species and location), and space the meals from this fish over a period of time.

Clean and cook your fish properly. How you clean and cook your fish can reduce the level of contaminants by as much as half in some fish. Some chemicals have a tendency to concentrate in the fatty tissues of fish. By removing the fish's skin and trimming fillets according to the diagram, you can reduce the level of chemicals substantially. Mercury is bound to the meat of the fish, so these precautions will not help reduce this contaminant.



Remove the skin from fillets or steaks. The internal organs (intestines, liver, roe, and so forth), and skin are often high in fat and contaminants.

Trim off the fatty areas shown in black on the drawing. These include the belly fat, side or body fat, and the flesh along the top of the back. Careful trimming can reduce some contaminants by 25 to 50%.

Cook fish so fat drips away. Broil, bake or grill fish and do not use the drippings. Deep-fat frying removes some contaminants, but you should discard and not reuse the oil for cooking. Pan frying removes few, if any, contaminants.

Specific Waterbody Consumption Guidelines. These guidelines are designed to protect you from experiencing health problems associated with eating contaminated fish. It should be noted that these guidelines are based on the best scientific information and procedures available. As more advanced procedures are developed these guidelines may change.

PCBs, chlordane, dieldrin, DDT and methylmercury build up in your body over time. It may take months or years of regularly eating contaminated fish to accumulate levels which would affect your health. It is important to keep in mind that these guidelines are based on eating fish with similar contamination over a period of 30 years or more. These guidelines are not intended to discourage people from eating fish. They are intended to help fishermen choose safe fish for the table.

Table 6-2 lists the lakes and streams where the fish have been tested and found to contain little or no contamination. There are no problems with eating fish from these water bodies.

Tables 6-3 and 6-4 list the lakes and streams where consumption guidance has been issued by the DNR. This information is provided annually in Georgia's Freshwater and Saltwater Fishing Regulations, which is available from DNR and also supplied with each fishing license purchased. This information is also updated annually in the DNR publication *Guidelines for Eating Fish From Georgia Waters*.

Special Notice For Pregnant Women, Nursing Mothers, and Children. If you plan to become pregnant in the next year or two, are pregnant now, or are a nursing mother, you and your children under 6 years of age are especially sensitive to the effects of some contaminants. For added protection, women in these categories and children may wish to limit consumption to a greater extent than recommended in Tables 6-3 and 6-4.

Fish tissue consumption guidelines are discussed in detail in the DNR publication *Guidelines for Eating Fish from Georgia Waters-2002 Update* that is reproduced in Appendix C.

Bathing Area Monitoring

The U.S. Army Corps of Engineers has conducted fecal coliform monitoring at its bathing beaches in Georgia. Tennessee Valey Authority (TVA), Georgia Power, the U.S. Forest

TABLE 6-2
NO CONSUMPTION RESTRICTIONS - 2002

LAKES	RIVERS	
Allen Creek WMA Ponds A & B	Alcovy River	Moccasin Creek (Lake Burton Trout Hatchery)
Blackshear	Boen Creek (Rabun Co.)	Nickajack Creek
Bowles C. Ford Lake	Brasstown Creek (Towns Co.)	North Oconee River
Brasstown Valley Kid's Fish Pond	Broad River	Noonday Creek (Cobb Co.)
Carters	Buffalo Creek (Carroll Co.)	Ocmulgee River (Butts, Monroe, Houston, Twiggs, & Pulaski Cos.)
City of Adairsville Pond	Butternut Creek (Union Co.)	
Clayton Co. Water Auth. Lakes	Cane Creek (Lumpkin Co.)	Oconee River (Laurens Co. & Milledgeville to Dublin)
Blalock, Smith and Shamrock	Chattahoochee River (Chattahoochee, Early, & Stewart Cos.)	
Dodge County PFA		Ogeechee River (Ft. McAllister)
Fort Yargo State Park Lake	Chattanooga Creek	Olley Creek
Hard Labor Creek (Rutledge)	Chattanooga River (NW Ga.)	Ponder Branch (Walker Co.)
Juliette	Chickasawhatchee Creek	Proctor Creek
Ken Garden	Coleman River	Sewell Mill Creek
Mayer	Daniels Creek (Cloudland Canyon State Park)	Slab Camp Creek (Oconee Co.)
McDuffie PFA East Watershed Ponds		South River (Butts Co.)
Nancy Town Lake	Dukes Creek	Spirit Creek
Olmstead	East and South Chickamauga Creek	Stamp Creek (Pine Log WMA)
Paradise PFA (Patrick & Horseshoe 4)	Flint River (Dougherty, Baker & Mitchell Cos.)	Stekoa Creek
		Tallapoosa River (at and above U.S. Hwy. 27)
Payton Park Pond	Goldmine Branch	Tallulah River
Seed	Jacks River	Upatoi Creek
Sinclair	Jones Creek	Yahoola Creek
Shepherd CEWC	Little Dry Creek (Floyd Co.)	Yellow River
Varner	Little Tallapoosa River	
Walter F. George	Little Tennessee River	
	Middle Oconee River	
	Mill Creek (Whitfield Co.)	

TABLE 6-3
GUIDELINES FOR LIMITING THE FISH YOU EAT
LAKES - 2002

LAKES	NO RESTRICTIONS	1 MEAL PER WEEK	1 MEAL PER
Albany By-Pass Pond		LMB, Brown bullhead	
Acworth	Bluegill, LMB < 16"	LMB > 16"	
Allatoona	Carp < 16", Crappie, Spotted bass< 12",	Spotted bass 12-16", LMB > 16",	
Andrews	CCF	LMB > 12"	
Banks	Bluegill		LMB > 12"
Bartlett's Ferry	Crappie	HB < 12", LMB > 12", CCF < 16"	HB & CCF > 16"
Bennett CEWC PFA		LMB > 12"	
Black Shoals	CCF < 12"	CCF 12-16"	LMB 12-16"
Big Lazer PFA	LMB 12-16", CCF	LMB > 16"	
Blue Ridge	CCF < 16", LMB < 12"	White bass & LMB 12-16", CCF > 16"	
Burton	LMB <16", CCF, Bluegill, White catfish	LMB > 16", Spotted bass 12-16"	
Pond N. Bush Field, Augusta	Bluegill, LMB < 12"	LMB 12-16"	
Chatuge	LMB >12", CCF >12"	Spotted bass 12-16"	
Clarks Hill	CCF, Black crappie, Redear, White perch, Striped bass, Spotted sucker, HB, LMB <16"	LMB > 16"	
Evans County PFA	CCF, LMB 12-16"	LMB > 16"	
Goat Rock	Black crappie, LMB 12-16", Spotted sucker	HB < 12" , CCF 12-16"	HB & CCF & LMB > 16" White bass < 16"
Hartwell (Tugaloo Arm)	Black crappie, Hybrid/Striped bass < 12", CCF < 16"	LMB < 16", Carp > 16"	HB/Striped bass 12-16" CCF & LMB > 16"
	DO NOT EAT Hybrid and Striped bass > 16 inches in length		
Hartwell - main body of lake	DO NOT EAT Hybrid and Striped bass (S.C. Dept. Health and Environmental Control 1-888-849-7241)		LMB, CCF
High Falls	HB, CCF & LMB < 16", Crappie, Redear sunfish	CCF & LMB > 16"	
Jackson	Crappie, Redear sunfish, Catfish & LMB < 16"	Catfish & LMB > 16"	
Lanier	Catfish & Striped bass < 16", Bluegill, Crappie	LMB, Spotted bass, Striped bass & CCF > 16", Carp > 16"	
L. Ocmulgee St. Pk.		Brown bullhead 12-16"	LMB > 16"
McDuffie PFA, West	CCF	LMB	
Nottely	CCF, Black crappie	LMB > 12", Striped bass > 16"	
Oconee	LMB < 16", Catfish, Crappie,HB	LMB > 16"	
Oliver	Striped bass < 12", CCF < 16", Redear, Bluegill	LMB > 12", CCF > 16"	
Rabun	LMB 12-16", Bluegill, White catfish < 16"	White catfish & LMB > 16"	
Reed Bingham S.P.			LMB > 12"Catfish > 16"
Richard B. Russell	Crappie, Bluegill, White perch, Catfish	LMB > 12"	
Seminole	Bullhead < 12", LMB 12-16" , CCF	Bullhead > 12", LMB > 16"	
Stone Mountain	Catfish	LMB > 16"	
Tobesofkee	CCF, LMB 12-16"	LMB > 16"	
Treutlen PFA		Lake chubsucker < 12"	LMB > 16"
Tugalo	White catfish 12-16", Bluegill		LMB > 12"
Tribble Mill Park Pond Gwinnett County	Black Crappie, Bluegill, LMB < 12"	LMB 12-16"	
West Point	Black crappie, HB < 12"	CCF & HB > 12" LMB > 16"	
Worth	LMB <16", Flathead catfish,CCF < 16"	CCF & LMB > 16"	
Yonah		LMB 12-16", catfish 12-16"	

Abbreviations: < means less than, > means more than, LMB = largemouth bass, HB = Hybrid bass, CCF = Channel catfish

TABLE 6-4
GUIDELINES FOR LIMITING THE FISH YOU EAT
RIVERS - 2002

RIVERS/CREEKS	NO RESTRICTIONS	1 MEAL PER WEEK	1 MEAL PER MONTH
Alapaha River	Redbreast sunfish	Spotted sucker	LMB, Bullhead
Alapahoochee River		Bullhead	
Allatoona Creek, Cobb Co.		Spotted bass, Alabama Hog Sucker	
Altamaha River	CCF (below US 25)	Flathead catfish, LMB, CCF	
Apalachee River	CCF	LMB	
Beaver Creek (Taylor Co.)			Yellow bullhead
Brier Creek (Burke Co.)		Spotted sucker	LMB
Canoochee River		Redbreast	LMB, CCF
Casey Canal	LMB, Bluegill	Striped mullet	
Chatooga River (NE Ga., Rabun County)		Northern Hog Sucker, Silver Redhorse	
Chattahoochee River (Helen to Lanier)	CCF	Redeye bass, Bullhead,Redhorse	LMB
Chattahoochee River (Buford Dam to Morgan Falls Dam)	Brown trout, Carp, Rainbow trout	LMB	
Chattahoochee River (Morgan Falls Dam to Peachtree Creek)	Brown trout, Jumprock sucker LMB		Carp
Chattahoochee River (Peachtree Creek to Franklin, Ga)	CCF, Spotted bass White sucker, Carp	LMB	Striped bass
Chattahoochee River (Oliver Dam to Chattahoochee Co.)	LMB	CCF	
Chattahoochee River (West Point dam to I-85)	LMB, Bullheads	Spotted bass	
Chickamauga Creek (West)	Redbreast sunfish	Spotted bass	
Conasauga River (below Dalton)			White bass, buffalo
Coosa River (Rome to Hwy 100, Floyd Co.)		Spotted bass	LMB, Striped bass, Blue catfish
	DO NOT EAT SMALLMOUTH BUFFALO		
Coosa River (Hwy 100 to State line, Floyd Co.)	Spotted bass	Black crappie, LMB	Striped bass, CCF, buffalo
Etowah River (Dawson County)		Blacktail Redhorse	
Etowah River (above Lake Allatoona)	Golden redhorse	Spotted bass	
Etowah River (below Lake Allatoona)	CCF, Striped bass, Bluegill	Spotted bass, LMB	Smallmouth buffalo
Flint River (Spalding/Fayette cos.)	Spotted sucker	LMB	
Flint River (Meriwether/Upson/Pike cos.)	CCF, Flathead catfish	Shoal bass	
Flint River (Taylor co.)	CCF, Shoal bass	LMB	
Flint River (Macon/Dooly/Worth cos.)	CCF	LMB	
Gum Creek (Crisp Co.)	Carp	LMB	
Ichawaynochaway Creek	Spotted Sucker	LMB	
Kinchafoonee Creek (above Albany)		LMB, Spotted sucker	
Little River (above Clarks Hill Lake)	Spotted sucker, Silver Redhorse	LMB	
Little River, (above Ga. Hwy 133, Valdosta)	Spotted sucker	LMB	
Muckalee Creek (above Albany)	Spotted sucker	LMB	
Ochlockonee River (near Thomasville)		Spotted sucker, White catfish	LMB
Ocmulgee River (below Macon, Bibb co.)	CCF	LMB	Flathead catfish
Ocmulgee River (Telfair/Wheeler cos.)		Flathead catfish, LMB	
Oconee River (above Barnett Shoals)		Silver redhorse, LMB	

TABLE 6-4 Continued

RIVERS / CREEKS	NO RESTRICTIONS	1 MEAL PER WEEK	1 MEAL PER MONTH
Ogeechee River (all to Ft. McAllister)		Redbreast sunfish, CCF, Spotted sucker, Snail bullhead	LMB
Ohoopee River (Emanuel/Toombs cos.)		Spotted sucker, Redbreast	LMB
Okefenokee Swamp (Billy's Lake)		Flier	Bowfin
Oostanaula River, Hwy. 156, Calhoun	Bluegill	Smallmouth buffalo	
Oostanaula River, Hwy 140, to Coosa River	Bluegill, Smallmouth buffalo	LMB, CCF, Spotted bass	Striped bass
Patsiliga Creek (Taylor Co.)		Suckers, Chain Pickerel	Bass
Pipemaker Canal		LMB	
Satilla River (Waycross, Ware/Pierce cos.)		Redbreast sunfish, CCF	LMB
Satilla River (near Folkston, Camden Co.)			LMB, Redbreast
Savannah River (above & below New Savannah Bluff Lock & Dam)		Spotted sucker, LMB	
Savannah River (Chatham/Screven cos.)	CCF, Redear sunfish	LMB	
Savannah River (Effingham Co.)	CCF, Redbreast sunfish	White catfish	LMB, Bowfin
Savannah River (Tidal Gate)	Red drum	White catfish	
Short Creek (Warren Co.)		Sunfish	
South River (Henry Co., Snapping Shoals)	Silver redhorse, CCF	LMB	
South River (Butts Co., Hwy. 36)	LMB, CCF, Crappie, Redear sunfish	White catfish, Silver redhorse	
Spring Creek (Seminole/Decatur/Miller cos)	Spotted sucker	LMB	
St. Marys River (Camden Co.)	Redbreast sunfish	LMB	
St. Marys River (Charlton Co.)		Redbreast sunfish	LMB
Suwannee River		Bullhead, Chain pickerel	LMB
Swamp Creek (Redwine Cove Road)		Redeye bass	
Talking Rock Creek		Redeye bass	
Tallapoosa River	Bluegill	Blacktail Redhorse	
Trib. To Hudson River, Alto, Banks Co.	Brown bullhead	Redeye bass	
Withlacoochee River (Berrien/Lowndes cos.)		Redbreast sunfish	LMB

COASTAL RIVERS & CREEKS	NO RESTRICTIONS	1 MEAL PER WEEK	1 MEAL PER MONTH	DO NOT EAT
Turtle River System (Purvis, Gibson Cr.s)				all Seafood
Turtle & Buffalo Rivers (upriver Hwy 303)	Shrimp	Red drum,B. crab, Flounder	Croaker, Spotted seatrout	Black drum, Bivalves
Turtle River (Hwy 303 - Channel Marker 9)	Shrimp	Flounder	Red & Black drum, B. crab Spotted seatrout Croaker	Bivalves
Turtle River (C. Marker 9 & So. Brunswick River to Dubignons & Parsons creeks)	Shrimp, Flounder, Red drum	Croaker, Blue crab	Black drum, Spotted seatrout	Bivalves
Terry Creek (So. Torras Causeway to Lanier Basin)	Spot, Mullet, Shrimp, Croaker, Spotted seatrout Red & Black drum, Blue crab	Yellowtail (Silver perch)		Bivalves

SPECIAL LISTING: RIVERS / CREEKS	Recommendation
Terry and Dupree creeks (all of Dupree Creek and Terry Creek north of Torras Causeway to ½ mile west of confluence with the Back River)	**No Fishing or Swimming due to the disturbance of toxaphene contaminated sediments in the cleanup process**

King Mackerel Special Joint State Guidance Issued by Georgia, North Carolina, South Carolina and Florida For South Atlantic Ocean

Size Range (Fork Length, Inches)	Recommendations for Meal Consumption of King Mackerel Caught Offshore Georgia Coast
24 To Less Than 33 Inches	No Restrictions
33 To 39 Inches	1 meal per month for pregnant women, nursing mothers and children age 12 and younger meal per week for other adults
Over 39 Inches	Do Not Eat

Forest Service, the National Park Service, Georgia State Parks, and counties and cities throughout the state have also conducted some sampling. The City of Acworth closed a swimming beach on Lake Acworth in the early 1990s. In 1994-1995, a water quality investigation of Lake Acworth and its watershed was conducted by Kennesaw State College under a contract with Cobb County. Based on the results of the study, Cobb County developed and implemented portions of an action plan for water quality improvements. In 1997 the City of Acworth and Cobb County conducted monitoring on Lake Acworth. The City of Acworth reopened the beach in June 1998.

Shellfish Area Closures

The potential shellfish growing areas on the Georgia coast are classified as "Approved", "Restricted", or "Prohibited" in accordance with the criteria of the National Shellfish Sanitation Program. Shellfish growing areas classified as "Prohibited" are listed in Appendix A. These areas are closed as a precaution to shell fishing because of the proximity to a marina or a municipal or industrial discharge. Georgia's one hundred linear mile coastline contains approximately 700,000 acres of potential shellfish habitat. Only about 10% of that area, however, actually produces viable shellfish stocks. Lack of suitable clutch, tidal amplitudes, littoral slope, and other geomorphological features contribute to the limited occurrence of natural shellfish resources along the Georgia coast. Most shellfish in Georgia grow in the narrow intertidal zone and are exposed between high water and low water tide periods. Georgia maintains approximately 32,000 acres approved for the harvest of shellfish for commercial and/or personal consumption. Georgia currently has three harvest areas comprised of commercial leases and public recreational plots. Only those areas designated as Public Recreational Harvest or those areas under commercial lease are classified as "Approved". "Approved" areas are monitored regularly. All other waters of the state are classified as "Prohibited", are not monitored and are closed to the taking of shellfish due to the presence of human activities that may potentially create a problem.

Even though some of these areas meet the criteria to allow harvesting, they were classified as "Prohibited" so that a safe zone can be maintained in the event of an accidental spill. Additionally, another 179,000 acres of the potential shellfish growing area is classified as "Prohibited" due to the lack of available water quality data.

Pollution-Related Fish Kills

During the 2000-2001 period, a total of 44 fish kill events were reported, with 22 tributable to some pollutant entering a stream, lake, or reservoir. These events, including the suspected pollutant, its source, and estimated number of fish killed are presented in Table 6-5. Depending on the location, the first responders to a fish kill event are the DNR Wildlife Resources Division or Coastal Resources Division. GAEPD personnel typically augment the investigation. Depending on the circumstances causing the fish kill, GAEPD may issue a consent or administrative order and assess a civil penalty.

TABLE 6-5
Pollution-Caused Fish Kills - 2000-2001

Name of Waterbody	Date	Pollutant of Concern	Source(s) of Pollutants	Comments
North Oconee River, Oconee R.B., Clarke Co.	1/07/00	Sewage	CO: EPD-WQ-3802 ($31,532)	15 fish killed
Unnamed canal, Savannah R.B., Richmond Co.	1/30/00	Unknown chemical spill	Investigated	17 fish killed
Mountain Creek, Ocmulgee R.B., Walton Co.	2/04/00	Unknown	Investigated	5 fish killed
Big Sandy Creek, Ocmulgee R.B., Twiggs/Wilkinson Co.s	2/07/00	pH disturbance	Mining; CO: EPD-WQ-3811 ($97,125)	11,150 fish killed
Little Dry Creek, Coosa R.B., Floyd Co.	2/11/00	Unknown	Investigated	79 fish killed
Rocky Comfort Creek, Ogeechee R.B., Jefferson Co.	2/29/00	Diesel Fuel Spill	Investigated	2 fish killed
Tributary to Coosawattee River, Coosa R.B., Gilmer Co.	3/24/00	Concrete discharge	CO: EPD-WQ-3794 ($12,500)	105 fish killed
Burnett Creek, Tennessee R.B., Union Co.	3/25/00	Concrete discharge	CO: EPD-WQ-3775 ($446.97)	100 fish killed
Bromolow Creek, Ocmulgee R.B. Gwinnett Co.	4/18/00	Undetermined	Fire fighting runoff	904 fish killed
Tributary to Tar Creek, Coosa R.B., Whitfield Co.	4/26/00	Pesticide residue	CO:EPD-WQ-ERT-3805 ($2,000)	171 fish killed
Sope Creek, Chattahoochee R.B., Cobb Co.	4/28/00	Undetermined	Investigated	1001 fish killed
Lake Seminole, Chattahoochee/Flint R.B., Seminole/Decatur Co.s	5/15/00	Undetermined	Investigated	650 fish killed
Tanyard Branch, Oconee R.B., Clarke Co.	6/15/00	Sewage/Lime	CO: See Kill 1-7-00	9 fish killed
Lake W.F. George, Chattahoochee R.B., Clay Co.	6/19/00	Low Dissolved Oxygen (D.O.)	Dam Discharge Corbicula kill	0 fish killed; clams killed
Little Cedar Creek, Coosa R.B., Floyd Co.	6/22/00	Chlorine	Swimming pool	1232 fish killed
Tributary to North Fork Peachtree Creek, Chattahoochee R.B., DeKalb Co.	6/23/00	Sewage, low D.O.	CO: EPD-WQ-3766 ($37,900)	2709 fish killed
Nancy & Peachtree Creeks, Chattahoochee R.B., DeKalb Co.	7/5/00	Chlorine, multiple discharges	CO: EPD-WQ-3819 ($1000); EPD-WS-951 ($7500); EPD-WQ-8336 ($4000)	,14989 fish killed
Buck Creek, Tallapoosa R.B., Haralson & Carroll Co.s	7/27/00	Sewage, low D.O.	CO: EPD-WQ-3859 ($3186)	2555 fish killed
Tributary to Noonday Creek, Coosa R.B., Cobb Co.	7/28/00	Chemical spill	CO: EPD-PCEP-NWRO-064 ($1000)	5 fish killed
Swamp Creek, Coosa R.B., Whitfield Co.	8/2/00	Indust. Septic field discharge, low D.O.	CO: EPD-WQ-3810 ($8000)	11656 fish killed
Long Island Creek, Chattahoochee R.B., Fulton Co.	8/5/00	Undetermined	Investigated	171 fish killed
Poplar Creek, Chattahoochee R.B., Cobb Co.	8/17/00	Sewage, low D.O.	Investigated	121 fish killed
Little Allatoona Creek, Coosa R.B., Cobb Co.	8/19/00	Sewage, low D.O.	Investigated	135 fish killed
Little Nancy Creek, Chattahoochee R.B., DeKalb Co.	10/1/00	Undetermined	Investigated	32 fish killed
Buck Creek, Tallapossa R.B., Haralson Co.	10/23/00	Petroleum leak	Investigated	21 fish killed
Shamrock Lake, Ocmulgee R.B., Clayton Co.	10/27/00	LAS runoff	Investigated	5185 fish killed
Barbashela Creek, Ocmulgee R.B., DeKalb Co.	11/1/00	Sewage, low D.O.	Investigated	459 fish killed
Brooklyn Creek, Oconee R.B., Clarke Co.	12/2/00	Undetermined	Investigated	72 fish killed
Tributary to Single Creek, Ocmulgee R.B., Gwinnett Co.	2/25/01	Undetermined	Investigated	72 fish killed
Savage Branch, Ocmulgee R.B., Bibb Co.	4/27/01	pH	Concrete discharge	63 fish killed
Tributary to Florence Branch, Savannah R.B., Lincoln Co.	5/9/01	Sewage, low D.O	CO: EPD-WQ-3923 ($2000)	119 fish killed
Brush Creek, Ocmulgee R.B., Henry Co.	5/14/01	Sewage, low D.O	CO: EPD-WQ-3931 ($6500)	884 fish killed
Jordan Creek, Ocmulgee R.B., Bleckley Co.	5/31/01	Undetermined	Investigated	0 fish killed
Chicken Creek, Coosa R.B., Fulton Co.	6/22/01	Undetermined	Investigated	0 fish killed
Town Creek, Ocmulgee R.B., Monroe Co.	6/27/01	Chlorine discharge	CO: EPD-WQ-3995 ($7500)	175 fish killed
Williamson Swamp Creek, Ogeechee R.B., Washington Co.	7/22/01	Natural causes	Investigated	0 fish killed
Conasauga River, Coosa R.B., Whitfield Co.	8/28/01	Undetermined	Investigated	1157 fish killed
Tributary to Mill Creek, Coosa R.B., Whitfield Co.	8/28/01	Undetermined	Investigated	344 fish killed
Tributary to Burwell Creek, Coosa R.B., Floyd Co.	9/14/01	Sewage, low D.O	CO: EPD-WQ-3973 ($8881)	971 fish killed
Wildcat Creek, Ocmulgee R.B., Gwinnett Co.	9/28/01	Undetermined	Investigated	104 fish killed
Olley Creek, Chattahoochee R.B., Cobb Co.	10/16/01	Diesel fuel spill	CO: EPD-WQ-ERT-3998 ($2000)	820 fish killed
Horseleg Creek, Coosa R.B., Floyd Co.	11/14/01	Sewage, low D.O	CO: EPD-WQ-3982 ($8750)	1071 fish killed
South Fork Mud Creek, Chattahoochee R.B., Habersham Co.	12/3/01	Chicken process waste	CO: EPD-WQ-4025 ($9280)	1237 fish killed
South Fork Mud Creek, Chattahoochee R.B., Habersham Co.	12/13/01	Toxic sewage pass through	CO: EPD-WQ-4001 ($10543)	206 fish killed

CHAPTER 7
Water Protection Programs

Program Perspective

The first major legislation to deal with water pollution control in Georgia was passed in 1957. The Act was ineffective and was replaced by the Water Quality Control Act of 1964. This Act established the Georgia Water Quality Control Board, the predecessor of the Environmental Protection Division of the Georgia Department of Natural Resources which was established in 1972. Early efforts by the Board in the late 1960's and early 1970's included documenting water quality conditions, cleanup of targeted pollution problems and the establishment of water use classifications and water quality standards. Trend monitoring efforts were initiated and a modest State construction grants program was implemented.

In 1972 the Federal Water Pollution Control Act of 1972 was enacted by Congress. Today, this law is known as the Clean Water Act (CWA). The CWA set the national agenda for water protection and launched the national objective to provide "for the protection and propagation of fish, shellfish, and wildlife and provide for recreation in and on the water. The CWA established the NPDES permit system for regulation of municipal and industrial water pollution control plants, a water use classifications and standards process, and a construction grants process to fund the construction of municipal water pollution control facilities.

Most industries in Georgia had installed modern, effective water pollution control facilities by the end of 1972. In the mid/late 1970's emphasis was placed on the design and construction of municipal facilities through the federal Construction Grants Program. First and second round NPDES permits were negotiated and operation and maintenance, compliance monitoring, and enforcement programs initiated. Basin planning, trend monitoring, intensive surveys, modeling and wasteload allocation work was well underway.

In 1987 Congress made significant changes to the Clean Water Act. The Water Quality Act of 1987 placed increased emphasis on toxic substances, control of nonpoint source pollution, clean lakes, wetlands and estuaries. The Act required that all States evaluate water quality standards and adopt numeric criteria for toxic substances to protect aquatic life and public health. The Act also required each State to evaluate nonpoint source pollution impacts and develop a management plan to deal with documented problems. This work was initiated and completed by the GAEPD in the late 1980s.

In the late 1980s and early 1990s, the Georgia General Assembly passed a number of laws that set much of the agenda for the GAEPD in the early 1990s. Laws such as the Growth Strategies Act which helps protect sensitive watersheds, wetlands, and groundwater recharge areas and the ban on high phosphate detergents to reduce nutrient loading to rivers and lakes were enacted. Legislation was passed in 1990 which requires the GAEPD to conduct comprehensive studies of major publicly owned lakes and establish specific water quality standards for each lake. In addition in 1991 the General Assembly passed a law requiring a phosphorus limit of 0.75 mg/l for all major point sources discharging to the Chattahoochee River between Buford Dam and West Point Lake. Major river corridors were accorded additional protections with laws passed in 1991. Also in 1991, the General Assembly passed the Georgia Environmental Policy Act that requires an environmental effects report be developed for major State funded projects. In 1992, the General Assembly passed the River Basin Management Planning Act that requires the GAEPD develop and implement plans for water protection for each major river basin in Georgia. The work ongoing to implement this significant legislation was discussed in detail in Chapter 2 and at appropriate locations through this report.

In 2000-2001 high priority was placed on monitoring and assessment, river basin management planning, TMDL development, NPDES permitting and enforcement, nonpoint source pollution abatement, fish consumption guidance, stormwater permitting, treatment plant funding, and public participation projects.

River Basin Management Planning

River basin management planning efforts were expanded significantly in 1992 with the passage of O.C.G.A. 12-5-520 by the Georgia General Assembly. The Act provides for the development of river basin management plans for the major rivers in the State. The Act provides guidance regarding the content of the plans and for local input to plan development. The Act also provides that upon adoption of a plan by the Board of Natural Resources all permitting and other activities conducted by or under the control of the Department of Natural Resources are consistent with the plan. The River Basin Management Planning program is discussed in Chapter 2.

In addition to basin planning work sponsored by the GAEPD, Alabama, Georgia, Florida, and the U. S. Army Corps of Engineers are working together on major studies of the Apalachicola/ Flint/Chattahoochee and Alabama/Coosa/Tallapoosa river basins that have resulted in interstate compacts regarding water allocations. The USEPA has initiated a Savannah River Watershed Project which includes Georgia and South Carolina as major partners. The Georgia and Florida Natural Resources Conservation Services have conducted basin planning work on the

Suwannee River. The GAEPD and the Suwannee River Management District in Florida and the Florida Department of Environmental Regulation have also joined together with the Florida Department of Environmental Protection, the U. S. Fish and Wildlife Service, and other state and federal agencies to coordinate work on the Suwannee River basin planning process. The GAEPD is supporting these projects to avoid duplication of efforts and to effectively leverage resources to accomplish river basin planning across Georgia.

Water Quality Monitoring

The goal of the water protection program in Georgia is to effectively manage, regulate, and allocate the water resources of Georgia. In order to achieve this goal, it is necessary to monitor the water resources of the State to establish baseline and trend data, document existing conditions, study impacts of specific discharges, determine improvements resulting from upgraded water pollution control plants, support enforcement actions, establish wasteload allocations and/or TMDLs for new and existing facilities, verify water pollution control plant compliance, and document water use impairment and reasons for problems causing less than full support of designated water uses. Trend monitoring, intensive surveys, toxic substances monitoring, aquatic toxicity testing and facility compliance sampling are some of the monitoring tools used by the GAEPD. These programs were discussed in Chapter 3.

Water Quality Modeling/Wasteload Allocations/TMDL Development

The GAEPD conducted a significant amount of modeling in 2000-2001 in support of the development of wasteload allocations and total maximum daily loads TMDLs. In 2000, TMDLs were developed and publicly noticed for segments on the Georgia 2000 303(d) list in the Ochlockonee, Suwannee, Satilla, and St. Marys River Basins. These TMDLs were finalized and approved by the EPA in 2001. In 2001, TMDLs were developed and publicly noticed for segments on the Georgia 2000 303(d) list for the Ocmulgee, Oconee and Altamaha River Basins. These TMDLS were finalized and approved by the EPA in 2002.

State Revolving Loan/Construction Grants

Georgia presently administers through the Georgia Environmental Facilities Authority (GEFA) and the GAEPD a State Revolving Loan Fund (SRF) program which provides low interest loans for the construction of municipal wastewater treatment facilities and nonpoint source pollution control projects. This program was initiated in 1988 to the full extent allowed by the 1987 amendments to the Clean Water Act. With the initiation of SRF, the federal Construction Grants program has been phased out and all federal monies received through the Environmental Protection Agency are being used to capitalize the SRF program.

Considerable amounts of money have been required for water pollution abatement in Georgia and additional expenditures will be needed in the future. Local governments have the responsibility of securing funding for water pollution control projects including CSO controls. In addition to the SRF program, other funding sources are available, including other state low interest loans from GEFA, grants and loans from the Rural Economic and Community Development Administration (RECD), the Appalachian Regional Commission, and various programs administered by the Georgia Department of Community Affairs. Table 7-1 lists the major funding sources utilized by Georgia communities in 2000-2001 for wastewater treatment system and CSO control construction and improvements.

TABLE 7-1
Municipal Facility Sources of Investment
2000-2001

SRF Loans	$7,000,000
GEFA Loans	$17,000,000
Local or Federal	$448,000,000
TOTAL	**$472,000,000**

In 2000-2001 through various forms of funding, construction was completed on seventy treatment facilities. Fifteen expansions of treatment facilities were completed. The remaining facilities were upgrades.

Upgrading the level of wastewater treatment produces direct benefits by reducing pollutant discharges to Georgia streams, rivers, and lakes/reservoirs. The most widely used measure of municipal pollution is the extent to which the organic content of treated wastewater depletes oxygen in the receiving water and reduces the oxygen available to fish and aquatic life. In 1995, of the nearly one million pounds per day of oxygen demanding pollutants produced by municipalities, approximately 93% was removed by municipal water pollution control plants.

National Pollutant Discharge Elimination System (NPDES) Permit Program

The NPDES permit program provides a basis for municipal and industrial discharge permits, monitoring compliance with limitations, and appropriate enforcement action for violations.

In 2000-2001, a significant amount of personnel time was allocated to the reissuance of NPDES permits. Permits were issued, modified or reissued for 239 municipal and private discharges and for 189 industrial discharges. In addition, 98 private dischargers were covered under general permit No. GAPID1000. In contrast to many other areas in the nation, Georgia had a very small backlog of permits to be issued.

In addition to permits for point source discharges, the GAEPD has developed and implemented a permit system for land application systems. Land application systems for final disposal of treated wastewaters have been encouraged in Georgia. Land application systems are used as alternatives to advanced levels of treatment or as the only alternative in some environmentally sensitive areas. A total of 137 (municipal and private) and 47 (industrial and Federal) permits for land application systems were in effect in 2001.

Swine Feeding Operations

For over twenty years, GAEPD has required farmers to manage animal wastes from poultry, dairy, beef cattle and swine operations in a manner that results in no discharge of pollutants to Georgia streams, but GAEPD has not required thousands of family farms to have wastewater permits. Early in 1998, the Board of Natural Resources asked GAEPD to develop more specific rules to regulate large animal feeding operations, particularly swine operations, to assure adequate environmental protection as the industry evolved towards ever larger facilities. GAEPD then assembled a stakeholder advisory group and developed a new rule for swine feeding operations requiring registration or permitting for larger facilities with graduated requirements based on facility size. The rule, which includes deadlines for achieving various requirements, was adopted in June 1999. An addition to the swine rule provided for the certification of swine facility operators was adopted in February 2000. Individual NPDES wastewater permits were issued for 15 large swine operations later during 2000. In early 2001, a permitting rule was adopted for non-swine animal facilities, and the swine rule was amended later in 2001 to make it more consistent with the non-swine rule. General permits to cover both swine and non-swine animal facilities are planned for 2002.

Combined Sewer Overflows

The GAEPD has issued NPDES Permits to the three cities in Georgia that have Combined Sewer Overflows (CSOs) in their wastewater collection systems (Albany, Atlanta and Columbus). The permits require that the CSO must not cause violations of Georgia Water Quality Control Standards. In addition, the CSOs must be controlled to prevent the following conditions for waters downstream of the CSO:

- materials which settle to form sludge deposits that become putrescent, unsightly or to interfere with legitimate water uses;
- oil, scum and floating debris in amounts sufficient to be unsightly or to interfere with legitimate water uses;

- materials which produce turbidity, color, odor or other objectionable conditions which interfere with legitimate water uses;

- toxic, corrosive, acidic and caustic substances in amounts, concentrations or combinations which are harmful to humans, animals or aquatic life.

In 1998 the City of Atlanta signed a Consent Decree that requires a long-term control plan be implemented to remediate the overflow from combined sewers in 2007. The Consent Decree stipulated, among other things, the development and implementation of short-term remedial measures to improve operations, maintenance and treatment performance of the existing CSO facilities. Some of the other tasks required by the Consent Decree include: installation of warning signs along the streams receiving CSO discharges, a one-time stream cleanup, greenway acquisition plan, and creating Maintenance, Operations, and Management Systems (MOMS) Plans to provide guidance to City personnel regarding the operations and maintenance requirements of each of the City's CSO facilities as well as management strategies to control CSOs.

The City of Atlanta submitted their long-term control plan in April 2001. The selected option calls for 27% sewer separation, a tunnel connecting the eastside CSOs to an upgraded CSO treatment facility at the current Intrenchment Creek facility and a tunnel connecting the westside CSOs to a new CSO treatment facility on the Chattahoochee River near the RM Clayton Water Reclamation Center. The selected option is estimated to cost $950 million. November 7, 2007 is the date in the Consent Decree for compliance with water quality standards.

Compliance and Enforcement

The Georgia Water Quality Control Act requires that every point source discharge obtain a NPDES permit, and that zero discharge systems obtain a Land Application System Permit from the GAEPD which specifies allowable discharge limits for the receiving streams or land application sites. Insuring compliance with permit limitations is an important part of the Georgia water pollution control program. Staff review discharge and groundwater monitoring reports, inspect water pollution control plants, sample effluents, investigate citizen complaints, provide on-site technical assistance and, if necessary, initiate enforcement action.

As of December 2001, of the 126 major municipal water pollution control plants (facilities with design flow >1.0 mgd), 121 of the 126 were in general compliance with the final limitations. The remaining five facilities of the 126 are under compliance schedules to resolve the noncompliance or implementing infiltration/ inflow strategies which will allow compliance at the plant to be achieved. Enforcement action has been taken by the GAEPD to insure problems are alleviated.

Data evaluations (using annual reports, GAEPD sampling and biomonitoring results) were performed on NPDES permitted municipal facilities to determine the need to reopen specific permits for inclusion of numerical limits and monitoring for appropriate toxic pollutants.

Increased emphasis was placed on the industrial pretreatment programs for municipalities to ensure that the cities comply with the new requirements for pretreatment established in the November 1988 Amendments to the Federal General Pretreatment Regulations (40 CFR Part 403).

Industries in Georgia achieved a high degree of compliance in 2000-2001. Of 47 major industrial facilities, 46 have final effluent limitations. The major industrial discharger not on final limits has a permit under Administrative appeal. Of the 46 facilities on final limits, 45 were achieving compliance at the end of 2001. The major discharger not in compliance at the end of 2001 is under an order schedule to attain compliance.

The GAEPD utilizes all reasonable means to obtain compliance, including technical assistance, noncompliance notification letters, conferences, consent orders, administrative orders, and civil penalties. Emphasis is placed on achieving compliance through cooperative action. However, compliance cannot always be achieved in a cooperative manner. The Director of the GAEPD has the authority to negotiate consent orders or issue administrative orders. In 2000-2001, 5 Administrative Orders and 219 Consent Orders were issued and a total of $1,088,296 in negotiated settlements was collected.

Zero Tolerance

In January 1998, the Georgia Board of Natural Resources adopted a resolution requiring that regulatory initiatives be developed to ensure polluters are identified, and that appropriate enforcement action is taken to correct problems. The resolution also directed EPD to provide the "best quality of effort possible in enforcing Georgia's environmental laws". High growth areas that have been identified as in need of enhanced protection include the Chattahoochee River Basin (from the headwaters through Troup County), Coosa River Basin, Tallapoosa River Basin, and the greater metropolitan Atlanta area. EPD

developed a "zero tolerance" strategy for these identified geographic areas. This strategy requires enforcement action on any and all noncompliance issues. The strategy includes simple orders (Expedited Enforcement Compliance Order and Settlement Agreement) with a directive to correct the cause of noncompliance with a monetary penalty for isolated, minor violations, and more complex orders (consent orders, administrative orders, emergency orders) with conditions and higher monetary penalties for chronic and/or major violations. In addition to the enforcement strategy, inspections and surveillance activities were also increased.

Storm Water Management

The Water Quality Act of 1987 requires permits to be issued for certain types of storm water discharges, with primary focus on storm water runoff from industrial operations and large urban areas. The USEPA promulgated Storm Water Regulations on November 16, 1990. The GAEPD subsequently received delegation from the USEPA in January 1991 to issue NPDES Permits for regulating storm water in Georgia. GAEPD has developed and implemented a storm water strategy which assures compliance with the Federal Regulations.

Phase I of the Federal Regulations set specific application submittal requirements for large (population 250,000 or more) and medium (population 100,000 to 250,000) municipal separate storm sewer systems (MS4). The GAEPD has determined that the metropolitan Atlanta area is a large municipal system as defined in the regulations. Clayton, Cobb, DeKalb, Fulton and Gwinnett Counties and all interlying incorporated cities were required to comply with the application submittal target dates for a large municipal area. Forty-five storm water permits were issued to the Atlanta area municipalities on June 15, 1994 and reissued in 1999.

Augusta, Macon, Savannah, Columbus, the counties surrounding these cities and any other incorporated cities within these counties were identified as medium municipal systems as defined in the storm water regulations. Thirteen storm water permits were issued to the medium municipal systems between April 20 and May 25, 1995. These permits were reissued in April 2000. The storm water permits for large and medium municipal systems require the submittal of Annual Reports to GAEPD. Each year, the Georgia storm water permitting program reviews the Annual Reports from the large and medium municipalities. Among other things, the Annual Report includes a detailed description of the municipality's implementation of its Storm Water Management Program. The GAEPD provides comments on the Annual Reports to the MS4 permittees, noting areas of noncompliance and recommending improvements to the local Storm Water Management Programs.

On December 8, 1999 USEPA promulgated the Phase II Rules for Storm Water. Phase II requires NPDES permitting and the development of Storm Water Management Programs for a large number of smaller cities and counties. Construction sites from 1 to 5 acres and municipally-owned industrial facilities will also be regulated.

In the implementation of the Phase II Storm Water Rule, GAEPD will evaluate the 2000 census data and identify those local governments that need to comply with the new regulations. GAEPD will also determine a waiver process and a process to designate additional MS4s. The General Storm Water Permit for Small MS4s and the Notice of Intent (NOI) application are expected to be finalized in time for the required issuance of the permit in December 2002. Other tasks include explaining the permitting process to the permittees, and determining which Federal/State facilities will require permit coverage.

The GAEPD has issued general permits for the eleven industrial subcategories defined in the Phase I Federal Storm Water Regulations. During 1993, the GAEPD issued a general NPDES permit (GAR000000) that regulates the discharge of storm water from 10 categories of industrial activity. This permit was reissued in 1998 and will be reissued again in 2003. As of December 2001, approximately 3000 NOIs for this general permit have been submitted to the GAEPD.

A second general NPDES permit that would regulate storm water discharges from construction activities was issued by GAEPD and subsequently appealed in 1992, 1994, 1995, 1996 and 1999. Settlement negotiations involving the regulated community who filed the three petitions, several environmental organizations, GAEPD, and a professional facilitator began in October 1999. After months of negotiation, GAEPD issued a revised general NPDES permit GAR100000 for construction activities on June 12, 2000. The permit became effective on August 1, 2000. This permit currently regulates storm water discharges associated with construction activity that result in land disturbances of five acres or greater. The construction permit requires permittees to implement best management practices, conduct inspections and sample storm water leaving their site after certain rainfall events. A three-tiered permitting structure allows a differentiation of responsibility between permittees. Approximately 20,000 NOIs have been received by GAEPD since the permit issuance in 2000.
In an effort to determine compliance with the construction general permit, GAEPD and the USEPA partnered to form the Storm Water Task Force, which conducted over 200 inspections between May and September 2001. The Task Force adopted a "zero tolerance" enforcement policy with regard to violations of the permit in order to increase awareness among the regulated community that erosion and sediment control violations are a significant water quality problem, as

well as to document additional resource needs for GAEPD. Substantial fines were levied on permittees found to be in violation.

Looking ahead to the reissuance of the construction permit in July 2003, a group of stakeholders referred to as the Storm Water General Permit Advisory Committee (GPAC) has been holding regular meetings since November 2000 to discuss permit issues. GPAC is comprised of those parties who were involved in the 1999 settlement negotiations, as well as additional stakeholders such as Georgia DOT. GPAC is a forum to discuss issues related to implementation of the construction permit. GPAC is currently tasked with recommending appropriate changes to the current permit, and examining how Phase II NPDES permitting for sites disturbing between one acre and five acres can be incorporated into the permit.

The Erosion and Sedimentation Control Technical Study Committee (Dirt II) was formed in 1996. Dirt II developed a two-phase mission statement. The first phase involved developing practical guidance for project site management and erosion and sediment control techniques with an emphasis on protecting water quality. The second phase focused on determining how best to meet turbidity levels recommended in previous "Dirt I" report. This involved an evaluation of new and emerging engineering tools, "state of the practice" erosion and sediment control devices and techniques, and resultant performance levels for both under various site and rainfall scenarios. The Dirt II Committee, whose efforts were partially funded by a $400,000 state grant, presented their findings and recommendations in a final report published by the Chattahoochee-Flint Regional Development Center in July 2001.

An important component of storm water management in Georgia is information exchange/technology transfer. GAEPD staff participated in many meetings and seminars throughout Georgia in an effort to disseminate information concerning Georgia's storm water requirements to the regulated community. In addition, staff from the central Atlanta office conducted inspections at approximately 90 industrial facilities to assess compliance with the industrial general storm water permit during 2000-2001. Approximately 18 of these inspections involved coordination with GAEPD Regional Office personnel.

The GAEPD will continue to regulate storm water runoff from industrial facilities, construction sites and urban areas as a part of the point-source permitting process to protect water quality.

Erosion and Sedimentation Control

The Erosion and Sedimentation Act (Act) was signed into law in April 1975. This legislation was the result of over five years of work, debate, and legislative compromise. Agencies and groups that coordinated their efforts to this end included the Georgia Association of Conservation Districts, the State Soil and Water Conservation Commission, and the GAEPD.
The intent of the Act is to establish a statewide and comprehensive program for erosion and sedimentation control to conserve and protect air, water and land resources of the State. The Act provides a mechanism for controlling erosion and sedimentation as related to certain land disturbing activities. Land disturbing activities are any activities which may result in soil erosion and the movement of sediments into State waters and onto lands within the State. Such activities may include, but are not limited to, clearing, dredging, grading, excavating, transporting, and filling of land. Activities not regulated under the Act include surface mining, construction of single family homes being constructed by the owner or under contract to an owner, and minor activities such as home landscaping and gardening.

Implementation of the Act involves local units of governments and State agencies. The Act provides for municipalities and Counties to adopt local ordinances and to become delegated "Issuing Authorities". The GAEPD delegates local "Issuing Authority" and administers the GAEPD rules where there is no local authority, and oversees local program implementation. Currently 220 municipalities and 125 counties have adopted ordinances, which have been reviewed by the GAEPD for compliance with the Act.

During the 2000-2001 period, the GAEPD decertified as issuing authorities 12 counties and 3 cities. Two of the cities requested decertification. Eleven counties were decertified because they did not update their local ordinances in response to the 2000 changes to the Act. One city and one county had their certifications revoked for poor programs and numerous erosion and sedimentation complaints. Two of the counties were recertified in 2002.

During that same period, the GAEPD processed 274 Land Disturbing Activity Permit Applications in the municipalities and counties where EPD is the "Issuing Authority", and issued 243 stream buffer variances. In addition, 52 stream buffer variance requests were denied by GAEPD.

The Erosion and Sediment Control Overview Council (Council) was created in accordance with Senate Bill 524. This bill amended the Georgia Erosion and Sedimentation Act in May 2000. The Council was tasked with developing recommendations governing the preparation of plans and the installation and maintenance of best management practices for erosion and sediment control for

Georgia Department of Transportation (DOT) projects. The Erosion and Sediment Control Overview Council met 14 times during 2001.

House Bill 1426 is the second of the two amendments to the Act passed during the 2000 session. This amendment made changes to the stream buffer minimum requirements and required that the Georgia Board of Natural Resources establish new rules for the implementation of these changes. Other changes were the establishment of stop work procedures and minimum mandatory penalties for violations.

In October and December 2000, the Georgia Board of Natural Resources adopted amendments to the Erosion and Sedimentation Control Rules. These amendments established criteria for the consideration of stream bank buffer variances. Also established were procedures for the review of stream bank buffer encroachments.

GAEPD's Erosion and Sedimentation Control Program was audited by the State Department of Audits in 2001. Their September 2001 report made several recommendations to improve the program. The primary recommendation is for better implementation of the program at the state and local level, particularly in the area of enforcement. GAEPD is working with the Board of Natural Resources and various committees to determine the best way to address the recommendations in the audit report.

Nonpoint Source Management Program

Nonpoint sources of water pollution are both diffuse in nature and difficult to define. Nonpoint source pollution can generally be defined as the pollution caused by rainfall or snowmelt moving over and through the ground. As water moves over or through the soil, it picks up and carries away natural pollutants and pollutants resulting from human activities, finally depositing them in lakes, rivers, wetlands, coastal waters and ground waters. Habitat alteration (e.g., removal of riparian vegetation) and hydrological modification (e.g., channelization, bridge construction) can cause adverse effects on the biological and physical integrity of surface waters and are also treated as nonpoint sources of pollution.

The diffuse nature of nonpoint sources (e.g., agriculture, construction, mining, silviculture, urban runoff) and the variety of pollutants generated by them create a challenge for their effective control. Although progress has been made in the protection and enhancement of water quality, much work is still needed to identify nonpoint source management strategies that are both effective and economically achievable under a wide range of conditions.

The control of dominant point source problems has allowed the GAEPD to place increasing emphasis on the prevention, control and abatement of nonpoint sources of pollution. The GAEPD is responsible for administering and enforcing laws to protect the waters of the State, defined to include surface and ground water. Consequently, the GAEPD has been designated as the administering or lead agency for implementing the State's *Nonpoint Source Management Program*. This program combines regulatory and non-regulatory approaches, in cooperation with other State and Federal agencies, local and regional governments, State colleges and universities, businesses and industries, non-governmental organizations and individual citizens.

The Georgia Soil and Water Conservation Commission (GSWCC) have been designated by the GAEPD as the lead agency for implementing the agricultural component of the State's *Nonpoint Source Management Program*. Similarly, the Georgia Forestry Commission (GFC) has been designated as the lead agency for implementing the silvicultural component of the State's *Nonpoint Source Management Program*.

Georgia's initial *Nonpoint Source Assessment Report* was completed in compliance with the Federal Clean Water Act and approved by the USEPA in January 1990. This report, *Water Quality in Georgia 2000-2001*, as required by Section 305(b) of Public Law 92-500, serves as the current process to update the *Nonpoint Source Assessment Report*.

The revision of the State's *Nonpoint Source Management Program* in FFY 2000 was intended to meet the requirements for funding under Section 319(b) of the Federal Clean Water Act and to delineate short and long-term goals and implementation strategies. Just as important, it was also designed to be an information resource for the wide range of stakeholders across the State involved in the prevention, control and abatement of nonpoint sources of pollution. It was developed as an inventory of the full breadth of nonpoint source management (regulatory and non-regulatory) in Georgia, including activities that are currently underway or planned for the time period FFY 2000 through FFY 2004.

The State's *Nonpoint Source Management Program* focuses on the comprehensive categories of nonpoint sources of pollution identified by the USEPA: Agriculture, Silviculture, Construction, Urban Runoff, Hydrologic/Habitat Modification, Land Disposal, Resource Extraction and Other Nonpoint Sources. This revision of the State's *Nonpoint Source Management Program* was developed through a consultatory process, incorporating input from a wide range of stakeholders involved in nonpoint source management activities throughout the State: local, regional, State and Federal agencies, as well as private, non-governmental organizations. This process encouraged intergovernmental resource sharing and increased stakeholder involvement. This revision of the

State's *Nonpoint Source Management Program* established new partnerships and strengthened existing partnerships in the development and implementation of nonpoint source strategies.

As with other activities, the State's *Nonpoint Source Management Program* will continue to be implemented in conjunction with the State's River Basin Management Planning process. Local governments, regional development centers, private non-governmental organizations and the general public have a critical role in developing and implementing nonpoint source management strategies. The State continues to expand its role in facilitating and supporting local and regional nonpoint source management activities.

Under Section 319(h) of the Federal Clean Water Act, the USEPA awards a Nonpoint Source Implementation Grant to the GAEPD to fund eligible projects that support the implementation of the State's *Nonpoint Source Management Program.* Section 319(h) Grant funds for the prevention, control and/or abatement of nonpoint sources of pollution are made available annually to public agencies in Georgia. With funding from Section 319(h) FFY 1990 – FFY 2001 Grants, the GAEPD has awarded over $28,800,000 in grant funds to State agencies, local and regional governments, Resource Conservation and Development Councils, State colleges and universities to fund eligible projects supporting the State's *Nonpoint Source Management Program.*

The GAEPD uses a competitive process to ensure that the most appropriate projects are selected for funding. In accordance with the Fair and Open Grant Act, the GAEPD publishes a description of the Section 319(h) Nonpoint Source Implementation Grant Program with the Secretary of State prior to disbursement of any grant funds. In accordance with the provisions of O.C.G.A. 28-5-122, the grant description filed with the Secretary of State includes information regarding the general scope and purpose of the grant program, general terms and conditions of the grant, eligible recipients of the grant, criteria for the award, and directions and deadlines for applications.

Section 319(h) Grant projects must specifically identify the nonpoint sources of pollution being addressed and the activities proposed to prevent, control and/or abate these nonpoint sources of pollution. Types of activities which are eligible include: regulatory or non-regulatory programs for enforcement, technical assistance, financial assistance, education, training, technology transfer, watershed projects, demonstration projects, update and refinement of nonpoint source programs and assessments, monitoring to assess the success of specific nonpoint source implementation projects, urban stormwater control activities not specifically required by a draft or final NPDES permit, and certain ground water activities. Lake protection and restoration activities are eligible provided that they

are not used for *in-lake* work such as aquatic macrophyte harvesting or dredging unless the nonpoint sources of pollution will be remediated.

Eligible recipients of Section 319(h) Nonpoint Source Implementation Grant funds include local, regional and State units of government, local authorities which operate local government service delivery programs, regional development centers, local school systems, State colleges and universities, and State agencies. Local governments must have Qualified Local Government status, in compliance with the requirements of the Georgia Planning Act of 1989 and Service Delivery Strategy Law of 1997.

Priority is given to project proposals which implement the nonpoint source components of Total Maximum Daily Loads that have been approved under Section 303(d) of the Federal Clean Water Act; develop and/or implement the nonpoint source components of Watershed Restoration Action Strategies; and implement action to alleviate the criterion violations identified in the Section 305(b) and Section 303(d) lists of waters which are partially or not supporting designated or beneficial uses due to nonpoint sources of pollution.

In addition, priority is given to projects that encompass or support a watershed management approach and result in measurable improvements in water quality. A watershed approach is a strategy for effectively protecting and restoring aquatic ecosystems and protecting human health. Major features of a watershed management approach are: targeting priority problems, promoting a high level of stakeholder involvement, integrated solutions that make use of the expertise and authority of multiple agencies, and measuring success through monitoring and other data gathering. The application of increased Section 319(h) Grant funds to focus on solving nonpoint source pollution problems will enable the State to make great strides in achieving water quality goals.

Agriculture

Georgia's Agriculture Nonpoint Source Management Program is implemented through a statewide non-regulatory approach. Benefits have accrued to Georgia as a result of voluntarily installed best management practices and the implementation of conservation incentive programs. These voluntary programs are enhanced by numerous financial, technical assistance, education, demonstration, and research activities delineated in the State's *Nonpoint Source Management Program*. Implementation of the Agriculture Nonpoint Source Management Program supports Georgia's River Basin Management Planning process as a critical State initiative to identify priority waters and to target nonpoint source management activities.

Agriculture nonpoint source pollution prevention opportunities can be broken down into handling of animal waste runoff, soil erosion, nutrients, pesticides, and agrichemicals. Water quality degradation and soil erosion can often be limited or prevented through the implementation of proven techniques. Georgia's Agriculture Nonpoint Source Management Program supports BMP demonstration projects, technical assistance, and research activities to explore and promote these techniques. Nutrient management plans and land application of effluent can improve soil and maintain water quality. This is an expanding area of research and demonstration in the specialized aquaculture segment and the traditional poultry, swine, and beef production sectors of the agriculture industry. Precision farming, integrated pest management (IPM), and other best management practices can often be used to decrease the need for agrichemical inputs and to increase their effectiveness on cropping systems. Many improved methods of storing and handling agrichemicals are based firmly in the principles of reducing risk of environmental contamination. Georgia has growing programs in pesticide container recycling, outdated pesticide collection, and self-administered risk assessment consistent with the goals of pollution prevention in agricultural production and management. Agriculture nonpoint source management efforts that maintain or improve environmental quality, focus on pollution prevention, and demonstrate techniques for economic viability will continue to guide Georgia toward sustainable agricultural systems.

The statewide non-regulatory approach uses cooperative partnerships with various agencies and a variety of activities and programs. Agencies that form the basis of the partnerships include the GSWCC (designated lead agency administrating the Agriculture Nonpoint Source Management Program), SWCD, NRCS, UGACAES, CES, FSA, GFC and the GDA. These agencies work closely with Georgia agricultural commodity commissions and organizations such as the GFBF, GAC, RC&D Councils, Cattleman's Association, Milk Producers, Pork Producers Association, Poultry Federation, Goldkist, The Georgia Conservancy, and GWF as well as other producer groups and agriculture support industries to prevent and solve water quality problems. In addition to the agriculture agencies and interest groups, a working partnership with individual land users is the cornerstone of soil and water conservation in Georgia.

The cooperating agencies have specific functions and directions. All have an information, education, and public participation component to support their objective to improve and maintain water quality. Of the agriculture agencies, only the GDA has enforcement authority. The GSWCC works with GAEPD, the enforcement agency for the Georgia Water Quality Control Act, to resolve agricultural water quality complaints, where appropriate. The UGACAES and NRCS produce and distribute numerous brochures and fact sheets dealing with agriculture best management practices and water quality.

A cooperative effort between UGACAES and P^2AD is providing pollution prevention information, education and technical assistance to the farmer and green industry professionals to reduce nonpoint source pollution as a result of fertilizer and pesticide use. With Section 319(h) Grant funding, the GSWCC, UGACAES, GAEPD and the P^2AD have established the Georgia Farm-A-Syst Program to address the problems of nonpoint source contamination of surface and groundwater from agricultural sources. The overall objective of this program is to develop and test voluntary agricultural self assessment materials to fit the needs and conditions throughout the State. The self assessments, fact sheets, and action plans encourage farmers to become environmentally proactive and to ultimately take steps to prevent nonpoint source pollution. Additional information is available at the national Farm-A-Syst website, www.uwex.edu/farmasyst, with links to the Georgia Farm-A-Syst Program.

The GSWCC has continued to sponsor local demonstration projects, provide farmers with visual demonstrations and information on the use and installation of best management practices, and collect data and generate computer databases on land use, animal units and agricultural BMP implementation. The GSWCC has published and continues to distribute the following guidebooks for implementing agricultural best management practices to protect the State's waters: *Agricultural Best Management Practices for Protecting Water Quality in Georgia*, *Planning Considerations for Animal Waste Systems*, *A Georgia Guide to Controlling EROSION with Vegetation*, and *Guidelines for Streambank Restoration*.

Since 1990, approximately $11,650,000 in Section 319(h) Grant monies have been used to fund agricultural water quality demonstration projects in Georgia. In addition to the minimum 40% required non-federal in-kind match, the NRCS has contributed over $4,500,000 in technical assistance to support these projects. The UGACAES, GSWCC, FSA, GFC and other agencies have also contributed significant technical assistance to support these projects. These projects offer solutions, as well as financial and technical implementation assistance, in identified priority watersheds.

The 1996 Farm Bill contains conservation provisions that will have far reaching impacts on the protection of water quality from nonpoint source pollution in Georgia. The conservation provisions seek to improve the flexibility and efficiency of existing programs by diversifying agency participation in the delivery of conservation programs that protect water quality and related natural resources. To date, conservation planning assistance through this partnership has devised conservation plans for 15,125,485 acres, or 45% of the 33.5 million acres of privately owned land in Georgia.

Conservation programs for which NRCS now retains program leadership include the existing Forestry Incentive Program (FIP) and Wetland Reserve Program (WRP); along with newly created programs that include the Environmental Quality Incentives Program (EQIP) that encompasses the old Agricultural Conservation Program and Water Quality Incentives Program; the Wildlife Habitats Incentives Program (WHIP); and the Farmland Protection Program. FSA maintains program leadership for the Conservation Reserve Program (CRP) and the Agricultural Market Transition Program. Collectively these programs, described more fully in the State's *Nonpoint Source Management Program*, will continue to have a significant and positive impact on Georgia's natural resources.

The conservation program delivery process initiated by the Bill will cause a number of positive events to occur at the local, state, regional, and national levels. In the past, much of the focus has been placed on conservation programs. The Bill describes a new program delivery process that focuses first and foremost on resource concerns and considers conservation programs as tools with which to address the identified concerns. Multiple agencies, therefore, can take advantage of their common goals to protect and improve the natural resources of this State. New programs in the Bill seek to address high priority environmental protection goals through the cooperative work of Federal, State, and local agencies, as well as an active State Technical Committee. This cooperative effort will continue to identify and set resource concern priorities thereby establishing Georgia's agricultural priority environmental protection goals. Applying common goals to address resource concerns in many of Georgia's geographic settings, which vary greatly, will encourage multiple agencies to find common solutions to resource impairment.

The Federal cost-share programs in the Bill will bring millions of dollars to Georgia. By requiring priority areas to be identified and ranked, conservation assistance will maximize the environmental benefit per dollar expended. Therefore, capital funding and technical expertise can be leveraged to enhance ongoing State and local efforts to more efficiently manage our natural resources.

Another benefit arising from this new process is the focus on the locally led conservation program delivery process, which should lead to a higher rate of landowner participation. Under a voluntary approach, the programs can only be effective to the extent that they are used. The process will result in a sense of ownership at the local level arising from local identification of local resource concerns, needs, and goals. Landowners will better understand the impact of their actions on their communities and will be better equipped to comply with environmental regulations, including the nonpoint source components of approved TMDLs.

Georgia's RBMP process will be enhanced by these new partnerships and the coordinated effort to select priority resource concerns. As with other activities, the agricultural portion of the State's *Nonpoint Source Management Program* will be implemented in conjunction with the RBMP process. The GSWCC and NRCS are working to merge the planning process adopted by the GAEPD so that the agriculture community's involvement will be evident in every step of the RBMP process. Identification and selection of priority waters affected by agricultural nonpoint source pollution is a continuing process.

Silviculture

The Georgia Forestry Commission has been an integral partner with the GAEPD since 1977, committed to protect and maintain the integrity and quality of the State's waters. The GAEPD designated the Georgia Forestry Commission (GFC) as the lead agency for the silviculture portion of the State's *Nonpoint Source Management Program.* The Silviculture Nonpoint Source Management Program is managed and implemented by the GFC, with the support of the forestry industry, for the voluntary implementation of best management practices.

This program is managed by a Statewide Water Quality Coordinator and 12 foresters serving as District Water Quality Coordinators. The GFC Statewide and District Water Quality Coordinators have received specialized training in erosion and sediment control, forest road layout and construction, stream habitat assessment and wetland delineation. The Statewide and District Water Quality Coordinators provide local and statewide training to forest community through workshops, field demonstrations, presentations, management advice to landowners and distribution of *Georgia's Best Management Practices for Forestry* manual and brochures. In 2000 and 2001, the GFC Statewide and District Water Quality Coordinators provided BMP advice and guidance to over 9,000 landowners involving approximately 515,000 acres of forest and conducted 200 BMP workshops and field demonstrations for major corporations and independent loggers.

The GFC also investigates and mediates complaints involving forestry operations. After notifying the landowner, the GFC District Coordinators conduct field inspections to determine if best management practices were followed, if the potential for water quality problems exists, if a contract was used and who purchased the timber. If a written contract was executed, the GFC District Coordinators will verify if the contractual agreement contains a clause specifying the implementation of BMP. If problems do exist, the GFC District Coordinator will work with the timber buyer and/or logger on behalf of the landowner to correct the problems. Complaints usually involve logging debris left in streams and are resolved without involving the GAEPD. However, the GFC is not a regulatory authority. Therefore, in situations when the GFC cannot get

satisfactory compliance, the case is turned over to the GAEPD for enforcement action as provided under the Georgia Water Quality Control Act.

The State Board of Registration for Foresters has adopted procedures to sanction or revoke the licenses of registered foresters involved in unresolved complaints where actions or lack of supervision to implement best management practices have resulted in violations of the Board's land ethic criterion, Georgia Water Quality Control Act, or Federal wetlands regulations.

In 1991, the GFC conducted the first Statewide BMP Compliance Survey to assess the application of best management practices by logging operations. The survey of 349 harvesting sites conducted during 1991 revealed that best management practices had been properly applied to 86% of the total area harvested and that only 4.8% of the perennial and intermittent streams had been adversely affected. Regional BMP compliance was highest in the Coastal Plain physiographic region (92%) and lowest in the Mountain physiographic region (61%). Forestry industry land had the highest rate of BMP compliance (93%) followed by private non-industrial forest lands (80%) and public lands (77%).

In 1998, the GFC conducted a standardized survey of BMP implementation, stream habitats and turbidity levels for selected harvested plots. The goal of this Statewide BMP Compliance Survey was to evaluate 10% of the estimated 3,000 annual harvesting operations. Silvicultural BMPs evaluated included streamside management zones, stream crossings, roads, harvesting, mechanical and chemical site preparation, regeneration, prescribed burning and firebreaks. The streams were also assessed for physical damage and turbidity in approximately 300 selected harvested plots. In addition, the GFC selected a subsample of five commercial forestry plots for the purpose of evaluating stream habitat quality and aquatic benthic macroinvertebrate community health up and downstream of forestry operations.

Statewide and regional BMP compliance rates by physiographic regions and ownership were determined. The survey conducted during 1998 revealed that best management practices had been properly applied to 98% of the total area harvested and 91% of the stream habitats were not impacted and/or impaired. Regional BMP compliance was highest in the Coastal Plain physiographic region (99.0%) and lowest in the Mountain physiographic region (90.7%). Public lands had the highest rate of BMP compliance (99.4%) followed by forestry industry land (99.1%) and private non-industrial forest lands (97.4%).

The Georgia Forestry Association (GFA) and the forestry industry have played a significant role in encouraging the voluntary implementation of BMPs in Georgia. The forest industry has initiated numerous education workshops and training

programs. The American Forest and Paper Association (AFPA) has adopted the Sustainable Forestry Initiative Program. The objective of the Sustainable Forestry Initiative Program is to induce and promote a proactive approach to forest management, including the protection of water resources. Two pertinent aspects of this program are: 1) A continuing series of 2½ day Master Timber Harvester Workshops with a component devoted to the protection of water resources and the implementation of best management practices, and 2) A Land Owner Outreach Program which endeavors to deliver information about forestry management and the protection of water resources to forest land owners.

Urban Runoff

The 1990 report of the Community Stream Management Task Force, *We All Live Downstream*, established a road map for urban runoff nonpoint source management in Georgia. The task force was convened in 1988 to assist the Georgia Department of Natural Resources with impacts on urban streams. The task force's report emphasized the importance of cooperative partnerships and building working relationships between the units of government responsible for land and water quality management. Educational, management, and support strategies were recommended to help move toward an integrated structure which would allow continued evolution of intergovernmental and private sector structures and promote development of urban stream management activities over time.

The task force recognized two major impediments to effective management of urban water bodies. The first is the division between statutory responsibilities for management of water quality, granted to GAEPD, and local governments' constitutional responsibility for management of the land activities that affect urban waterbodies. The second impediment is the diffuse nature of nonpoint source pollution and the variety of activities that may contribute to impacts from urban runoff. They concluded that urban runoff nonpoint source management would require a cooperative partnership between layers of government, the private sector, and the general public. The development of such a partnership will require a strong impetus to accept new institutional roles and make the structural changes necessary to support and sustain the stream management process.

Since publication of *We All Live Downstream*, urban runoff nonpoint source management in Georgia has continued to evolve. Consistent with the multiple sources of urban runoff, the management systems have multiple focuses. Some programs focus on specific sources of urban runoff, targeting implementation of structural and/or management BMPs on individual sites or systemwide. Other programs treat corridors along waterbodies as a management unit to prevent or control the impacts of urban runoff on urban streams. Additional programs focus

on comprehensive watershed management. This approach, which considers the impacts of all the land draining into a waterbody and incorporates integrated management techniques, is particularly critical to protecting and enhancing the quality of urban streams. Urban waterbodies cannot be effectively managed without controlling the adverse impacts of activities in their watersheds.

While the State continues to have an important regulatory role, aspects of the cooperative intergovernmental partnerships envisioned by the task force have emerged and are being strengthened. GAEPD is implementing programs which go beyond traditional regulation, providing the regulated community with greater flexibility and responsibility for determining management practices. The GAEPD is also expanding its role in facilitation and support of local watershed management efforts.

An array of programs to manage urban runoff are under development or being implemented in a variety of locales. Catalysts which contribute to more comprehensive management of urban waterbodies include public interest groups, local governments, regional development centers, State agencies, and State laws and regulations (e.g., Metropolitan Rivers Protection Act, Georgia Planning Act Part V Standards). The development and implementation of Total Maximum Daily Loads for waterbodies not meeting water quality standards will continue to spur local and regional watershed management initiatives.

To a large extent, however, the conclusions of the Community Stream Management Task Force (CSMTF) still hold. The division between the State's responsibilities for water quality management and local responsibility for land management, as well as the variety of activities and sources which contribute to urban runoff problems, continue to pose challenges for management of nonpoint sources.

The water quality in an urban and/or developing watershed is the result of both point source discharges and the impact of diverse land activities in the drainage basin (i.e., nonpoint sources). Activities which can alter the integrity of urban waterbodies include habitat alteration, hydrological modification, erosion and sedimentation associated with land disturbing activities, stormwater runoff, combined sewer overflows, illicit discharges, improper storage and/or disposal of deleterious materials, and intermittent failure of sewerage systems. In a more recent assessment, studies reviewed by the CSMTF indicated that waterbodies throughout the State are threatened by the effects of urban development. During urbanization, pervious, vegetated ground is converted to impervious, unvegetated land. Land imperviousness in urban areas - as rooftops, roads, parking lots, and sidewalks - can range from 35% in lightly urbanized areas to nearly 100% in heavily urbanized areas. Increases in pollutant loading

generated from human activities are associated with urbanization, and imperviousness results in increased stormwater volumes and altered hydrology in urban areas.

While the State has statutory responsibilities for water resources, local governments have the constitutional authority for the management of land activities. Therefore, it is necessary to forge cooperative partnerships between the State, local and regional governments, business and industry, and the general public. Watershed planning and management initiatives are necessary to identify local problems, implement corrective actions and coordinate the efforts of cooperating agencies.

In 1998, the Georgia Water Management Campaign (GWMC) was established to enhance local governments' ability to manage and protect water resources by translating water management policies into local government decision making capabilities, guidance and technical assistance. The GWMC promotes stakeholder involvement in the development and implementation of local watershed management initiatives. To accomplish its mission, the GWMC sponsors the annual Georgia Water Resources Leadership Summit to provide a *bottom up* and *top down* understanding of issues affecting the management and protection of water resources in Georgia. In addition, several outreach tools, such as public service announcements and videos, have been developed for local governments. Information and contacts for the GWMC can be accessed at the ACCG website, www.accg.org.

Other initiatives have been implemented to further statewide coordination and implementation of urban runoff best management practices. The Atlanta Regional Commission (ARC) and the GAEPD published the *Georgia Stormwater Management Manual – Volume 1, Stormwater Policy Guide and Volume 2, Technical Handbook* in August 2001. This guidance manual for developers and local governments illustrates proper design of best management practices for controlling stormwater and nonpoint source pollution in urban areas in Georgia.

The GAEPD and the University of Georgia School of Environmental Design developed land development code recommendations for incorporation into existing and/or new local government ordinances. The document, *Land Development Provisions to Protect Georgia Water Quality*, describes provisions that could be modified in or added to local development regulations to better protect water quality. This report also includes two sections introducing the problem of runoff water quality and its relationship to urban development. This document is intended to serve as a partial "menu" from which each municipality can select appropriate provisions and adapt them to the local conditions. Municipal ordinances where these provisions could be used include zoning and

subdivision ordinances, erosion and sedimentation control codes, stormwater management ordinances and design standards documents.

In cooperation with the ARC, the GAEPD has also produced and distributed the reports, *Protecting Community Streams: A Guidebook for Local Governments in Georgia* and *Urban Streams Assessment and Evaluation Guidelines*. The guidebooks outline actions that a local community can undertake to protect its healthy streams and restore its degraded streams. The guidebooks provide details of where and how to collect information on stream water quality, how to evaluate the quality of a community's streams, what protection measures should be considered and how all of this can be put together in an integrated planning and management program. The guidebooks are intended for use by government officials, public works departments, planning departments and drainage departments, but are also useful resources to any individual or community group interested in stream protection. The focus of the guidebooks is not only the stream and the stream's edge but the entire land area of watershed that drains into the stream. Streams are best protected through careful development of the land that they drain.

The GAEPD in cooperation with the University of Georgia School of Environmental Design has produced the *Pointless Pollution in Georgia* brochure and video and the *Georgia Urban Waterbody Education Plan and Program*. The *Pointless Pollution In Georgia* brochure and video were developed to provide individuals with suggestions to minimize nonpoint source pollution from entering Georgia's urban streams and rivers. In addition, the GAEPD has continued to provide both financial and technical support to encourage the development of local government watershed planning and management initiatives.

Georgia Project WET (Water Education for Teachers) Program

Nonpoint sources of pollution are diffuse and varied; therefore, prevention, control and abatement of nonpoint source impacts will require action by a wide range of audiences. Effective nonpoint source management must address numerous activities of individuals, businesses, industries and governments that can adversely affect urban and rural waters. In many cases, these groups are unaware of the potential impacts of their activities or the corrective actions which may be taken.

A report outlining a plan for nonpoint source education in Georgia was completed in 1994. The *Georgia Urban Waterbody Education Plan and Program* delineated nonpoint source education strategies for seven target audiences: general public, environmental interest organizations, civic associations, educators, business associations, local government officials and State government officials. Given

the limited resources and the scope of effort required to target each of these audiences concurrently, statewide nonpoint source education and outreach programs have been limited to the Georgia Project WET Program and the Georgia Adopt-A-Stream Program.

In October 1996, the Georgia EPD selected Project WET (Water Education for Teachers) curriculum as the most appropriate water science and nonpoint source education curriculum for the State. The Project WET curriculum is an interdisciplinary water science and education curriculum that can be easily integrated into the existing curriculum of a school, museum, university pre-service class, or a community organization. The goals of the Georgia Project WET Program are to facilitate and to promote awareness, appreciation, knowledge and stewardship of water resources through the development and dissemination of classroom (K-12) ready teaching aids.

The success of the Georgia Project WET Program has been phenomenal. Since 1997, several Project WET facilitator training workshops have been successfully completed in Athens, Atlanta, Dahlonega, Macon, Savannah and Warner Robbins with over 200 Project WET facilitators trained statewide. In addition, 220 Project WET educator workshops have been completed in Georgia with more than 4000 formal and non-formal educators implementing the Project WET curriculum in Georgia with a substantial number of students – over 600,000 students annually!

The Georgia Project WET Program provides educators with additional resources such as the Enviroscape Nonpoint Source, Wetlands and Groundwater Flow Models – demonstration tools used to emphasize the impacts of nonpoint source pollution to surface and ground waters, scripted theatrical performances and costumes for *Mama Bass and the Mudsliders*, and promotional and instructional training videos. In addition, the *Dragonfly Gazette*, a quarterly newsletter, and the *Georgia River of Words Art and Poetry Journal* are published and distributed to over 3000 educators statewide and nationally. Information is also available on the Georgia Project WET website, www.eealliance.org/gaprojectwet.

In March 2001, the Georgia Project WET Program partnered with the Environmental Education Alliance of Georgia to conduct an annual conference and awards ceremony. The 2001 conference, *Georgia Environment - Reaching and Teaching Communities*, was held in Columbus, Georgia with over 200 participants.

In September 2000, Project WET organized the national effort, *Make a Splash with Project WET*, with support from the Perrier Group of America and its local Zephyrills brand. The annual *Make a Splash with Project WET* water festivals around the country consist of structured learning stations and exhibits where

students actively engage in hands-on activities and investigations. More than 50,000 children around the country join together raising awareness about the importance of protecting our water resources. The Georgia Project WET Program held its water festivals at the Lewis Elementary School in Kennesaw, Georgia in September 2000 and Tritt Elementary School in Marietta, Georgia in September 2001 with more than 1200 students and parents participating annually. The Georgia Project WET Program and the elementary schools coordinated 30 hands-on activity stations and performing artists with financial and volunteer support from the PTA. Additional information is available on the Project WET website, www.projectwet.org.

The Georgia Project WET Program has been nationally recognized as a model program for its training strengths and techniques – specifically, the use of arts in environmental education. The Georgia Project WET Program offers educators in Georgia the opportunity to participate in the *River of Words*, an international and poetry and art contest for students (K-12). This contest provides students with the opportunity to explore their own watersheds and to learn their "ecological" addresses through poetry and art. National winners are selected by the former U.S. Poet Laureate, Robert Hass, and the International Children's Art Museum. Annually, only eight students are selected as National Grand Prize Winners to be honored at the Library of Congress in Washington DC.

Over 20,000 entries were submitted to the *River of Words 2001* contest – three out of the eight National Grand Prize Winners selected in April 2001 were from Georgia! Since 1997, eight students from Georgia have been recognized as National Grand Prize Winners and an additional 60 students have been selected as National Finalists and Merit Winners.

The students' original art and poetry has been returned from the international competition and is currently on display in the *Georgia River of Words Exhibition*. In May 2000, the Georgia Project WET Program partnered with the Atlanta Botanical Gardens to conduct the *Georgia River of Words Awards Ceremony* recognizing State and National winners – with over 250 guests from all regions of the State annually. The Georgia Project WET Program offers a guidebook for teachers with specific information about Georgia's watersheds. In addition, several nature centers throughout Georgia offer *River of Words* field trips for students and teachers.

Georgia Adopt-A-Stream Program

The Georgia Adopt-A-Stream Program is a citizen monitoring and stream protection program with two staff positions in the Georgia EPD and five Regional Training Centers. The Regional Training Centers are a network of college-based

training centers located in Americus, Columbus, Milledgeville, Savannah and Valdosta, Georgia. This network of training centers allows the Georgia Adopt-A-Stream Program to be accessible to all areas of the State. The Regional Training Centers ensure that volunteers are trained consistently and that the monitoring data is professionally assessed for quality assurance and quality control.

Stakeholder involvement and stewardship are essential to implementing Georgia's River Basin Management Planning (RBMP) approach to water resource management. The Georgia Adopt-A-Stream Program objectives support the RBMP strategies for stakeholder involvement and stewardship: (1) increase individual's awareness of how they contribute to nonpoint source pollution problems, (2) generate local support for nonpoint source management through public involvement and monitoring of waterbodies, and (3) provide educational resources and technical assistance for addressing nonpoint source pollution problems statewide.

Currently, more than 10,000 volunteers participate in 200 individual and 45 community sponsored Adopt-A-Stream Programs. Volunteers conduct clean ups, stabilize streambanks, monitor waterbodies using biological and chemical methods, and evaluate habitats and watersheds at over 235 sites throughout the State. These activities lead to a greater awareness of water quality and nonpoint source pollution, active cooperation between the public and local governments in protecting water resources, and the collection of basic water quality data. The Georgia Adopt-A-Stream Program focuses on what individuals and communities can do to protect from nonpoint sources of pollution.

Volunteers are offered different levels of involvement. Each level involves an education and action component on a local waterbody. The introductory level consist of setting up a project (i.e., identifying a stream segment, lake, estuary or wetland, identifying partners, registering with the Georgia Adopt-A-Stream Program), evaluating land use and stream conditions during a watershed walk, conducting quarterly visual operations and clean-ups, and public outreach activities. Volunteers create a "Who to Call for Questions or Problems" list so that if something unusual is noted, immediate professional attention can be obtained. Advanced levels of involvement include biological monitoring, chemical monitoring, habitat improvement or riparian restoration projects.

The Georgia Adopt-A-Stream Program provides volunteers with additional resources such as the *Getting to Know Your Watershed and Visual Stream Survey*, *Biological and Chemical Stream Monitoring*, *Adopt-A-Wetland*, *Adopt-A-Lake*, and *Adopt-A-Stream Teacher's Guide* manuals, PowerPoint presentations, and promotional and instructional training videos. In addition, a bi-monthly newsletter is published and distributed to over 3000 volunteers statewide with

program updates, workshop schedules, and information about available resources. Additional information about the Georgia Adopt-A-Stream Program is available on the *Rivers Alive* website, www.riversalive.org/aas.htm. In addition, the Georgia Adopt-A-Stream Program activities have been correlated to the Georgia Quality Core Curriculum (QCC) Science Standards for grades K – 12 and certified teachers in Georgia participating in Georgia Adopt-A-Stream Program training workshops will receive Staff Development Unit (SDU) credits. Additional information about the QCC correlations and SDU credits and the Georgia Adopt-A-Stream QuickTime Training Videos are available on the National Science Center's website, tech.ncdiscovery.org/ee/aas.htm.

In March 2001, the Georgia Adopt-A-Stream Program partnered with the Environmental Education Alliance of Georgia to conduct an annual conference and awards ceremony. The 2001 conference, *Georgia Environment - Reaching and Teaching Communities*, was held in Columbus, Georgia with over 200 participants.

In addition, the Georgia Adopt-A-Stream Program organizes Georgia's annual volunteer river clean up event, *Rivers Alive*, held through-out the month of October. *Rivers Alive* is a statewide event that targets clean-ups across all waterways in the State including streams, rivers, lakes and wetlands. The mission of *Rivers Alive* is to create awareness of and involvement in the preservation of Georgia's water resources.

Rivers Alive 2001 included 100 local clean up events and attracted more than 18,700 volunteers statewide cleaning over 660 miles of the State's waterways. *Rivers Alive 2001* was sponsored by numerous corporations including the Coca-Cola Company, International Paper, Turner Broadcasting System Incorporated, Miller Brewing Company, CVS Pharmacy, Mead Corporation, Beers Construction Company, The Home Depot, BellSouth, Canon USA, Fox 5 TV WAGA, Ricoh Electronics, and Six Continents Hotels. Organizers and volunteers received free t-shirts, watershed posters and signs, press releases and public service announcements. Previous river clean-up events in Georgia have been successful but pale in comparison to the success that has been achieved by *Rivers Alive* in 2000 and 2001. In addition to cleaning the State's waterways, *Rivers Alive* included diverse activities such as storm drain stenciling, water quality monitoring and riparian restoration workshops, riverboat tours, wastewater treatment facility tours and environmental education workshops.

The goals for *Rivers Alive 2002* are to have at least 20,000 volunteers with at least 125 local events statewide. These goals represent increased efforts that will result in cleaner waters in the State. Additional information about *Rivers Alive 2002* is available on the website, www.riversalive.org.

Emergency Response Program

The GAEPD maintains a team of Environmental Emergency Specialists capable of responding to oil or hazardous materials spills 24-hours a day. Each team member is cross-trained to address and enforce all environmental laws administered by the GAEPD. The team members interact at the command level with local, state and federal agency personnel to ensure the protection of human health and the environment during emergency and postemergency situations. The majority of the team members are located in Atlanta in order to facilitate rapid access to the major interstates. Two additional team members operate out of the Environmental Protection Division office in Savannah to provide rapid response to water quality concerns along the coast of Georgia and to assist the United States Coast Guard Marine Safety Office when needed.

A significant number of reported releases involve discharges to storm sewers. Many citizens and some industries do not understand the distinction between storm and sanitary sewers and intentional discharge to storm sewers occurs all too frequently. A problem which arises several times a year involves the intentional discharge of gasoline to storm sewers, with a resulting buildup of vapors to explosive limits. A relatively small amount of gasoline can result in explosive limits being reached in a storm sewer. The resulting evacuations and industry closures cost the citizens of Georgia hundreds of thousands of dollars each year.

The GAEPD is designated in the Georgia Emergency Operations Plan as the lead state agency in responding to hazardous materials spills. Emergency Response Team members serve in both a technical support and regulatory mode during an incident. The first goal of the Emergency Response Team is to minimize and mitigate harm to human health and the environment. In addition, appropriate enforcement actions including civil penalties are taken with respect to spill incidents. Emergency Response Team members work directly with responsible parties to coordinate all necessary clean-up actions. Team members can provide technical assistance with clean-up techniques, as well as guidance to ensure regulatory compliance.

Environmental Radiation

In 1976, the Georgia Radiation Control Act was amended to provide the GAEPD with responsibility for monitoring of radiation and radioactive materials in the environment. The Environmental Radiation Program was created to implement these responsibilities for environmental monitoring. Since that time, the Program has also been assigned responsibility for implementing the GAEPD lead agency role in radiological emergency planning, preparedness and response, and for analyzing drinking water samples collected pursuant to the Safe Drinking Water

Act for the presence of naturally-occurring radioactive materials such as uranium, 226Ra, 228Ra and gross alpha activity.

The Environmental Radiation Program monitors environmental media in the vicinity of nuclear facilities in or bordering Georgia to determine if radioactive materials are being released into the environment in quantities sufficient to adversely affect the health and safety of the citizens of Georgia or the quality of Georgia's environment. Among the more important of the facilities monitored by the Program are:

- Georgia Power Company Edwin I. Hatch Nuclear Plant, located in Appling County, Georgia;
- Alabama Power Company Joseph M. Farley Nuclear Plant, located in Houston County, Alabama;
- Georgia Power Company Vogtle Electric Generating Plant, located in Burke County, Georgia;
- U.S. Department of Energy Savannah River Site, located in Aiken and Barnwell Counties, South Carolina;
- Naval Submarine Base, Kings Bay, located in Camden County, Georgia;
- Tennessee Valley Authority Sequoyah Nuclear Plant, located in Hamilton County, Tennessee; and
- Duke Power Company Oconee Nuclear Plant, located in Oconee County, South Carolina.

On a routine basis, associates in the Environmental Radiation Program collect samples of groundwater, surface water, stream sediment and/or aquatic species (i.e. fish, shellfish) from each of these facilities. The Program contracts with the Environmental Radiation Laboratory (ERL) at Georgia Tech for laboratory analysis of these samples for natural and man-made radionuclides such as 90Sr, 131I, 137Cs and 3H (tritium).

The results of the GAEPD monitoring around Plant Hatch indicate very little evidence of releases of radioactive materials, with the exception of monitoring related to a 1986 spill of spent fuel pool water, as discussed in the GAEPD Environmental Monitoring Reports. Slightly elevated levels of 60Co, 65Zn, 134Cs, and 137Cs have been detected in fish and river sediment from the

Altamaha River downstream to the coastal area near Darien. Slightly elevated levels of 137Cs are observed in vegetation samples from a background station plant cannot be attributed to plant operations, as similar levels are not found at indicator stations closer to the plant. Overall, it appears that Plant Hatch operations have not added significant quantities of radioactive materials to the environment.

The results of the GAEPD monitoring around Plant Farley indicate little evidence of releases of radioactive materials, with the exception of slightly elevated levels of tritium (3H) in surface water and slight traces of 58Co and 60Co in river sediment.

Results of the GAEPD monitoring around SRS and Plant Vogtle show evidence of current and previous releases of radioactive materials from SRS. Elevated levels of tritium (3H) due to airborne and liquid releases are routinely detected in fish, milk, precipitation, surface water and vegetation. Elevated levels of 137Cs and 60Co, attributed to releases from previous SRS operations, are found in sediments from the Savannah River. Elevated 137Cs, gross beta, and 90Sr levels are also found in fish from the Savannah River. Staff of the Environmental Radiation Program are working with SRS personnel on a study of the effects on human health from consumption of contaminated fish. The GAEPD monitoring results also show evidence of current and previous releases of radioactive materials from Plant Vogtle. Slightly elevated concentrations of 54Mn, 58Co, and 60Co have been detected in aquatic vegetation and sediment downstream of Plant Vogtle, and 134Cs has been detected in fish downstream of the plant.

The results of the GAEPD monitoring around Kings Bay indicate little evidence of releases of radioactive materials. Elevated gross beta concentrations in surface water are due to naturally-occurring 40K in sea-water. Overall, it appears that operations at Naval Submarine Base, Kings Bay have not added significant quantities of radioactive materials to the environment.

The results of the GAEPD monitoring around the Sequoyah Nuclear Plant indicate no evidence of releases of radioactive materials.

Results of the GAEPD monitoring around the Oconee Nuclear Plant indicate no evidence of releases of radioactive materials. Elevated gross alpha and gross beta concentrations observed in ground water at one location are due to the presence of 226Ra (naturally-occurring radioactive isotope).

CHAPTER 8

Groundwater, Ground and Surface Water Withdrawals/Availability, and Ground and Surface Water Drinking Water Supplies

Groundwater

Georgia began the development of its Comprehensive State Groundwater Protection Program (CSGWPP) in the 1970s with enactment of the Ground Water Use Act in 1972. By the mid-1980s, groundwater protection and management had been established by incorporation in a variety of environmental laws and the rules. In 1984, the GAEPD published its first Groundwater Management Plan, in which the various regulatory programs dealing with groundwater were integrated.

Most laws providing for protection and management of groundwater are administered by the GAEPD. Laws regulating pesticides are administered by the Department of Agriculture, environmental planning by the Department of Community Affairs, and on-site sewage disposal by the Department of Human Resources. The GAEPD has established formal Memoranda of Understanding (MOU) with these agencies. The Georgia Groundwater Protection Coordinating Committee was established in 1992 to coordinate groundwater management activities between the various departments of state government and the several branches of the GAEPD.

The first version of Georgia's Groundwater Management Plan (1984) has been revised several times to incorporate new laws, rules and technological advances. The current version, Georgia Geologic Survey Circular 11, was published in February, 1998. This document was GAEPD's submission to the USEPA as a "core" CSGWPP. The USEPA approved the submittal in September of 1997. Georgia is now one of approximately 20 percent of the states with an EPA approved CSGWPP.

Groundwater is extremely important to the life, health, and economy of Georgia. For example, in 1995, groundwater made up 23 percent of the public water supply, 91 percent of rural drinking water sources, 66 percent of the irrigation use and 45 percent of the industrial and mining use. Total groundwater withdrawals

in 1995 were approximately 1.2 billion gallons per day. For practical purposes, outside the larger cities of the Piedmont, groundwater is the dominant source of drinking water. Literally billions of dollars could be lost to the economy of Georgia and the health of millions of persons could be compromised if Georgia's vast treasure trove of pure groundwater were to be significantly polluted.

Few cases of groundwater pollution have been documented in Georgia and there is no significant portion of the population at risk from groundwater pollution from any source. No particular source of man-made pollution is known to be widespread or represents a significant threat to groundwater quality in the State. Data on the major sources of groundwater contamination are provided in Table 8-1.

The GAEPD's groundwater regulatory programs follow an anti-degradation policy under which regulated activities will not develop into significant threats to the State's groundwater resources. This anti-degradation policy is implemented through three principal elements:

- Pollution prevention,
- Management of groundwater quantity, and
- Monitoring of groundwater quality and quantity.

The prevention of pollution includes (1) the proper sitting, construction and operation of environmental facilities and activities through a permitting system, (2) implementation of environmental planning criteria by incorporation in land-use planning by local government, (3) implementation of a Wellhead Protection Program for municipal drinking water wells, (4) detection and mitigation of existing problems, (5) development of other protective standards, as appropriate, where permits are not required, and (6) education of the public to the consequences of groundwater contamination and the need for groundwater protection. Management of groundwater quantity involves allocating the State's groundwater, through a permitting system, so that the resource will be available to present and future generations. Monitoring of groundwater quality and quantity involves continually assessing the resource so that changes, either good or bad, can be identified and corrective action implemented when and where needed. Table 8-2 is a summary of Georgia groundwater protection programs.

The State of Georgia possesses a groundwater supply that is both abundant and of high quality. Except where aquifers in the Coastal Plain become salty at great depth, all of the State's aquifers are considered as potential sources of drinking water. For the most part, these aquifers are remarkably free of pollution. The aquifers are continuously recharged by precipitation falling within the borders of the State and can, in most places, continue to provide additional water to help

TABLE 8-1
MAJOR SOURCES OF GROUND WATER CONTAMINATION

Contaminant Source	Contaminant Source Selection Factors	Contaminants
Agricultural Activities		
Agricultural chemical facilities		
Animal feedlots		
Drainage wells		
Fertilizer applications		
Irrigation practices		
Pesticide applications		
Storage and Treatment Activities		
Land application		
Material stockpiles		
Storage tanks (above ground)		
Storage tanks (underground)*	C, D, F	D
Surface impoundments		
Waste piles		
Waste tailings		
Disposal Activities		
Deep injection wells		
Landfills*	C, D, F	D, G, H
Septic systems*	C	E, K, L
Shallow injection wells		

Contaminant Source	Contaminant Source Selection Factors	Contaminants
Other		
Hazardous waste generators		
Hazardous waste sites*	F	C, H
Industrial facilities*	C, F	C, D, H
Material transfer operations		
Mining and mine drainage		
Pipelines and sewer lines*	F	D
Salt storage and road salting		
Salt water intrusion*	B, C, E, F	G
Spills*	F	D
Transportation of materials		
Urban runoff*	D, E	Variable
Natural iron and manganese* Natural radioactivity	F	H, I

*10 highest-priority sources

Factors used to select each of the contaminated sources.

A. Human health and/or environmental risk (toxicity)
B. Size of the population at risk
C. Location of the sources relative to drinking water sources
D. Number and/or size of contaminant sources
E. Hydrogeologic sensitivity
F. State findings, other findings

Contaminants/classes of contaminants considered to be associated with each of the sources that were checked.

A. Inorganic pesticides
B. Organic pesticides
C. Halogenated solvents
D. Petroleum compounds
E. Nitrate
F. Fluoride
G. Salinity/brine
H. Metals
I. Radio nuclides
J. Bacteria
K. Protozoa
L. Viruses

TABLE 8-2
SUMMARY OF STATE GROUND WATER PROTECTION PROGRAMS

Programs or Activities	Check (X)	Implementation Status	Responsible State Agency
Active SARA Title III Program	X	Fully Established	GAEPD
Ambient ground water monitoring system	X	Fully Established	GAEPD
Aquifer vulnerability assessment	X	Ongoing	GAEPD
Aquifer mapping	X	Ongoing	GAEPD
Aquifer characterization	X	Ongoing	GAEPD
Comprehensive data management system	X	Ongoing	GAEPD
EPA-endorsed Core Comprehensive State Ground Water Protection Program (CSGWPP)	X	Fully Established	GAEPD
Ground water discharge		Prohibited	
Ground water Best Management Practices	X	Pending	GAEPD
Ground water legislation	X	Fully Established	GAEPD
Ground water classification		Not applicable	
Ground water quality standards	X	Ongoing	GAEPD
Interagency coordination for ground water protection initiatives	X	Fully Established	GAEPD
Nonpoint source controls	X	Pending	GAEPD
Pesticide State Management Plan	X	Fully Established	DOA
Pollution Prevention Program	X	Fully Established	DNR
Resource Conservation and Recovery Act (RCRA) Primacy	X	Fully Established	GAEPD
State Superfund	X	Fully Established	GAEPD
State RCRA Program incorporating more stringent requirements than RCRA Primacy	X	Fully Established	GAEPD
State septic system regulations	X	Fully Established	DHR
Underground storage tank installation requirements	X	Fully Established	GAEPD
Underground Storage Tank Remediation Fund	X	Fully Established	GAEPD
Underground Storage Tank Permit Program		Not applicable	
Underground Injection Control Program	X	Fully Established	GAEPD
Vulnerability assessment for drinking water/wellhead protection	X	Ongoing	GAEPD
Well abandonment regulations	X	Fully Established	GAEPD
Wellhead Protection Program (EPA-approved)	X	Fully Established	GAEPD
Well installation regulations	X	Fully Established	GAEPD

meet future water needs. While water from wells is safe to drink without treatment in most areas of Georgia, water to be used for public supply is required to be chlorinated (except for very small systems). Water for domestic use can also be treated if required.

Ambient groundwater quality, as well as the quantity available for development, is related to the geologic character of the aquifers through which it has moved. Georgia's aquifers can, in general, be characterized by the five main hydrologic provinces in the State (Figure 8-1).

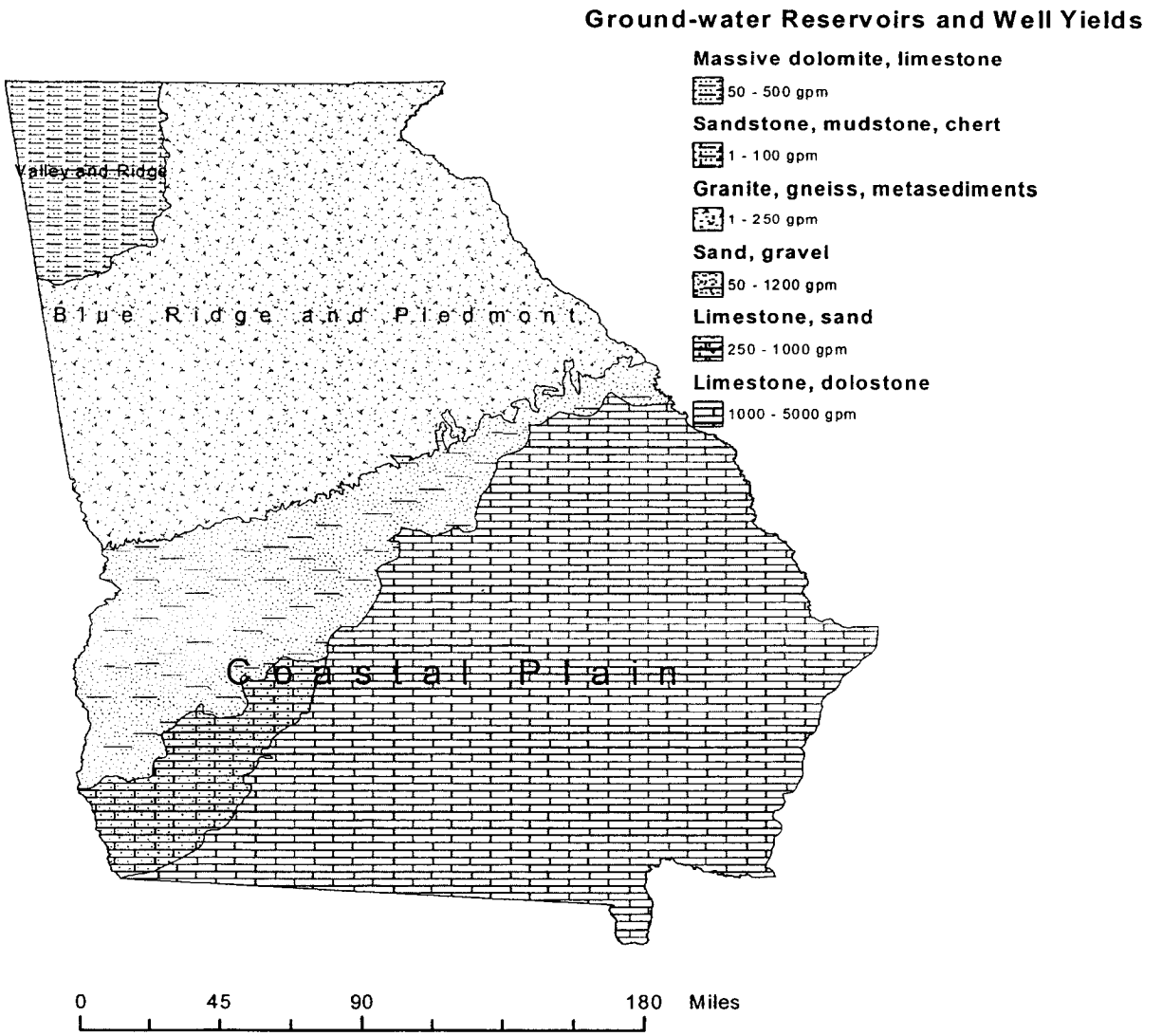
In addition to sampling of public drinking water wells as part of the Safe Drinking Water Act and sampling of monitoring wells at permitted facilities, the GAEPD monitors ambient groundwater quality through the Georgia Groundwater Monitoring Network. The Network consists of approximately 120-130 wells, which are sampled periodically (Figure 8-2). These wells are located in all of the main aquifers and throughout the State in key areas. Water quality is reported annually. This network allows the GAEPD to identify groundwater quality trends before they become a problem. The only adverse trend noted to date is that nitrate, while still a fraction of the USEPA established MCL for drinking water, has slightly increased in concentration in the recharge areas of some Coastal Plain aquifers since 1984. General results of aquifer monitoring data for calendar year 2000 are provided in Table 8-3, with calendar year 2001 results reported in Table 8-4.

To evaluate nitrate/nitrite from non-point sources in the State's groundwater, the GAEPD sampled over 5000 shallow domestic drinking water wells for nitrate/nitrite since 1991. Results indicate that water from 97 percent of the wells has less than 5 ppm nitrate as N, well below the MCL of 10 ppm. Water from less than one percent of the wells exceeded the MCL value. Nitrate can come from non-point sources such as natural and artificial fertilizer, natural sources, feedlots and animal enclosures. Septic tanks and land application of treated wastewater and sludge are other potential sources of nitrate. The GAEPD's extensive sampling program demonstrates that nitrates, from non-point sources, are not a significant contributor to groundwater pollution in Georgia.

Agricultural chemicals are commonly used in the agricultural regions of the State (Figure 8-3). In addition to the Groundwater Monitoring Network and nitrate/ nitrite sampling, the GAEPD has sampled:

- A network of monitoring wells located downgradient from fields where pesticides are routinely applied,
- Domestic drinking water wells, and
- Agricultural drainage wells and sinkholes in the agricultural regions of Georgia's Coastal Plain for pesticides.

FIGURE 8-1
HYDROLOGIC PROVINCES OF GEORGIA



Only a few pesticides and herbicides have been detected in groundwater in these studies. There is no particular pattern to their occurrence, and most detections have been transient; that is, the chemical is most often no longer present when the well is resampled.

From 1993 through 2000, the GAEPD cooperated with the Georgia Department of Agriculture to sample a network of special monitoring wells located downgradient from fields where pesticides were routinely applied. Pesticides were not detected in any of these monitoring wells, and this project was terminated in 2000. Beginning in 2000, the GAEPD began a five-year statewide screening of water samples from domestic wells for four target pesticides (alachlor, atrazine, metolachlor and simazine). The GAEPD had sampled 1,220 domestic wells in south Georgia by the end of 2001. Laboratory analysis confirmed that only seven wells contained detectable concentrations of pesticides. Three of these wells contained atrazine at concentrations of 3.6 to 6.2 ppb, slightly higher than the public drinking water MCL of 3.0 ppb. All homeowners whose wells tested positive for pesticides were referred to the University of Georgia's Cooperative Extension Service for assistance. Prudent agricultural use of pesticides does not appear to represent a significant threat to drinking water aquifers in Georgia at this time.

The most extensive contamination of Georgia's aquifers is from naturally occurring mineral salts (i.e., high total dissolved solids, or TDS levels). Areas generally susceptible to high TDS levels are shown in Figure 8-4. Intensive use of groundwater in the 24 counties of the Georgia coast has caused some groundwater containing high levels of dissolved solids to enter freshwater aquifers either vertically or laterally. Salt-water intrusion into the Upper Floridan Aquifer threatens groundwater supplies in the Hilton Head-Savannah and Brunswick areas. Intrusion rates, however, are quite slow, being more than a hundred years to reach Savannah. The GAEPD has placed limitations on additional withdrawals of groundwater in the affected areas. This has effectively slowed the rate of additional contamination. On April 23, 1997, the GAEPD implemented an Interim Strategy to protect the Upper Floridan Aquifer in the 24 coastal counties from salt-water intrusion. The strategy, developed in consultation with South Carolina and Florida, will continue until December 31, 2005 at which time the GAEPD plans to implement a Final Strategy that will (a) stop salt-water intrusion before municipal water supply wells on Hilton Head Island, South Carolina and Savannah, Georgia are contaminated and (b) prevent an existing salt-water problem at Brunswick, Georgia from worsening. To accomplish this objective, the GAEPD will do the following:

1. Continue to conduct scientific and feasibility studies to determine with certainty how to permanently stop the salt-water intrusion moving towards Hilton Head Island, South Carolina and Savannah, Georgia and how to

FIGURE 8-2
AMBIENT GROUNDWATER MONITORING NETWORK

TABLE 8-3
AQUIFER MONITORING DATA FOR CY 2000

Ambient Monitoring Network	Total wells used in assessment	Parameter groups (See note 1)	ND (See note 2)/ Nitrate <3	ND/ 3<nitrate <5 mg/l	Parameters detected >RL<MCL; 5<nitrate <=10 mg/l	Parameters detected >MCLs	Removed from service	Special treatment	Background parameters>MCLs
Cretaceous Aquifer System Coastal Plain	17	VOC	14 of 17	14 of 17	3 of 17	0 of 17	0	0	0 of 17
		Nitrate	17 of 17	0 of 17	0 of 17	0 of 17	0	0	0 of 11
Providence Aquifer System Coastal Plain	2	VOC	2 of 2	0 of 2	0 of 2	0 of 2	0	0	0 of 2
		Nitrate	2 of 2	0 of 2	0 of 2	0 of 2	0	0	0 of 2
Clayton Aquifer System Coastal Plain	5	VOC	5 of 5	5 of 5	0 of 5	0 of 5	0	0	0 of 5
		Nitrate	4 of 5	1 of 5	0 of 5	0 of 5	0	0	0 of 5
Claiborne Aquifer System Coastal Plain	5	VOC	5 of 5	5 of 5	0 of 5	0 of 5	0	0	0 of 5
		Nitrate	4 of 5	1 of 5	0 of 5	0 of 5	0	0	0 of 5
Jacksonian Aquifer System Coastal Plain	8	VOC	8 of 8	8 of 8	0 of 8	0 of 8	0	0	0 of 8
		Nitrate	7 of 8	0 of 8	1 of 8	0 of 8	0	0	0 of 8
Floridan Aquifer System Coastal Plain	48	VOC	46 of 48	46 of 48	2 of 48	0 of 48	0	0	0 of 48
		Nitrate	44 of 48	4 of 48	0 of 48	0 of 48	0	0	0 of 48
Miocene Aquifer System Coastal Plain	7	VOC	7 of 7	7 of 7	0 of 7	0 of 7	0	0	0 of 7
		Nitrate	3 of 7	0 of 7	3 of 7	1 of 7	0	0	0 of 7
Piedmont/Blue Ridge Unconfirmed Aquifers	17 wells 3 springs	VOC	14 of 20	14 of 20	5 of 20	1 of 20	0	0	0 of 20
		Nitrate	20 of 20	0 of 20	0 of 17	0 of 20	0	0	0 of 20
Valley & Ridge Unconfirmed Aquifers	5 wells 4 springs	VOC	7 of 9	7 of 9	2 of 9	0 of 9	0	0	0 of 9
		Nitrate	9 of 9	0 of 9	0 of 9	0 of 9	0	0	0 of 4

Notes: 1. Reporting Limit (RL) used for VOC Parameter Group. For nitrates, 3 mg/l is assumed for background. Combined nitrate/nitrite analysis was used for evaluating nitrate levels.

2. ND (Not Detected) used where parameters were analyzed but not detected above the RL.

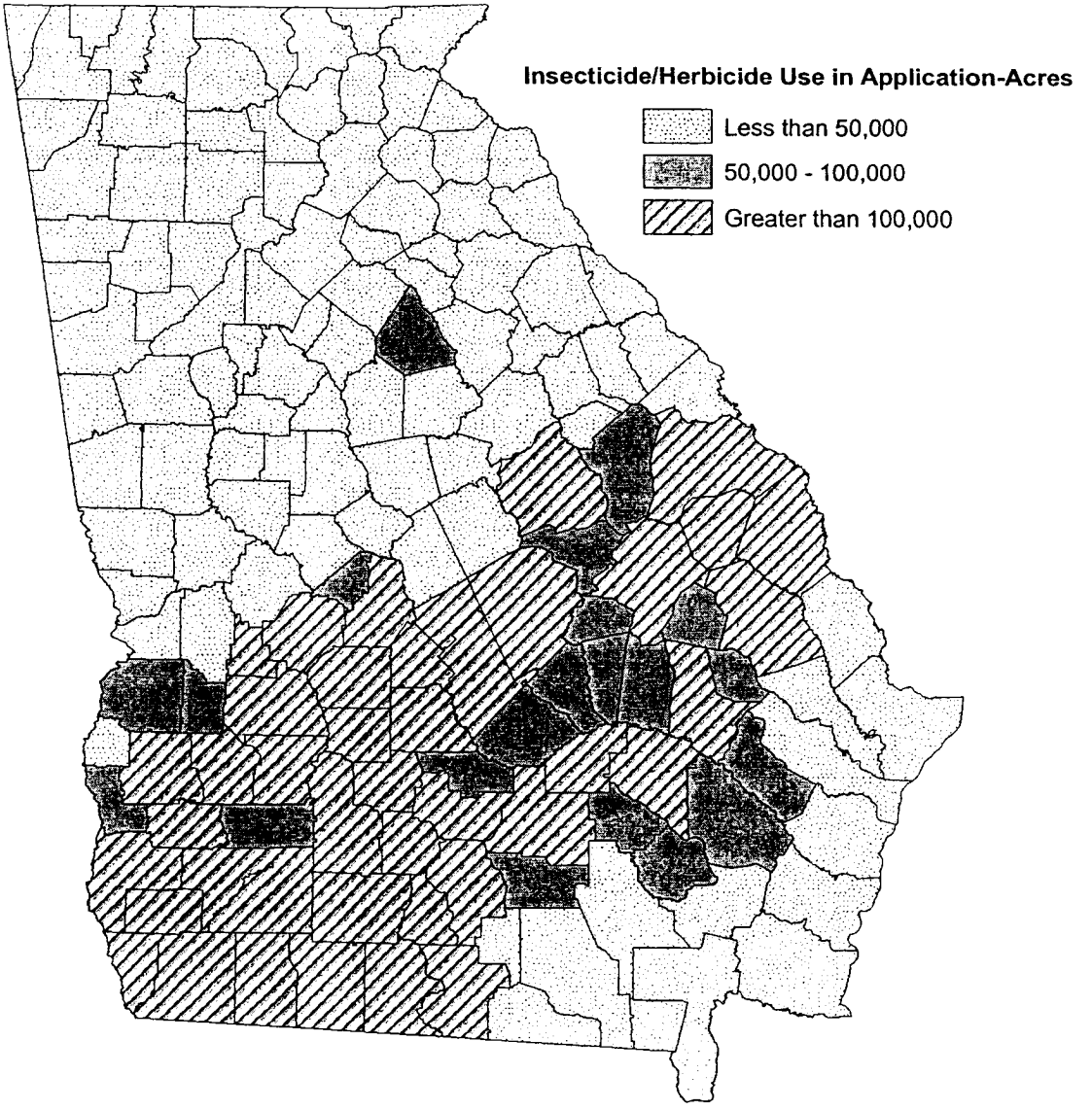
TABLE 8-4
AQUIFER MONITORING DATA FOR CY 2001

Ambient Monitoring Network	Total wells used in assessment	Parameter groups (See note 1)	ND (See note 2) Nitrate <3	ND 3<nitrate <5 mg/l	Parameters detected >RL <MCL 5<nitrate <=10 mg/l	Parameters detected >MCLs	Removed from service	Special treatment	Background parameters> MCLs
Cretaceous Aquifer System Coastal Plain	17	VOC	13 of 17	13 of 17	4 of 17	0 of 17	0	0	0 of 17
		Nitrate	17 of 17	0 of 17	0 of 17	0 of 17	0	0	0 of 17
Providence Aquifer System Coastal Plain	2	VOC	2 of 2	2 of 2	0 of 2	0 of 2	0	0	0 of 2
		Nitrate	2 of 2	0 of 2	0 of 2	0 of 2	0	0	0 of 2
Clayton Aquifer System Coastal Plain	5	VOC	5 of 5	5 of 5	0 of 5	0 of 5	0	0	0 of 5
		Nitrate	4 of 5	0 of 5	1 of 5	0 of 5	0	0	0 of 5
Claiborne Aquifer System Coastal Plain	5	VOC	5 of 5	5 of 5	0 of 5	0 of 5	0	0	0 of 5
		Nitrate	4 of 5	1 of 5	0 of 5	0 of 5	0	0	0 of 5
Jacksonian Aquifer System Coastal Plain	8	VOC	8 of 8	8 of 8	0 of 8	0 of 8	0	0	0 of 8
		Nitrate	7 of 8	0 of 8	1 of 8	0 of 8	0	0	0 of 8
Floridan Aquifer System Coastal Plain	49	VOC	48 of 49	48 of 49	1 of 49	0 of 49	0	0	0 of 49
		Nitrate	45 of 49	4 of 49	0 of 49	0 of 49	0	0	0 of 49
Miocene Aquifer System Coastal Plain	6	VOC	6 of 6	6 of 6	0 of 6	0 of 6	0	0	0 of 6
		Nitrate	3 of 6	0 of 6	2 of 6	1 of 6	0	0	0 of 6
Piedmont/Blue Ridge Unconfined Aquifers	17 wells 3 springs	VOC	14 of 20	5 of 20	0 of 20	1 of 20	0	0	0 of 20
		Nitrate	20 of 20	0 of 20	0 of 20	0 of 20	0	0	0 of 20
Valley & Ridge Unconfined Aquifers	5 wells 4 springs	VOC	6 of 9	6 of 9	3 of 9	0 of 9	0	0	0 of 9
		Nitrate	9 of 9	0 of 9	0 of 9	0 of 9	0	0	0 of 9

Notes: 1. Reporting Limit (RL) used for VOC Parameter Group. For nitrates, 3 mg/l is assumed for background. Combined nitrate/nitrite analysis was used for evaluating nitrate levels.

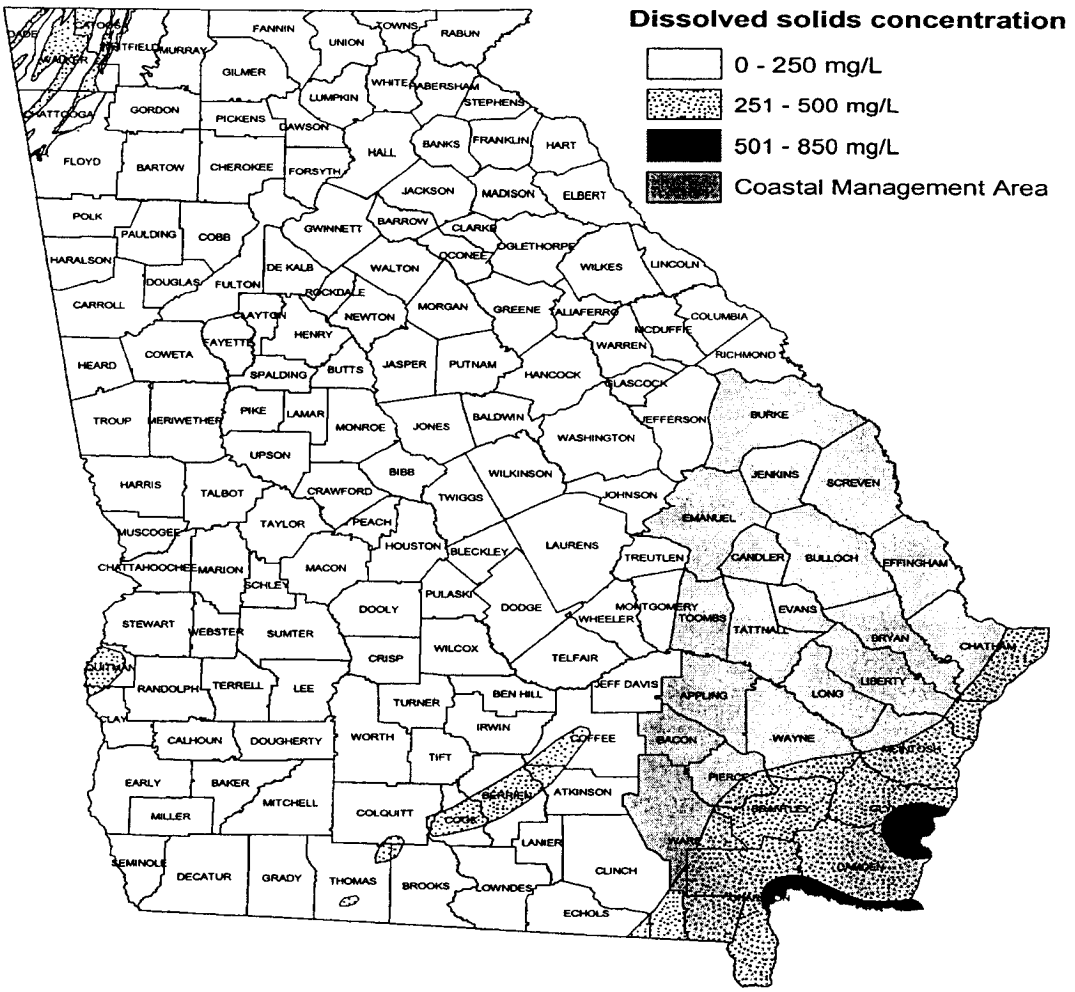
2. ND (Not Detected) used where parameters were analyzed but not detected above the RL.

FIGURE 8-3
INSECTICIDE/HERBICIDE USE IN GEORGIA, 1980



Note: An application-acre represents one application of insecticide-herbicide to one acre of land. Some crops may require multiple applications.

FIGURE 8-4
AREAS SUSCEPTIBLE TO NATURAL HIGH DISSOLVED SOLIDS AND 24 COUNTY AREA COVERED BY THE INTERIM COASTAL MANAGEMENT STRATEGY



prevent the existing salt-water intrusion at Brunswick, Georgia from worsening.

(2) Complete the collation and synthesis of the 24 county water supply plans into one comprehensive coastal area water supply planning document. As required by the Interim Strategy, each of the 24 coastal counties has submitted a planning document detailing current water usage in the county and projecting the quantities of future water use. The counties were to document any potential alternate water supply sources as well. Since each of the counties has already submitted a plan, there is no restriction on this account for any future proposed public water, agriculture or industrial water withdrawal permit.

(3) Maintain caps on groundwater use in Glynn County, Chatham County, and portions of Bryan and Effingham counties, to avoid worsening the rate of salt-water intrusion at Hilton Head, Savannah and at Brunswick.

(4) Reduce groundwater use in Chatham County by at least 10 million gallons per day by December 31, 2005 through conservation and substitution of surface water for groundwater. This will be affirmed through reductions in groundwater use permits.

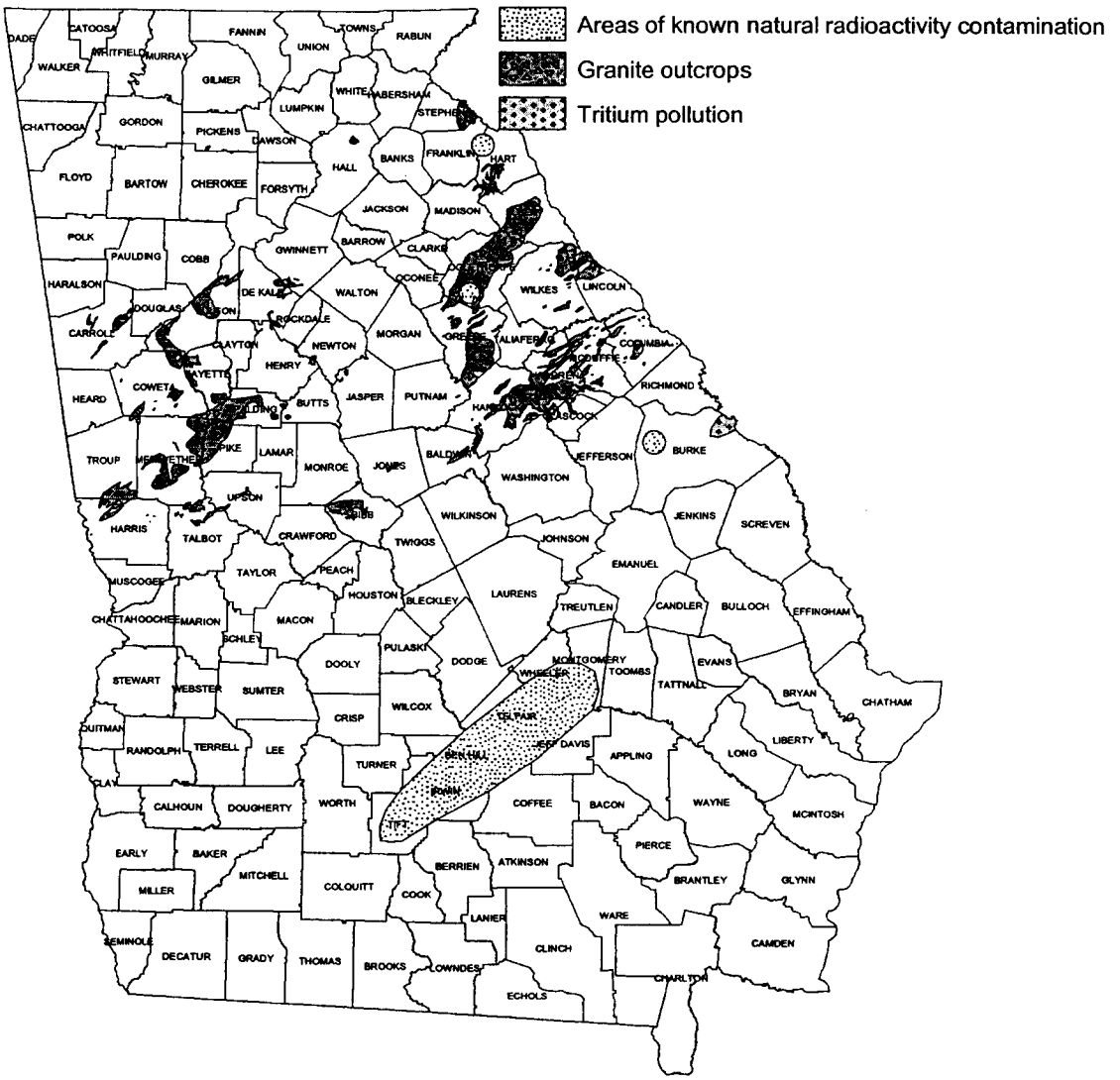
(5) Allow, on an interim basis, increases in groundwater withdrawals in the areas of southeast Georgia that have little impact on salt-water intrusion problems.

(6) Encourage and promote water conservation and reduced groundwater usage wherever feasible, throughout southeast Georgia.

Some wells in Georgia produce water containing relatively high levels of naturally occurring iron and manganese. Another natural source of contamination is from radioactive minerals that are a minor rock constituent in some Georgia aquifers. While natural radioactivity may occur anywhere in Georgia, the most significant problems have occurred at some locations near the Gulf Trough, a geologic feature of the Floridan Aquifer in the Coastal Plain (Figure 8-5). Wells can generally be constructed to seal off the rocks producing the radioactive elements to provide safe drinking water. Radon, a radioactive gas produced by the radioactive minerals mentioned above, also has been noted in highly variable amounts in groundwater from some Georgia wells, especially in the Piedmont region. Treatment systems may be used to remove radon from groundwater.

Tritium, a radioactive isotope of hydrogen, in excess of expected background levels, was found in 1991 by GAEPD sampling in Burke County aquifers. While

FIGURE 8-5
AREAS SUSCEPTIBLE TO NATURAL AND HUMAN INDUCED RADIATION



the greatest amount of tritium thus far measured is only 15 percent of the USEPA MCL for tritium, the wells in which it has been found lie across the Savannah River from the Savannah River Plant in South Carolina, where tritium was produced for nuclear weapons (Figure 8-5). The tritium does not exceed MCLs for drinking water; therefore it does not represent a health threat to Georgia citizens at the present time. Results of the GAEPD's studies to date indicate the most likely pathway for tritium to be transported from the Savannah River Plant is through the air due to evapo-transpiration of tritiated water. The water vapor is condensed to form titrated precipitation over Georgia and reaches the shallow aquifers through normal infiltration and recharge.

In July, 1994, heavy rainfall associated with Hurricane Alberto caused the Flint River in southwest Georgia to flood. Some floodwaters appear to have entered the Upper Floridan Aquifer through sinkholes and contaminated the aquifer with coliform bacteria. During the summer and fall of 1994, over 6000 analyses were made at domestic wells. Subsequent follow-up monitoring in the winter of 1995 demonstrated that the aquifer had cleaned itself and any residual problems related to bacteria were probably due to improper well construction.

Man-made pollution of groundwater can come from a number of sources, such as business and industry, agriculture, and homes (e.g., septic systems). Widespread annual testing of more than 2000 public water supply wells for volatile organic chemicals (VOC's, e.g. solvents and hydrocarbons) is performed by the GAEPD. In 2000-2001, one water system had a VOC level high enough to exceed the MCL and become a violation. The sources of the VOCs most commonly are ill-defined spills and leaks, improper disposal of solvents by nearby businesses, and leaking underground fuel-storage tanks located close to the well. Where such pollution has been identified, alternate sites for wells are generally available or the water can be treated. In 2001, 5 water systems had MTBE, a gasoline additive, in the water at levels higher than 10 ppb. There is currently no MLC for MTBE.

The GAEPD evaluates public groundwater sources (wells and springs) to determine if they have direct surface water influence. Ground Water Under the Direct Influence of Surface Water (GWUDI) is defined as "Water beneath the surface of the ground with: (1) Significant occurrence of insects or other macro organisms, algae, or large diameter protozoa and pathogens such as Giardia lamblia or Cryptosporidium; and significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity or pH which closely correlate to climatological or surface conditions." Microscopic Particulate Analysis (MPA) is a method of sampling and testing for significant indicators. Hundreds of MPA's have been performed each year since the program began in 1988. All of the known existing sources have been evaluated either on site or

from information gathered from our files. Some are being re-evaluated as better information becomes available. Recently the primary focus of the program has been to monitor the nearly 100 public spring sources scattered around the state and to evaluate new wells and spring sources as they enter the source approval process.

On the basis of the information gathered from MPAs and evaluations during 2000-2001, 11 sources were found to have direct surface water influence. During this period, of the influenced sources, several were either taken out of service, added additional treatment to eliminate the influence or took corrective action to find and repair the cause. The remaining are either on schedule for adding treatment or in the process of gathering more information by collecting additional samples.

Groundwater protection from leaking underground storage tanks was enhanced with the enactment of the Georgia Underground Storage Tank Act in 1988. The program established a financial assurance trust fund and instituted corrective action requirements to clean up leaking underground storage tanks. Through December 31, 2001, confirmed releases have been identified at 9655 sites and site investigation and corrective action procedures have been completed at 5747 sites and initiated at the remaining 3908 sites.

In 1992, the Georgia Legislature enacted the Hazardous Site Response Act to require the notification and control of releases of hazardous materials to soil and groundwater. Currently, there are 537 sites listed on the Georgia Hazardous Site Inventory (HSI). Since the initial publication of the HSI, cleanups have been initiated at 464 sites with 158 of them completed. As with underground storage tanks, Georgia has established a trust fund raised from fees paid by hazardous waste generators for the purpose of cleaning abandoned hazardous waste sites. Using a combination of site assessment, and removal and transportation/disposal contractors, the Hazardous Site Response Program has issued over 100 contracts to investigate and cleanup abandoned sites, of which approximately 60 have been completed.

Leachate leaking from solid waste landfills is also a potential groundwater pollutant. Georgia has a program, utilizing written protocols, to properly site, construct, operate, and monitor such landfills so that pollution of groundwater will not become a threat to drinking water supplies. In this regard, the GAEPD has completed a set of maps generated by a Geographic Information System that shows areas geotechnically unsuitable for a municipal solid waste landfill. Maps at the scale of 1:100,000 have been distributed to all of the State's Regional Development Centers. In addition, all permitted solid waste landfills are required to have an approved groundwater monitoring plan and monitoring wells installed

in accordance with the GAEPD standards for groundwater monitoring. As of September 1999, there were 101 permitted active (operational) solid waste landfills in Georgia. In addition, 68 landfills have ceased accepting waste and are currently closing the facility. There are 120 landfills in post-closure care (required to conduct groundwater monitoring for 30 years). Of these 289 landfills, 274 are monitoring groundwater with approved systems. The remaining landfills are in the process of installing monitoring systems, and/or are awaiting GAEPD approval.

The GAEPD also actively monitors sites where treated wastewaters are further treated by land application methods. Agricultural drainage wells and other forms of illegal underground injection of wastes are being closed under another GAEPD program. The GAEPD has identified the non-domestic septic systems in use in the State, has collected information on their use, and recently implemented the permitting of systems serving more than 20 persons. Very few of the systems were used for the disposal of non-sanitary waste and the owners of those systems have been required to obtain a permit, or stop disposing of non-sanitary waste, carry out groundwater pollution studies, and clean up any pollution that was detected. None of these sources represents a significant threat to the quality of Georgia's groundwater at the present time.

The GAEPD has an active Underground Injection Control Program. As of December 31, 2000, there were 112 active UIC permits covering 1,554 Class V wells. In this regard, it is the policy of GAEPD not to permit the disposal of waste fluids; all of the permits are for maintenance of aquifer pressures or remediation of UST sites, petroleum product spills, or hazardous waste sites.

Georgia law requires that well drillers constructing domestic, irrigation and public water supply wells be licensed and bonded. As of September 30, 2001, Georgia had 227 active licensed drillers that are required to follow strict well construction standards. The GAEPD actively pursues and works closely with the Courts to prosecute unlicensed water well contractors. The GAEPD continues to work with various drilling associations and licensed drillers to uphold and enforce the construction standards of the Water Well Standards Act. The GAEPD is also writing new rules for the certification of all water well pump installers. The GAEPD has taken an active role in informing all license drillers of the requirement that all irrigation wells must be permitted, and that such permits must be issued prior to the actual drilling of any irrigation well. All drillers constructing monitoring wells, engineering and geologic boreholes must be bonded. The GAEPD maintains an active file of all bonded drilling companies and makes every attempt to stop the operations of all drillers who fail to maintain a proper bond. The GAEPD issues permits and regulates all oil and gas exploration in the state under the Oil & Gas and Deep Drilling Act.

Activities affecting groundwater quality that take place in the areas where precipitation is actively recharging groundwater aquifers are more prone to cause pollution of drinking water supplies than those taking place in other areas. In this regard, Georgia was one of the first states to implement a state-wide recharge area protection program. The GAEPD has identified the most significant recharge areas for the main aquifer systems in the State (Figure 8-6). In addition, the GAEPD has completed detailed maps showing the relative susceptibility of shallow groundwater to pollution by man's activities at the land surface. These maps at the scale of 1:100,000 have also been distributed to the State's Regional Development Centers, and a state-wide map at the scale of 1:500,000 have been published as Hydrologic Atlas 20.

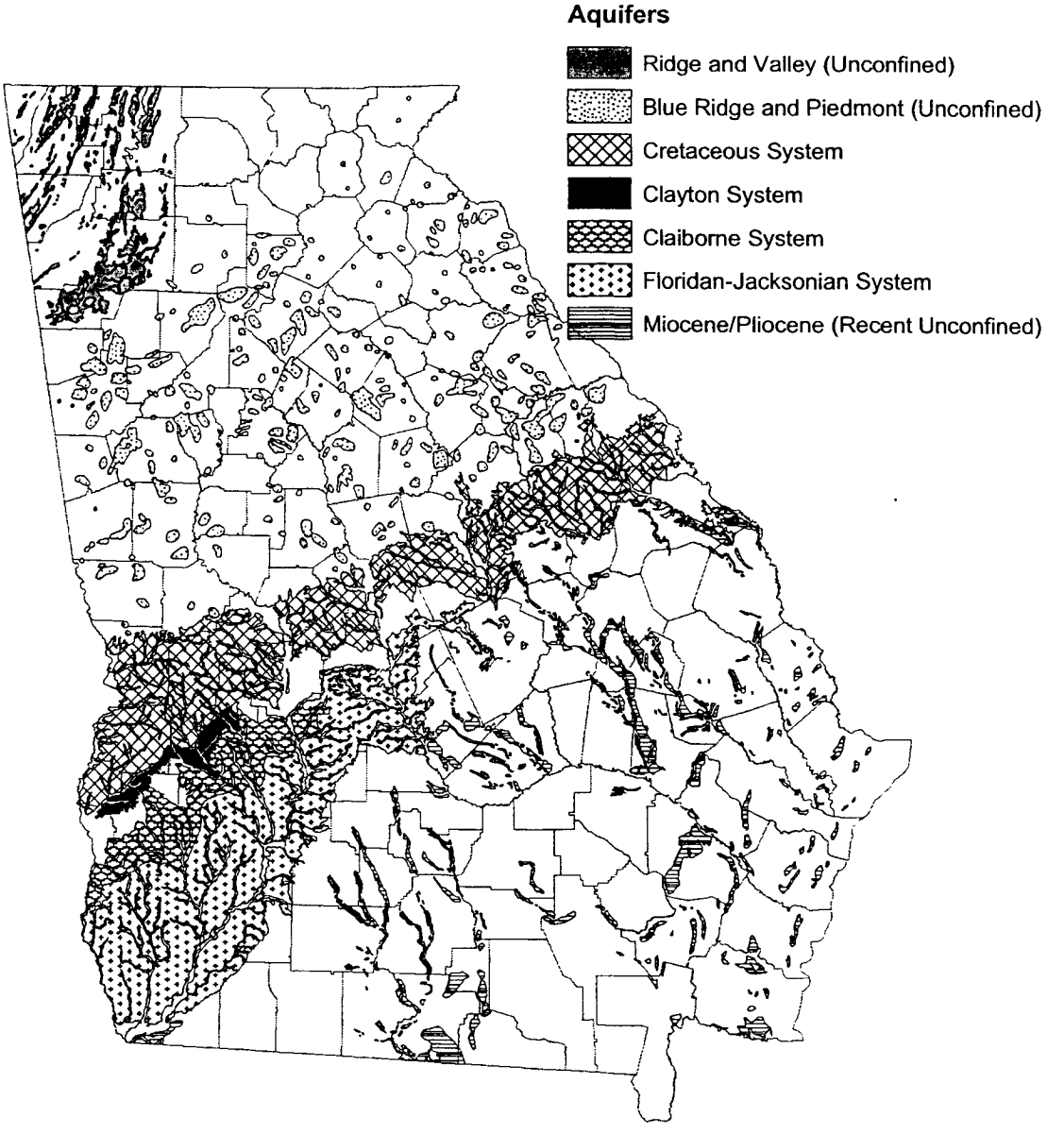
Recharge areas and areas with higher than average pollution susceptibility is being given special consideration in all relevant permit programs. The GAEPD has developed environmental criteria to protect groundwater in significant recharge areas as required by the Georgia Comprehensive Planning Act of 1989. These criteria also reflect the relative pollution susceptibility of the land surface in recharge areas. Local governments are currently incorporating the pollution prevention measures contained in the criteria in developing local land use plans.

Some areas, where recharge to individual wells using the surficial or unconfined aquifers is taking place, are also significant recharge areas. To protect such wells, the GAEPD implemented a Wellhead Protection Program for municipal drinking water wells in 1993. Wells in confined aquifers have a small Wellhead Protection Area, generally 100 feet from the well. Wells using unconfined aquifers have Wellhead Protection Areas extending several hundred to several thousand feet from the well. Wells in karstic areas require even larger protection areas, which are defined using hydrogeologic mapping techniques.

Wellhead Protection Plans were completed for 1,456 of the estimated 1,580 municipal wells in Georgia by December 31, 2001. Wellhead Protection Plans for the remaining 130 municipal wells will be completed by the end of September 2002. In addition, the GAEPD is carrying out vulnerability studies for non-municipal public water systems.

Table 8-1 summarizes the sources and nature of groundwater contamination and pollution in Georgia. In Table 8-1, an asterisk indicates that the listed source is one of the 10 highest sources in the state. Of these, the most significant source is salt-water intrusion in the 24 coastal counties. The second most significant source is naturally occurring iron, manganese, and radioactivity. On the other

FIGURE 8-6
GENERALIZED MAP OF SIGNIFICANT GROUNDWATER RECHARGE AREAS OF GEORGIA



hand, agricultural applications of pesticides and fertilizers are not significant sources. In 1996, USEPA requested that states report information on the type and number of contaminant sources within a specific reporting area or aquifer. The GAEPD does not collect such information; moreover, such data would be of little practical use in Georgia because of the State's complex hydrogeology and inter-aquifer leakage.

Table 8-2 is a summary of Georgia groundwater protection programs. Georgia, primarily the GAEPD, has delegated authority for all federal environmental programs involving groundwater. In addition, Georgia has several unique groundwater protection statutes that are more stringent than federal statutes. Of the 28 programs, identified by USEPA, only three are not applicable to Georgia: discharges to groundwater are prohibited; the State's hydrogeology is not compatible to classification; and, while managed through construction standards, actual permits for underground storage tanks are not issued.

Tables 8-3 and 8-4 respectively summarize ambient groundwater quality monitoring results for calendar years 2000 and 2001. The data presented were developed from the annual Georgia Groundwater Monitoring Network reports.

The USEPA also has requested that the States provide information on groundwater-surface water interactions. As previously mentioned, contamination of groundwater by surface water occurred when coliform bacteria entered the Upper Floridan Aquifer via sinkholes during flooding on the Flint River in southwest Georgia as a result of Hurricane Alberto. This is the only documented case of groundwater being contaminated by surface water. Also as previously mentioned there are some wells and springs that GAEPD has determined to be under the influence of surface water. There are no documented cases in Georgia of groundwater polluting surface water sources.

Ground and Surface Water Withdrawals (including water availability analysis and conservation planning)

The Water Resources Management Program (WRMP) of the Water Resources Branch currently has three (3) major water withdrawal permitting responsibilities: (a) permitting of municipal and industrial ground water withdrawal facilities; (b) permitting of municipal and industrial surface water withdrawal facilities; and (c) permitting of both surface and groundwater agricultural irrigation water use facilities.

Any person who withdraws more than 100,000 gallons of surface water per day on a monthly average or more than 100,000 gallons of groundwater on any day must obtain a permit from the GAEPD prior to any such withdrawal. Through the

end of August 2002, GAEPD currently has 280 active Surface Water withdrawal permits, 475 active municipal and industrial groundwater withdrawal permits and approximately 21,300 agricultural water use permits (encompassing both groundwater and surface water sources). Future efforts will focus on long-term permitting, water conservation planning, drought contingency planning and monitoring and enforcement of existing permits.

The Georgia Ground Water Use Act of 1972 requires all non-agricultural groundwater users of more than 100,000 gpd for any purpose to obtain a Ground Water Use Permit from GAEPD. Applicants are required to submit details relating to withdrawal location, historic water use, water demand projections, water conservation, projected water demands, the source aquifer system, and well construction data. A GAEPD issued Ground Water Use Permit identifies both the allowable monthly average and annual average withdrawal rate, permit expiration date, withdrawal purpose, number of wells, and standard and special conditions for resource use. Standard conditions define legislative provisions, permit transfer restrictions and reporting requirements (i.e., semi-annual groundwater use reports); special conditions identify such things as the source aquifer and conditions of well replacement. The objective of groundwater permitting is the same as that defined for surface water permitting.

The 1977 Surface Water Amendments to the Georgia Water Quality Control Act of 1964 require all non-agricultural surface water users of more than 100,000 gallons per day (gpd) on a monthly average (from any Georgia surface water body) to obtain a Surface Water Withdrawal Permit from the GAEPD. These users include persons, municipalities, governmental agencies, industries, military installations, and all other non-agricultural users. The 1977 statute "grandfathered" all pre-1977 users who could establish the quantity of their use prior to 1977. Under this provision these pre-1977 users were permitted at antecedent withdrawal levels with no minimum flow conditions. Applicants for surface water withdrawal permits are required to submit details relating to withdrawal source, historic water use, water demand projections, water conservation, low flow protection (for non-grandfathered withdrawals), drought contingency, raw water storage, watershed protection, and reservoir management. A GAEPD issued Surface Water Withdrawal Permit identifies withdrawal source and purpose, monthly average and maximum 24-hour withdrawal limits, standard and special conditions for water withdrawal, and Permit expiration date. Standard conditions define legislative provisions, permit transfer restrictions and reporting requirements (i.e., usually annual water use reports); special conditions identify withdrawal specifics such as the requirement for protecting non-depletable flow (NDF). The NDF is that minimum flow required to protect instream uses, (e.g., waste assimilation, fish habitat, and downstream

demand). The objective of surface water permitting is to provide a balance between resource protection and resource need.

The 1988 Amendments to both the Ground Water Use Act and the Water Quality Control Act require all agricultural groundwater and surface water users of more than 100,000 gpd on a monthly average to obtain an Agricultural Water Use Permit. "Agricultural Use" is specifically defined as the processing of perishable agricultural products and the irrigation of recreational turf (i.e., golf courses) except in certain areas of the state where recreational turf is considered as an industrial use. These areas are defined for surface water withdrawals as the Chattahoochee River watershed upstream from Peachtree Creek (North Georgia), and for groundwater withdrawals in the coastal counties of Chatham, Effingham, Bryan and Glynn. Applicants for Agricultural Water Use Permits who were able to establish that their use existed prior to July 1, 1988 and whose applications were received prior to July 1, 1991, are "grandfathered" for the operating capacity in place prior to July 1, 1988. Other applications are reviewed and granted with consideration for protecting the integrity of the resource and the water rights of permitted, grandfathered users. Currently, agricultural users are not required to submit any water use reports. A GAEPD issued Agricultural Water Use Permit identifies among other things the source, the purpose of withdrawal, total design pumping capacity, installation date, acres irrigated, inches of water applied per year, and the location of the withdrawal. Special conditions may identify minimum surface water flow to be protected or the aquifer and depth to which a well is limited. Agricultural Water Use Permits may be transferred and have no expiration date.

Since January, 1992, the states of Alabama, Florida, Georgia, and the United States Army Corps of Engineers - Mobile District have been cooperating partners in an interstate water resources management study. The study area encompasses the Alabama-Coosa-Tallapoosa River system (shared by Alabama and Georgia), and the Appalachicola-Chattahoochee-Flint River system (shared by the three states). These river basins make up 38 percent of Georgia's total land area, provide drinking water to over 60 percent of Georgia's people, and supply water for more than 35 percent of Georgia's irrigated agriculture. Significant portions of Georgia's industrial production and recreation-based economy are dependent on the water in these basins. The fish and wildlife resources that depend on these waters are also vital to Georgia. The goals of the study include, (a) forecasts of water demands for a myriad of uses in the two river systems through the year 2050; (b) estimates of ability of already developed water sources to meet the projected water demands; and (c) development of a conceptual framework for the basin wide management of the water resources of the two basins in a manner that would maximize the potential of the systems to meet expected water demands. At the end of December, 1997, the study was

essentially completed. Work on most of the detailed scopes of work were completed, and the states along with the federal government, had executed river basin compacts for the two basins. The compacts are providing the framework under which the states and the federal government continue to negotiate water allocation formulas that will equitably apportion the waters of these basins. Once these allocation formulas are developed and agreed upon, the state and federal partners will manage the two river systems to comply with the formulas.

Under Georgia's comprehensive water management strategy, permit applicants for more than 100,000 gallons per day of surface water or groundwater for public drinking water have been required for a number of years to develop comprehensive water conservation plans in accordance with GAEPD guidelines. These plans primarily address categories such as system unaccounted-for water (leakage, un-metered use, flushing, etc.), metering, plumbing codes, water shortage planning, water reuse, public education, and so forth. Such plans must be submitted in conjunction with applications for new or increased non-agricultural ground and surface water withdrawals. Key provisions of the plans include the required submittal of water conservation progress reports 5 years after plan approval, the submittal of yearly "unaccounted-for" water reports, and greater emphasis on incorporating water conservation into long-term water demand projections.

Georgia law also requires the use of ultra-low flow plumbing fixtures (1.6 gpm toilets, 2.5 gpm shower heads and 2.0 gpm faucets) for all new construction. Local governments must adopt and enforce these requirements in order to remain eligible for State and Federal grants or loans for water supply and wastewater projects.

During times of emergency, the GAEPD Director is authorized to issue orders to protect the quantity and safety of water supplies. In general, municipal water shortage plans follow a phased reduction of water use based on the implementation of restrictions on non-essential water uses such as lawn watering, and so forth. These demand reduction measures typically include odd/even and/or time of day restrictions and progress from voluntary to mandatory with appropriate enforcement procedures. Severe shortages may result in total restriction on all nonessential water use, cut-backs to manufacturing and commercial facilities, and eventual rationing if the shortage becomes critical enough to threaten basic service for human health and sanitation. Water conservation efforts are extremely important to Georgia's future particularly in the north and central regions of the State.

Ground and Surface Drinking Water Supplies

Similar to groundwater, Georgia's surface water sources provide raw water of excellent quality for drinking water supplies. During 2000-2001, there were no violations of chemical maximum contaminant levels for treated water for any surface water supplies. Likewise, no surface water supply system reported an outbreak of waterborne disease. Since the Federal and State Surface Water Treatment Regulations (SWTR) went into effect on June 29, 1993, 22 surface water plants around the state have opted to either shut down or stop providing potable water in lieu of making the required improvements to meet the SWTR's tougher disinfection and turbidity treatment technique requirements. During 2000-2001, no surface water systems were required to issue "boil water" advisories to their customers due to significant SWTR treatment technique violations.

The Public Water System Supervision Program is designed to ensure that Georgia residents, served by public water systems, are provided high quality and safe drinking water. Its legal basis is the Georgia Safe Drinking Water Act and Rules. As of September 30, 2002, the GAEPD regulates 1,664 community, 281 non-transient, non-community and 593 transient non-community public ground and surface water systems (serving populations greater than 25), each of which must obtain a Permit to Operate from the GAEPD. These permits set forth operational requirements for wells, surface water treatment plants and distribution systems for communities, industries, trailer parks, hotels, restaurants and other public water system owners. Georgia's community and non-transient, non-community public water systems are currently monitored for 84 regulated and 35 unregulated contaminants.

The program is funded from State and Federal appropriations and grants respectively on a year-to-year basis and a Drinking Water Service Fee (DWSF), which has been in effect since July 1992. The DWSF was necessary to provide the resources to implement testing for (a) lead and copper and (b) Phase II and V Synthetic Organic and Inorganic Chemicals in public water systems. Water system owners who contract with the GAEPD for this testing are billed annually based on the system population. Fees range from $30 per year for a transient non-community system to a maximum of $24,000 per year for a large water system with three or more entry points. Participation in the DWSF is voluntary to the extent that a system may elect to use a public or certified commercial laboratory to analyze their required samples.

Testing for lead and copper in accordance with the Federal Lead and Copper Rule (LCR) began on January 1, 1992. Georgia's 17 largest water systems (population of greater than 50,000) performed two, six-month consecutive rounds

of lead and copper monitoring starting January of 1992 and ending December of 1992. During this monitoring period, 6 systems exceeded the action levels for lead, copper, or both. In accordance with the requirements of the LCR, all large systems submitted a corrosion control plan to the GAEPD for approval. The plans were approved by the GAEPD and implemented by the systems. Beginning January of 1997, the large systems started a follow-up monitoring period of two, six-month consecutive rounds. After 1997, several medium systems, due to population increases, moved up to large system status. Of these, one of those systems had previously exceeded the lead and/or copper action level, but had come back into compliance before achieving large system status. All of the 7 large systems that previously exceeded the lead and/or copper action levels have achieved compliance with the lead and copper action levels. All of the existing 21 large systems, as of September 26, 2002 have either completed all three rounds of reduced monitoring or started triennial monitoring.

The medium size systems, populations of 3,300-50,000, started their two initial, six month consecutive rounds of lead and copper monitoring in July of 1992 and completed them in June of 1993. The systems that did not exceed an action level went into a reduced monitoring phase of the LCR in May of 1995. During this phase the systems are required to collect a reduced number of samples once per year for a period of three years. Beginning June 30, 1999, medium size systems that were eligible started the three-year compliance cycle. As of September 26, 2002, 7 medium systems are exceeding lead and 2 medium systems are exceeding copper. Nine systems that had previously exceeded the lead and/ or copper action level are now on reduced monitoring and five additional systems are on triennial.

Between July of 1993 and June of 1994, the small water systems, populations of 25-3,000 in size, conducted their consecutive rounds of lead and copper monitoring. There are 154 small systems currently exceeding the action levels for lead, copper, or both. These systems will remain in full monitoring until they have completed two consecutive rounds of monitoring without an exceedance, installed corrosion control, and for those exceeding lead, continue to provide public education on an annual basis. There are a total of 300 small systems that had previously exceeded lead and/or copper action levels. Of those 179 are now on reduced monitoring, 119 are on triennial monitoring, and 2 have gone to inactive status.

Monitoring for the 16 inorganic chemicals, 55 volatile organic chemicals and 43 synthetic organic chemicals, pesticides, herbicides and polychlorinated biphenyls continued as the fourth three-year compliance cycle commenced on January 1, 2002. New systems were required to initiate baseline monitoring (quarterly for all organic monitoring and surface water nitrate monitoring, annual for surface water

inorganic monitoring and once every three years for groundwater inorganic monitoring).

The fourth three-year compliance period afforded most community and non-community non-transient water systems to reduce their monitoring frequency for the volatile organic and synthetic organic compounds. Public water systems that demonstrated three consecutive years of Volatile Organic Chemical monitoring with none of the 21 regulated VOCs above the Method Detection Level of 0.0005 mg/l were placed on a reduced monitoring frequency of once every three years (2002-2004).

A majority of the community and non-community non-transient water systems completed their quarterly baseline synthetic organic chemical monitoring during the initial 1993-1995 compliance period. For systems with populations less than 3300, SOC monitoring was reduced to one event during the 1996-1998 compliance period. Systems with populations greater than 3300 are required to sample for two quarters during the 1996-1998 compliance period.

In order to reduce the Federal chemical monitoring requirements, the GAEPD conducts vulnerability studies for all public water sources. The studies are conducted to assist the GAEPD with the issuance of chemical monitoring waivers to public water systems. Water sources at low risk to contamination are issued waivers from the chemical monitoring requirements as specified by the Federal Phase II/Phase V regulations. To date, the GAEPD has issued statewide monitoring waivers for asbestos, cyanide, dioxin and most synthetic organic compounds. The GAEPD, however, does continue to monitor a representative number of water systems deemed to be of high vulnerability to contamination for asbestos, cyanide, dioxin and all waived synthetic organic compounds to obtain the chemical data needed to issue and maintain these state-wide waivers. The issuance of waivers from monitoring for the above chemical parameters has saved Georgia's public water systems millions of dollars in monitoring costs over the duration of the waiver terms.

In addition, the GAEPD is also preparing vulnerability studies for individual water sources. These studies include the preparation of county-wide and site specific maps of the area immediately surrounding the water source, and a report about the water source. The maps include water wells, potential pollution sources around the wells, cultural information such as roads, and bodies of water. As of September 1, 2002, the GAEPD has prepared site specific maps for approximately 350 privately-owned ground water public water systems.

Georgia's Source Water Assessment and Protection Implementation Plan (SWAP), was approved by EPA on April 24, 2000. Based on the 24-month

deadline, and a granted 18-month extension, Georgia's has until November 1, 2003 to complete all assessments for surface and ground water sources of drinking water. Under SWAP, States must identify the areas that are sources of public drinking water, assess water systems' susceptibility to contamination, and inform the public of the results. The implementation plan was developed with coordinated participation of the Georgia SWAP team, citizens and technical advisory committees and lots of input from interested stakeholders. The plan is tailored uniquely to Georgia while still satisfying all requirements of the 1996 Federal Safe Drinking Water Act. Due to the overlapping nature of a number of states water supply watersheds, the Division is encouraging regional watershed initiatives. Several watershed related initiatives are underway which will also fulfill SWAP requirements for the surface water system participants. An Alcovy River Basin Watershed Protection Study involving some 15 jurisdictions was completed for three water systems in early 2001. Columbus Water Works hosted a middle-Chattahoochee River Watershed Study involving the drinking water intakes for the cities of LaGrange, West Point, Opelika and Columbus. Source water assessments for these surface water intakes were completed in March 2001. With funding assistance from GAEPD, in December 2001, the Atlanta Regional Commission submitted source water assessments for 27 surface water intakes associated with 17 water systems within the 13 county metro Atlanta area. Other surface water intake initiatives are nearing completion in the Lake Lanier drainage basin of the upper Chattahoochee River basin, in the upper Oconee River basin, in the Lake Allatoona drainage area, and in the Augusta, Savannah and Macon areas.

GAEPD is preparing all the source water assessments for the privately-owned community, non-community, non-transient, and non-community transient ground water systems. Through September 1, 2002, SWAPs have been prepared for approximately 162 ground water systems.

CHAPTER 9
Major Issues and Challenges

The key issues and challenges to be addressed now and in the future years include (1) the control of toxic substances, (2) the reduction of nonpoint source pollution, (3) the need to increase public involvement in water quality improvement projects, and (4) a sustainable supply of potable water.

Toxic Substances

The reduction of toxic substances in rivers, lakes, sediment and fish tissue is extremely important in protecting both human health and aquatic life.

The sources of toxic substances are widespread. Some municipal and industrial treated wastewaters contain concentrations of heavy metals coming from plumbing (lead, copper, zinc) or industrial processes. Stormwater runoff may contain metals or toxic organic chemicals, such as pesticides (chlordane, DDE) or PCBs. Even though the production and use of PCB and chlordane is outlawed, the chemicals still persist in the environment as a result of previous use. One of the primary sources of mercury detected in fish tissue in Georgia and other states may be from atmospheric deposition.

The concern over toxic substances is twofold. First, fish are very sensitive to metals and even small concentrations of metals can impair a fish population. Fortunately, metals at low concentrations are not harmful to humans. Second, the contrary is true for carcinogenic organic chemicals. Concentrations of these can accumulate in fish flesh without damage to the fish but may increase a person's cancer risk if the fish are eaten regularly.

The most effective method to reduce the release of toxic substances into rivers is pollution prevention which consists primarily of eliminating or reducing the use of toxic substances or at least reducing the exposure of toxic materials to drinking water, wastewater and stormwater. It is very expensive and difficult to reduce low concentrations of toxic substances in wastewaters by treatment technologies. It is virtually impossible to treat large quantities of stormwater for toxic substance reductions. Therefore, toxic substances must be controlled at the source.

Nonpoint Source Pollution

The pollution impact on Georgia's streams has radically shifted over the last two decades. Streams are no longer dominated by untreated or partially treated sewage discharges which resulted in little or no oxygen and little or no aquatic life. The sewage is now treated, oxygen levels have returned and fish have

followed. However, another source of pollution is now affecting Georgia's streams. That source is referred to as nonpoint and consists of mud, litter, bacteria, pesticides, fertilizers, metals, oils, suds and a variety of other pollutants being washed into rivers and lakes by stormwater. This form of pollution, although somewhat less dramatic than raw sewage, must be reduced and controlled to fully protect Georgia's streams. The vast improvement in treatment of wastewaters was accomplished by local governments and industries with massive funding and modern technology. While these methods are important in reducing nonpoint source pollution, they alone are insufficient. As with control of toxic substances, nonstructural techniques such as pollution prevention and best management practices must be significantly expanded. These include both watershed protection through planning, zoning, buffer zones, and building densities as well as increased use of stormwater retention ponds, street cleaning and perhaps eventual limitations on pesticide and fertilizer usage.

Public Involvement

It is clear that local governments and industries, even with well funded efforts, cannot fully address the challenges of toxic substances and nonpoint source pollution control. Citizens must individually and collectively be part of the solution to these challenges.

The main focus is to achieve full public acceptance of the fact that some of everything put on the ground or street ends up in a stream. Individuals are littering, driving cars which drip oils and antifreeze, applying fertilizers and pesticides and participating in a variety of other activities contributing to toxic and nonpoint source pollution. If streams and lakes are to be pollutant free, then some of the everyday human practices must be modified.

The GAEPD will be emphasizing public involvement; not only in decision-making, but also in direct programs of stream improvement. The first steps are education and Adopt-A-Stream programs.

Sustainable Water

Georgia is one of the 5 fastest growing states in the nation (in percentage); and metropolitan Atlanta is one of the fastest growing cities in the nation (in actual number of people). The burgeoning population is making considerable demands on the Georgia's ground and surface water resources. Problems of sustainable long-term supply have become critical and include:

(1) Salt-water intrusion in the Upper Floridan Aquifer in coastal Georgia, including potential impacts in South Carolina and Florida.
(2) Depletion of Clayton Aquifer in southwest Georgia.

(3) Reductions in flow in the Flint River and its tributaries in southwest Georgia as a result of ground and surface water withdrawals for irrigation.

(4) Allocating water in the Alabama-Coosa-Tallapoosa and Appalachicola-Chattahoochee-Flint river basins equitably between the adjoining states of Alabama and Florida.

(5) Meeting the water supply needs of metropolitan Atlanta from the regions limited surface water sources and extremely small groundwater sources.

The above situations are further complicated by the fact that surface water resources are limited in south Georgia and groundwater resources are limited in north Georgia. In some locations, the fresh water resources are approaching their sustainable limits.

APPENDIX A
WATERS ASSESSED FOR COMPLIANCE WITH DESIGNATED USES

APPENDIX A

Waters Assessed For Compliance With Designated Uses

The attached tables present lists of rivers, streams, lakes, and estuaries for which water quality data have been assessed and used to determine compliance with designated water uses. The data reviewed included EPD monitoring data for rivers and streams, both trend data and intensive survey data, major lakes project data, toxic substances stream monitoring project data, aquatic biomonitoring project data, and coastal monitoring project data. The assessment also included data from other State, Federal, local governments, contracted Clean Lakes projects, and reports from three electrical utility companies.

The lists are divided into three categories; waters supporting designated uses, waters partially supporting designated uses, and waters not supporting designated uses. Waters were placed on the partially supporting list if 1) the chemical data (dissolved oxygen, pH, temperature) indicated an exceedence of a water quality standard in 11% to 25% of the samples collected 2) the fecal coliform bacteria data exceeded water quality standards for one geometric mean, 3) a fish consumption guideline was in place for the waterbody, or 4) the fish IBI community index of biotic integrity (IBI) data ranked poor or very poor. The partially supporting list also includes stream reaches based on predicted concentrations of metals at low streamflow (7Q10 flows) in excess of State standards as opposed to actual measurements on a stream sample. A stream reach was placed on the not supporting list if 1) the chemical data (dissolved oxygen, pH, temperature) indicated an exceedence of a water quality standard in greater than 25% of the samples collected, 2) the fecal coliform bacteria data exceeded water quality standards for two or more geometric means, 3) a fish consumption ban was in place for the waterbody, or 4) chronic toxicity tests conducted on municipal or industrial effluent samples indicated or predicted toxicity at critical 7Q10 low streamflow. Additional specific detail is provided in the following paragraphs on analysis of data for fecal coliform bacteria, metals, toxicity, dissolved oxygen, fish/shellfish consumption guidances, and biotic data.

Fecal Coliform Bacteria. Georgia water quality standards establish a fecal coliform criterion of a geometric mean (four samples collected over a 30-day period) of 200 MPN/100 ml for all waters in Georgia during the recreational season of May through October. This is the year-round standard for waters with the water use classification of recreation. For waters classified as drinking water, fishing, or coastal fishing, for the period of November through April, the fecal coliform criterion is a geometric mean (four samples collected over a 30-day period) of 1000 per 100 ml and not to exceed 4000 per 1000 ml for any one sample.

The goal of fecal coliform sampling in 2000-2001 was to collect four samples in a thirty day period in each of four quarters. If one geometric mean was in excess of the standard then the stream segment was placed on the partial support list. If more than one geometric mean was in excess of the standard the stream was placed on the not support list.

In some cases the number of samples was not adequate to calculate geometric means due to sampling or laboratory differences. In these cases, the USEPA recommends the use of a review criterion of 400 per 100 ml to evaluate sample results. This bacterial density (400 per 100 ml) was used to evaluate data from the months of May through October and the maximum criterion of 4000 per 100 ml was used in assessing the data from the results of November through April when geometric mean data was not available. Thus, where geometric mean data was not available, waters were deemed not supporting uses when 26% or more of the samples had fecal coliform bacterial densities greater than the applicable review criteria (400 or 4000 MPN/100 ml) and partially supporting when 11 to 25% of the samples were in excess of the review criterion.

Metals. In general, data on metals from any one given site are not frequent. As the data are infrequent, using the general evaluation technique of greater than 25% exceedence to indicate nonsupport and 11% to 25% exceedence to indicate partial support is not meaningful. Streams were placed in the not support category if multiple exceedences of state criteria occurred and the data were based on more than four samples per year. With less frequent sampling, streams with exceedences were placed on the partially supporting list. In addition, an asterisk is placed beside metals data in those cases where there is a minimal database. This is in accordance with USEPA guidance which suggests listing if more than one sample exceeds the criteria.

Toxicity Testing/Toxic Substances. Data from GAEPD toxicity testing of water pollution control plant effluents were used to indicate or predict toxicity in the receiving stream at critical 7Q10 flow conditions. Based on the effluent toxicity, receiving waters were evaluated as not supporting when one or more tests gave an indication of instream toxicity and as partially supporting when based on predicted instream toxicity. Effluent data for toxic substances were used to designate either partial support or non-support based on whether instream corroborating data were available. When instream data were available, the stream was determined to be not supporting. When instream data were not available, the stream was listed as partially supporting.

Dissolved Oxygen, pH, Temperature. When available data indicated that these parameters were out of compliance with state standards more than 25% of the time, the waters were evaluated as not supporting the designated use. Between 11% and 25% non-compliance resulted in a partially supporting evaluation. South Georgia blackwater streams were not evaluated for compliance with the state pH standards because these streams have naturally low pH.

Fish/Shellfish Guidelines. USEPA guidance for evaluating fish consumption guidelines formation for 305(b)/303(d) use support determinations has been to assess a water as fully supporting uses if fish can be consumed in unlimited amounts; as partially supporting if consumption needs to be limited; and, as not supporting if no consumption is recommended. Georgia followed this guidance in evaluating the fish consumption guidelines for the 2000 and earlier 305(b)/303(d) lists. This assessment methodology was followed again in developing the 2002 305(b)/303(d) List for all fish tissue contaminants except mercury. Mercury in fish tissue was assessed and a segment or waterbody was listed if the Trophic-Weighted Residue Value (as described in the October 19, 2001 Georgia EPD "Protocol"), was in excess of the new USEPA water quality criterion (*Water Quality Criterion for the Protection of Human Health: Methylmercury*, EPA-823-R-01-001, January 2001). The USEPA criteria represents a national approach to address what mercury levels are protective for fishing waters. For mercury, waters were placed on the partial support list if the calculated Trophic-Weighted Residue Value was greater than 0.3 μg/g wet weight total mercury, and less than 2 μg/g wet weight, and on the not support list if the value was greater than 2 μg/g wet weight.

Biotic Data. The "Biota Impacted" designation in the "Criterion Violated" column indicates that studies showed a modification of the biotic community. Communities utilized were fish. Studies of fish populations by the DNR Wildlife Resources Division and the Tennessee Valley Authority (TVA) used the Index of Biotic Integrity (IBI) to identify impacted fish populations. The IBI values were used to classify the population as Excellent, Good, Fair, Poor, or Very Poor. Stream segments with fish populations rated as "Poor" or "Very Poor" were included in the partially supporting list.

List Content. The lists are organized by river basin and include information on the location, data source, designated water use classification, and estimates of stream miles assessed. In addition, for the partial and not supporting lists, information is provided on the criterion violated, potential cause, actions planned to alleviate the problem, estimates of stream miles affected, 305(b) and 303(d) status, and priority. A discussion of the potential cause and actions to alleviate columns along with a discussion of priorities is given below. Explanations for the various codes used in the lists are given on the last page of this section.

Potential Cause(s)/Actions To Alleviate. In providing the information for the evaluated causes and actions to alleviate columns as listed in the tables on the following pages, many potential sources which may have caused the violation of the indicated criterion were considered. These sources are identified as the most likely candidates for affecting a particular stream segment. One potential source may be largely responsible for the criterion violated or the impact may be the result of a combination of sources. In many cases, action is described that has already been taken to address the potential sources or the ongoing action to alleviate the impact has been indicated. The GAEPD is addressing impacts from point and nonpoint sources

through a river basin management planning or watershed protection strategy which provides for a holistic approach to addressing identified problems in Georgia's waters.

Priorities for Action. The list of waters includes all waters for which available data indicate that water quality standards are or are not being met and designated uses are supported or not fully supported. This list of waters has become a comprehensive list of waters for Georgia incorporating the information requested by Sections 305(b), 303(d), 314, and 319 of the Federal CWA. As noted, waters listed on the partial and not supporting lists are active 305(b) waters. The list of lakes or reservoirs listed as partial or not supporting designated uses provides the information requested in Section 314 of the CWA. Waters with nonpoint sources identified as a potential cause of a standards violation are considered to provide the information requested in the CWA Section 319 nonpoint assessment. The 303(d) designation is described in the following paragraph.

The 303(d) list is a subset of the 305(b) listed waters. To develop the 303(d) list, the 305(b) list was reviewed and coded based on the guidance provided by the USEPA. Specifically, the August 13, 1992 and November 26, 1993 Memorandums from the USEPA Washington Office of Water titled, "Supplemental Guidance on Section 303(d) Implementation" and "Guidance for 1994 Section 303(d) Lists", were used. First, segments were identified where enforceable State, local or Federal requirements have led to or will lead to attainment of water quality standards. Segments where improvements were completed in 2000-2001 were assigned a "1" code and segments with ongoing action which will lead to attainment of water quality standards were assigned a "2" code under 303(d) status. A "3" code was assigned to segments where TMDLs have been developed and approved. A "4" code was assigned to segments where TMDLs have been developed but not approved as of the date of the final approved Georgia 2002 305(b)/303(d) list. The remaining segments are marked with an "X" and represent 303(d) listed waters for Georgia. In addition to these waters, the USEPA added waters to the Georgia 303(d) list on a consolidated list dated August 29, 2001. Those waters are shown in Appendix B and are 303(d) listed waters. To summarize, the Georgia 303(d) list of waters is made up of those waters with an "X" in the column marked 303(d) in Appendix A and those waters in Appendix B.

Georgia is implementing a watershed approach to water resource management through River Basin Management Planning. This approach provides the framework and schedule for actions to address waters on the Georgia 303(d) list. This work is summarized in Chapter 2 of this report. Basin planning provides an opportunity to focus monitoring, assessment, problem prioritization, TMDL development, water resource protection strategy development and implementation resources in specific basins on an orderly five year rotating basis. Of course, significant problems may arise in basins other than the basins of focus and the GAEPD will continue to respond in an appropriate manner. Thus, a discussion for prioritization of the 305(b)/303(d) list must be made in the context of the river basin planning program and in the context of current actions underway to address water quality problems documented in the Georgia 305(b)

report. The majority of resources will be directed to insuring the ongoing pollution control actions are completed and water quality improvements are achieved. This work applies to those waters which are identified as 305(b) waters and coded with a "2" in the 303(d) status column of the table. These stream segments while listed on the 305(b) report list are not segments on the Georgia 303(d) list in accordance with USEPA guidance as actions are ongoing which will resolve the issues. However, these streams are the highest priority waters as these segments will continue to require resources to complete actions and insure standards are achieved. These stream segments have been assigned priority one. This is evidenced by the "1" noted in the far right column titled priority on the listing.

Second priority was allocated to segments which showed metals or other toxic substance concentrations in excess of water quality standards and to segments in which dissolved oxygen concentration was an issue.

Third priority was assigned to waters where air deposition, urban runoff or general nonpoint sources caused fish consumption guideline listings, poor fish communities, fecal coliform bacteria standards violations, pH and/or temperature violations. Waters added to the Georgia 303(d) list by EPA were also assigned to third priority.

Several issues helped forge the rationale for priorities. First, strategies are currently in place to address many of the significant water quality problems across the state and significant resources will be required to ensure that these actions are completed. Second, a large percentage of waters for which no control strategy is currently in place are listed due to fish consumption guidelines or as a result of exceedence of criteria of fecal coliform bacteria due to urban runoff or nonpoint sources or atmospheric deposition. At the present time, the efficacy of the fecal coliform bacteria standard is in question in the scientific community, and there is no national strategy in place to address air deposition of mercury which may be the primary cause of fish consumption guidelines across the southeastern United States.

The Georgia River Basin Management Planning process provides the framework for the long-term schedule for developing TMDLs for 303(d) listed segments. The TMDL for 303(d) listed segments in the Ochlockonee, Suwannee, Satilla, and St. Marys River Basins were publicly noticed in 2000 and finalized in 2001. In 2001 TMDLs were publicly noticed for 303(d) listed segments in the Ocmulgee, Oconee, and Altamaha River Basins and finalized in 2002. TMDLs for 303(d) listed segments in the Chattahoochee and Flint River basins were publicly noticed in 2002 and will be finalized in 2003. TMDLs will be publicly proposed for 303(d) listed segments in the Coosa, Tallapoosa, and Tennessee River Basin 303(d) listed waters by June 2003, and by June 2004 for 303(d) listed waters in the Savannah and Ogeechee River basins. This schedule is in concert with the agreements between the USEPA and the plaintiffs in the recent court case. The USEPA will continue to support the Georgia TMDL efforts and will be specifically responsible for TMDL development for the waters in Appendix B.

The lists in Appendix A and B will continue to reflect the segments where water quality data indicate compliance with or problems with achieving compliance with water quality standards. These segments will be removed when the actions have been taken and compliance attained. The list will grow and shrink based on these considerations and any new standard or approaches implemented in the future. This will also affect the 303(d) list as these entries will undergo changes along with the 305(b) list.

Legend

State Agencies

1 = DNR-EPD, Watershed Planning & Monitoring Program
2 = DNR-EPD, Permitting Comp. & Enf. Program (Municipal)
3 = DNR-EPD, Permitting Comp. & Enf. Program (Industrial)
4 = DNR, Wildlife Resources Division
5 = DNR, Coastal Resources Division
6 = State University of West Georgia
7 = Gainesville College
8 = Georgia Institute of Technology

Federal Agencies

9 = U.S. Environmental Protection Agency
10 = U.S. Geological Survey
11 = U.S. Army Corps of Engineers
12 = U.S. Forest Service
13 = Tennessee Valley Authority

Local Agencies

14 = Cobb County
15 = Dekalb County
16 = Douglas County Water & Sewer Authority
17 = Fulton County
18 = Gwinnett County
19 = City of Clayton
20 = City of Gainesville
21 = City of LaGrange
22 = Georgia Mountains R.D.C.
23 = City of Conyers

Contracted Clean Lakes Studies

24 = Lake Allatoona (Kennesaw State University)
25 = Lake Blackshear (Lake Blackshear Watershed Association)
26 = Lake Lanier (University of Georgia)
27 = West Point (LaGrange College/ Auburn University)

Other

28 = Georgia Power Company
29 = Oglethorpe Power Company
30 = South Carolina Electric & Gas Company
31 = South Carolina DHEC
32 = Jones Ecological Research Center
33 = Alabama DEM
34 = City of College Park
35 = Kennesaw State University
36 = University of Georgia
37 = ColumbusWater Works
38 = Columbus Unified Government
39 = St. Johns River Water Mgmt. District
40 = Town of Trion
41 = Cherokee County
42 = Clayton County Water Authority
43 = City of Atlanta
44 = City of Cartersville
45 = Georgia Ports Authority

Criterion Violated Codes

As = Arsenic
Bio = Biota Impacted
Cd = Cadmium
CN = Cyanide
Cr = Chromium
Cu = Copper
DO = Dissolved Oxygen
CFB = Commercial Fishing Ban
FC = Fecal Coliform Bacteria
FCG = Fish Consumption Guidance
Hg = Mercury
Ni = Nickel
Pb = Lead
SB = Shellfishing Ban
Se = Selenium
Temp = Temperature
Tox = Toxicity Indicated
Zn = Zinc

Potential Cause Codes

CSO = Combined Sewer Overflow
I1 = Industrial Facility
I2 = Residual from Industrial Source
MA = Marina
M = Municipal Facility
NP = Nonpoint Sources/Unknown Sources
UR = Urban Runoff/Urban Effects
SB = Shellfish Ban
NAT = Natural

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
ALTAMAHA RIVER BASIN			
Altamaha River (1,9)	Confluence of Oconee and Ocmulgee Rivers to ITT Rayonier (Jeff Davis/Appling/Wayne Co.)	Fishing	72
Altamaha River (1,9)	ITT Rayonier to Penholoway Creek (Wayne Co.)	Fishing	20
Pendleton Creek (1)	Swift Creek to Ohoopee River (Toombs Co.)	Fishing	9
CHATTAHOOCHEE RIVER BASIN			
Anneewakee Creek (1,16)	Lake Monroe to Chattahoochee River (Douglas Co.)	Fishing	5
Bear Creek (10)	Near Clermont (Hall Co.)	Fishing	3
Bear Creek (1)	U/S Chattahoochee River (Fulton Co.)	Fishing	4
Beech Creek (4)	U/S Ross Keith Road (Meriwether Co.)	Fishing	10
Beech Creek (4)	D/S Ross Keith Road (Meriwether Co.)	Fishing	17
Big Branch (4)	Troup County	Fishing	4
Big Springs Creek (4)	Troup County	Fishing	6
Blue Creek (4)	Meriwether County	Fishing	6
Bluff Creek (16)	Douglas County	Fishing	4
Boggs Creek (4)	Headwaters to Chestatee River (Lumpkin Co.)	Fishing	4
Box Springs Creek (4)	Carroll County	Fishing	5
Browns Creek (4)	Coweta County	Fishing	4
Brush Creek (4)	Heard County	Fishing	10
Cane Creek (4)	Lumpkin County	Fishing	8
Caney Creek (4)	Carroll County	Fishing	5
Caney Creek (4)	Heard/Coweta Counties	Fishing	10
Carthbody Creek (4)	Carroll County	Fishing	3
Cavenders Creek (4)	Headwaters to Chestatee River (Lumpkin Co.)	Fishing	2

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Cedar Creek (4)	Heard County	Fishing	9
Cemochechobee Creek (4)	Headwaters to Hog Creek (Randolph/Clay Co.)	Fishing	11
Chattahoochee River (4)	Upstream Jasus Creek (Union/White Co.)	Fishing	7
Chattahoochee River (1)	Jasus Creek to Ga. Hwy. 17, Helen (White Co.)	Recreation	8
Chattahoochee River (1)	Downstream Buford Dam (Gwinnett/Forsyth Co.)	Recreation/Drinking Water	3
Chattahoochee River (1)	Hwy 20 to Morgan Falls Dam (Forsyth/Gwinnett/Fulton/Cobb Co.)	Recreation/Drinking Water	33
Chattahoochee River (1)	West Point Dam to Johnson Island (Troup/Harris Co.)	Fishing	13
Chattahoochee River (1)	D/S Fort Gaines to Lake Andrews (Clay/Early Co.)	Fishing	16
Chattahoochee River (1)	Lake Andrews Lock & Dam to U.S. Hwy. 84 (Early/Seminole Co.)	Fishing	11
Chattahoochee River (1)	U.S. Hwy. 84 to Lake Seminole (Early/Seminole Co.)	Recreation	17
Chestatee River (1)	Below SR9/U.S. Hwy. 19, Dahlonega to Lake Lanier (Lumpkin Co.)	Fishing	19
Colochee/Frog Bottom Creek (4)	Hightower Branch to Hannahatchee Creek (Stewart Co.)	Fishing	5
Cooper Creek (38)	Columbus (Muscogee Co.)	Fishing	6
Crawford Creek (4)	Meriwether/Troup Counties	Fishing	6
Crews Creek (4)	Carroll County	Fishing	5
Cry Creek (20)	Gainesville (Hall Co.)	Fishing	1
Deep Creek (10)	Headwaters to Soque River (Habersham Co.)	Fishing	8
Deep Creek (1)	U/S Chattahoochee River (Fulton Co.)	Fishing	2
Deer Creek (4)	Heard County	Fishing	10
Dick Creek (1)	Forsyth County	Fishing	2
Dicks Creek (1)	Headwaters to Waters Creek (Lumpkin Co.)	Fishing	5
Dog River (4,16)	Upstream Hwy. 5 (Douglas Co.)	Fishing	3

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Dog River (16)	Hwy. 5 to Dog River Reservoir (Douglas Co.)	Drinking Water	3
Double Branch (38)	Columbus (Muscogee Co.)	Fishing	1
Dram Creek (38)	Columbus (Muscogee Co.)	Fishing	1
Dukes Creek (4)	White County	Fishing	10
Dukes Creek (4)	Heard County	Fishing	3
Flat Creek (4)	Meriwether County	Fishing	6
Flat Creek (4)	Tom Keith Rd. (CR28) to Yellow Jacket Creek (Troup Co.)	Fishing	9
Flat Creek (4)	Fendley Branch to Kolomoki Creek (Clay Co.)	Fishing	7
Flatrock Creek (38)	Columbus (Muscogee Co.)	Fishing	3
Flatshoals Creek (4)	Meriwether County	Fishing	7
Flybow Creek (4)	Douglas County	Fishing	3
Fromby Creek (4)	Heard County	Fishing	3
Gothards Creek (4)	Douglas County	Fishing	11
Gum Creek (4)	Heard/Carroll Counties	Fishing	6
Harris Creek (1,4)	Heard County	Fishing	6
Haw Creek (1)	Forsyth County	Fishing	4
Heiferhorn Creek (38)	Columbus (Muscogee Co.)	Fishing	3
Hillabahatchee Creek (1,4)	Headwaters to Tollieson Branch, Franklin (Heard Co.)	Fishing	16
Hillabahatchee Creek (1)	Tollieson Branch to Glovers Road (Heard Co.)	Fishing	6
Holanna Creek (4)	Hog Creek to Pataula Creek (Randolph/Quitman Co.)	Fishing	7
Hurricane Creek (1,4)	Douglas/Carroll Counties	Fishing	7
Ingram Creek (4)	Troup County	Fishing	4
Jasus Creek (1)	Northwest of Helen (White Co.)	Fishing	3

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Keaton Creek (16)	Douglas County	Fishing	5
Kirkland Creek (4)	Dry Creek to Chattahoochee River (Early Co.)	Fishing	4
Kitchen Creek (18)	Gwinnett County	Fishing	2
Kolomoki Creek (4)	Little Kolomoki Creek to Chattahoochee River (Clay Co.)	Fishing	5
Kubota Creek (20)	Gainesville (Hall Co.)	Fishing	1
Lindsey Creek (38)	Columbus (Muscogee Co.)	Fishing	6
Little Bear Creek (2)	Palmetto (Fulton Co.)	Fishing	5
Little Bear Creek (16)	Douglas County	Fishing	5
Little Snake Creek (4,10)	Carroll County	Fishing	4
Little Taylor Creek (4)	Heard County	Fishing	4
Little Tesnatee Creek (4)	Freeman Cr. to u/s Hwy. 129 (White Co.)	Fishing	3
Long Cane Creek (4)	Upstream LaGrange WPCP (Troup Co.)	Fishing	19
Low Gap Creek (9)	Northwest of Helen (White Co.)	Fishing	4
Maple Branch (4)	Coweta County	Fishing	3
Messiers Creek (4)	Coweta County	Fishing	6
Moore Creek (1)	Coweta County	Fishing	4
Mountain Creek (4)	Newnan (Coweta Co.)	Fishing	14
Mud Creek (4)	Troup County	Fishing	9
Nancy Long Creek (16)	Douglas County	Fishing	3
Noses Creek (14)	Cobb County	Fishing	11
Nutt Creek (1)	Heard County	Fishing	3
Ochillee Creek (4)	Hollis Creek to Spring Creek (Chattahoochee Co.)	Fishing	5
Ossahatchie Creek (10)	Hwy 1 to Hwy 85 near Cataula (Harris Co.)	Fishing	7

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Pataula Creek (4)	Pumpkin Creek to Hodchodkee Creek (Randolph/Quitman Co.)	Fishing	8
Pink Creek (1,4)	Heard County	Fishing	3
Polecat Creek (4)	Troup County	Fishing	9
Powder Springs Creek (14)	Cobb County	Fishing	7
Pumpkin Creek (4)	Little Pumpkin Creek to Pataula Creek (Randolph Co.)	Fishing	4
Randall Creek (38)	Columbus (Muscogee Co.)	Fishing	3
Redbud Creek (4)	Heard County	Fishing	5
Roaring Branch (1)	U/S Columbus Foundaries (Muscogee Co.)	Fishing	1
Roaring Branch (1,38)	D/S Columbus Foundaries (Muscogee Co.)	Fishing	2
Sandy Creek (4)	Carroll County	Fishing	3
Sandy Creek (4)	Coweta County	Fishing	9
Sautee Creek (4)	Habersham/White Counties	Fishing	5
Sawhatchee Creek (4)	Headwaters to Weaver Creek (Early Co.)	Fishing	9
Sawhatchee Creek (4)	Weaver Creek to Sheffield Mill Creek (Early Co.)	Fishing	2
Shoal Creek (4)	Troup County	Fishing	11
Six Mile Creek (1)	Forsyth County	Fishing	2
Slater Mill Creek (4)	Douglas County	Fishing	2
Smith Creek (4)	White County	Fishing	6
Smithee Jack Creek (4)	Headwaters to Hodchodkee Creek (Quitman Co.)	Fishing	5
Snake Creek (1,4)	U/S Chattahoochee River (Carroll Co.)	Fishing	12
Soquee River (1)	SR17, Clarkesville to Chattahoochee River (Habersham Co.)	Fishing	6
South Fork Camp Creek (34)	College Park (Fulton Co.)	Fishing	3

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Squirrel Creek (22)	Hall County	Fishing	2
Sulfur Creek (4)	U/S White Sulfur Creek (Meriwether Co.)	Fishing	7
Sulfur Creek (4)	D/S White Sulfur Creek (Meriwether/Troup Co.)	Fishing	6
Tanyard Creek (4,16)	Douglas County	Fishing	2
Thomas Creek (1,4)	Coweta County	Fishing	4
Tobannee Creek (4)	Headwaters to Walter F. George Lake (Quitman Co.)	Fishing	3
Town Branch (1)	Villa Rica (Carroll/Douglas Co.)	Fishing	1
Town Creek (4)	Headwaters to Tesnatee Creek (White Co.)	Fishing	10
Tributary to Sope Creek (14)	Cobb County	Fishing	1
Tuggle Creek (1)	Fulton County	Fishing	3
Turkey Creek (38)	Columbus (Muscogee Co.)	Fishing	1
Upatoi Creek (1)	U/S Chattahoochee River, Columbus (Muscogee/Chattahoochee Co.)	Fishing	14
Waters Creek (4)	Headwaters to Dicks Creek (Lumpkin Co.)	Fishing	6
Wehadkee Creek (4)	Heard County	Fishing	7
White Creek (10)	U/S Webster Lake, Cleveland (White Co.)	Fishing	4
White Sulfur Creek (4)	Meriwether County	Fishing	9
Whitewater Creek (4)	Heard/Troup Counties	Fishing	17
Wildcat Creek (4)	Troup County	Fishing	4
Yahoola Creek (4)	Jack Walker Road to Hwy 52 (Lumpkin County)	Fishing	10
Yahoola Creek (1)	Hwy. 52 to Chestatee River (Lumpkin Co.)	Fishing	5
Yellowdirt Creek (1,4)	Carroll/Heard Counties	Fishing	10
Yellowjacket Creek (1)	Headwaters to West Point Lake (Coweta/Meriwether/Troup Co.)	Fishing	31
COOSA RIVER BASIN			

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Allen Creek (4)	Walker County	Fishing	4
Allgood Branch (4)	Chattooga County	Fishing	4
Anderson Creek (4)	Gilmer County	Fishing	13
Bear Branch (12)	Fannin County	Fishing	2
Beech Creek (12)	Fannin County	Fishing	1
Blankets Creek (24)	Lake Allatoona Tributary (Cherokee Co.)	Fishing	3
Boston Creek (24)	Lake Allatoona Tributary (Bartow/Cherokee Co.)	Fishing	6
Burt Creek (4)	Dawson County	Fishing	4
Caldwell Mills Creek (4)	Coahulla Creek Tributary (Whitfield Co.)	Fishing	3
Cartecay River (1)	Licklog Creek to Owltown Creek (Gilmer Co.)	Drinking Water	10
Cedar Creek (4)	Polk County	Fishing	7
Chappel Creek (4)	Chattooga and Walker Counties	Fishing	6
Chattooga River (1)	Downstream LaFayette (Walker Co.)	Fishing	7
Chattooga River (1)	Lyerly to Stateline (Chattooga Co.)	Fishing	7
Chelsea Creek (4)	Chattooga County	Fishing	4
Clear Creek (4)	Gilmer/Pickens Counties	Fishing	13
Clear Creek (24)	Lake Allatoona Tributary (Bartow Co.)	Fishing	2
Coahulla Creek (4)	Whitfield County	Fishing	1
Cochran Creek (4)	Dawson County	Fishing	7
Conasauga River (1,12)	Headwaters to Stateline (Murray/Fannin Co.)	Wild and Scenic/Fishing	15
Conasauga River (1)	Stateline to Sumac Creek (Murray/Whitfield Co.)	Fishing	14
Concord Creek (4)	Walker County	Fishing	3
Cooper Creek (24)	Lake Allatoona Tributary (Bartow Co.)	Fishing	1

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Coosawattee River (1)	U.S. Hwy. 411 to Noblet Creek, d/s Carters Lake (Murray/Gordon Co.)	Drinking Water	10
Coosawattee River (1)	Salacoa Creek to Oostanaula River (Gordon Co.)	Drinking Water	10
Darnell Creek (4)	Pickens County	Fishing	4
Dill Creek (4)	Murray County	Fishing	3
Downing Creek (24)	Lake Allatoona Tributary (Cherokee Co.)	Fishing	2
Dry Creek (4)	Tributary to Armuchee Creek (Walker Co.)	Fishing	4
Duck Creek (1,4)	Headwaters to Chattooga River (Walker Co.)	Fishing	13
Dykes Creek (4)	Floyd County	Fishing	3
East Armuchee Creek (4)	Upstream Hwy. 136 (Walker Co.)	Fishing	2
East Fork Little River (4)	Walker/Dade Counties	Fishing	5
East Fork Little River (4)	Chattooga County	Fishing	10
Ellijay River (4)	Upstream Ellijay (Gilmer Co.)	Drinking Water	10
Emery Creek (4)	Murray County	Fishing	4
Etowah River (4)	Lumpkin County	Fishing	21
Etowah River (1)	Sharp Mountain Creek to Lake Allatoona (Cherokee Co.)	Fishing/Drinking Water	20
Fawcett Creek (4)	Gilmer County	Fishing	5
Fisher Creek (4)	Pickens County	Fishing	5
Fourmile Creek (4)	Pickens County	Fishing	4
Furnace Creek (4)	Walker County	Fishing	2
Harris Creek (1)	Upstream Carters Lake (Gilmer Co.)	Fishing	3
Harrisburg Creek (4)	Walker County	Fishing	4
Heath Creek (1)	Upstream Rocky Mtn. Project (Floyd Co.)	Fishing	1
Heath Creek (1)	Downstream Rocky Mountain Project (Floyd Co.)	Fishing	5

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Hickory Creek (12)	Murray/Fannin Counties	Fishing	4
Hinton Creek (4)	Chattooga County	Fishing	5
Hobson Creek (4)	Tributary to Talking Rock Creek (Pickens Co.)	Fishing	2
Holly Creek (4)	Murray County	Fishing	6
Holly Creek (1)	Downstream Chatsworth WPCP (Murray Co.)	Fishing	4
Illinois Creek (24)	Lake Allatoona Tributary (Bartow/Cherokee Co.)	Fishing	2
Jacks River (1,12)	West/South Forks to Stateline (Fannin Co.)	Wild/Scenic	22
Johns Creek (4)	Floyd County	Fishing	8
Johns Creek (1)	Oostanaula River Tributary (Floyd Co.)	Fishing	6
Jones Creek (4)	Lumpkin County	Fishing	8
Kellogg Creek (41)	Lake Allatoona Tributary (Cherokee Co.)	Fishing	3
Little Armuchee Creek (4)	Chattooga County	Fishing	6
Little Armuchee Creek (1)	Chattooga Co. Line to Heath Creek (Floyd Co.)	Fishing	4
Little Cedar Creek (4)	Floyd/Polk Counties	Fishing	10
Little Cedar Creek (6)	U/S Cedar Rock Lake (Polk Co.)	Fishing	1
Little River (1,41)	Hwy 140 to Lake Allatoona (Cherokee Co.)	Fishing	12
Little Scarecorn Creek (4)	Pickens County	Fishing	6
Long Branch (4)	Gordon/Pickens Counties	Fishing	4
McKaskey Creek (24)	Lake Allatoona Tributary (Bartow Co.)	Fishing	3
Middle Fork Little River (4)	Chattooga County	Fishing	4
Mill Creek (4)	Murray County	Drinking Water	9
Montgomery Creek (4)	Lumpkin County	Fishing	4

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Mountaintown Creek (4)	Headwaters to Hwy. 282 (Gilmer Co.)	Fishing	15
Mud Creek (4)	Tributary to Talking Rock Creek (Pickens Co.)	Fishing	3
Murray Creek (12)	Fannin County	Fishing	3
Nimblewill Creek (4)	Lumpkin County	Fishing	8
Noonday Creek (1,41)	Old U.S. Hwy. 41 to Posey Branch (Cobb/Cherokee Co.)	Fishing	12
North Prong Sumac Creek (4)	Murray County	Fishing	7
Oothkalooga Creek (1)	U/S Bartow Co. Line to Oostanaula River (Bartow/Gordon Co.)	Fishing	14
Panther Creek (12)	Fannin County	Fishing	2
Penitentiary Branch (12)	Fannin County	Fishing	2
Perennial Spring (4)	Chattooga County	Fishing	5
Pin Hook Creek (4)	Gordon County	Fishing	6
Pine Log Creek (4)	Hwy 140 to Cedar Creek (Cherokee/Bartow Co.)	Fishing	18
Polecat Creek (4)	Pickens County	Fishing	6
Poplar Camp Creek (12)	Fannin County	Fishing	2
Possum Creek (4)	Paulding County	Fishing	3
Pumpkinpile Creek (4)	Polk County	Fishing	7
Pumpkinvine Creek (4)	Paulding County	Fishing	3
Pyle Creek (4)	Bartow County	Fishing	3
Raccoon Creek (4)	Chattooga County	Fishing	4
Raccoon Creek (4)	Paulding County	Fishing	6
Rice Camp Branch (12)	Fannin County	Fishing	3
Rock Creek (4)	Gilmer County	Fishing	6

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Rock Creek (4)	Pickens County	Fishing	6
Rock Creek (1)	Headwaters to Holly Creek (Murray Co.)	Fishing	7
Rock Mountain Creek (29)	Rocky Mountain Project (Floyd Co.)	Fishing	3
Rocky Creek (4)	Gordon County	Fishing	4
Rose Creek (24)	Lake Allatoona Tributary (Cherokee Co.)	Fishing	3
Rough Creek (12)	Fannin County	Fishing	7
Rough Creek (12)	Murray County	Fishing	2
Ruff Creek (4)	Headwaters to Armuchee Creek (Chattooga Co.)	Fishing	5
Salacoa Creek (4)	Henderson Mountain Road to Hwy 61 (Pickens/Cherokee/Bartow/Gordon Co.)	Fishing	19
Salacoa Creek (1)	Pine Log Creek to Coosawattee River (Gordon Co.)	Fishing	6
Scarecorn Creek (4)	Pickens County	Fishing	6
Shoal Creek (4)	Dawson County	Fishing	10
Shoal Creek (1,41)	Hwy 140 to Lake Allatoona (Cherokee Co.)	Fishing	17
Snake Creek (4)	Gordon/Walker Counties	Fishing	8
Spring Creek (4)	Floyd County (U/S Fishing Ban Area)	Fishing	6
Spring Creek (4)	Whitfield County	Fishing	5
Spring Creek (4)	Floyd/Polk Counties	Fishing	9
Storey Mill Creek (4)	Chattooga County	Fishing	3
Sugar Cove Branch (12)	Fannin County	Fishing	1
Sugar Creek (4)	Murray County	Fishing	4
Sumac Creek (1)	Coffey Lake to Conasauga River (Murray Co.)	Fishing	9
Sweetwater Creek (4)	Dawson County	Fishing	3
Tails Creek (4)	Headwaters to Hwy. 282 (Gilmer Co.)	Fishing	6

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Taliaferro Creek (4)	Chattooga County	Fishing	5
Talking Rock Creek (4)	Pickens County	Fishing	3
Talking Rock Creek (1)	Upstream Carters Lake (Gordon Co.)	Fishing	3
Talona Creek (4)	Gilmer County	Fishing	6
Toms Creek (4)	Bartow County (U/S Fishing Ban Area)	Fishing	5
Town Creek (4)	Gilmer County	Fishing	5
Two Run Creek (4)	Bartow County (U/S Fishing Ban Area)	Fishing	6
Ward Creek (4)	Paulding/Bartow Counties	Fishing	6
Ward Creek (1)	Shannon (Floyd Co.)	Fishing	1
West Armuchee Creek (4)	Walker County	Fishing	9
West Fork Little River (4)	Walker/Dade Counties	Fishing	6
FLINT RIVER BASIN			
Andrews Creek (4)	Upson County	Fishing	2
Auchumpkee Creek (4)	Upson County	Fishing	23
Bailey Creek (4)	Crawford County	Fishing	4
Baroucho Creek (4)	Headwaters (New Lake Dam) to Potato Creek (Upson Co.)	Fishing	3
Bear Creek (2)	Hampton (Henry Co.)	Fishing	2
Bear Creek (4)	Long Branch to Reedy Creek (Terrell Co.)	Fishing	9
Beaver Creek (4)	Meriwether County	Fishing	6
Big Cypress Creek (10)	U/S Ichawaynochaway Creek, near Newton (Baker Co.)	Fishing	6
Big Drain Creek (10)	U/S Spring Creek, Boykin (Early Co.)	Fishing	2
Big Slough (1)	Bainbridge (Decatur Co.)	Fishing	5

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Big Turkey Creek (4)	Headwaters to Little Turkey Creek (Upson Co.)	Fishing	3
Birch Creek (4)	Pike County	Fishing	11
Brantley Creek (4)	2 miles d/s Dawson WPCP to Chickasawhatchee Creek (Terrell Co.)	Fishing	4
Britten Creek (4)	Meriwether County	Fishing	5
Camp Creek (4)	Headwaters to Triple Creek (Schley/Macon Co.)	Fishing	12
Camp Creek (1)	Triple Creek to Flint River, Oglethorpe (Macon Co.)	Fishing	4
Cane Creek (4)	Meriwether County	Fishing	9
Cater Creek (34)	College Park (Fulton Co.)	Fishing	1
Cedar Creek (4)	Turkey Branch to Whitewater Creek (Macon Co.)	Fishing	10
Cedar Creek (25)	Crisp County	Fishing	3
Chandlers Creek (4)	Coweta County	Fishing	5
Chickasawhatchee Creek (4)	Brantley Creek to Herod Creek (Terrell Co.)	Fishing	4
Chickasawhatchee Creek (1)	Dougherty County	Fishing	12
Chickasawhatchee Creek (1,4,10,32)	Dougherty Co. Line to Ichawaynotchaway Creek, Elmodel (Baker Co.)	Fishing	10
Chokee Creek (4)	Mill Creek to Flint River (Lee Co.)	Fishing	6
Chokeelagee Creek (4)	Headwaters to Kinchafoonee Creek (Lee Co.)	Fishing	10
Cold Springs Branch (4)	Meriwether County	Fishing	4
Culpepper Creek (4)	Headwaters to Lewis Creek (Crawford Co.)	Fishing	6
Culpepper Creek (aka Spring Creek) (4)	Lewis Creek to Beaver Creek (Crawford Co.)	Fishing	3
Cypress Creek (10)	U/S Aycocks Creek near Colquitt (Miller Co.)	Fishing	4
Dead Oak Creek (1)	Upstream Line Creek (Coweta Co.)	Fishing	2
Dominy Branch (10)	U/S Lime Creek near Cobb (Sumter Co.)	Fishing	3

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Double Branch (4)	Coweta County	Fishing	3
Drake Branch (4)	Upson County	Fishing	2
Dye Branch (1)	Thomaston (Upson Co.)	Fishing	2
East Swift Creek (4)	Headwaters to Little Swift Creek (Upson Co.)	Fishing	5
Elkins Creek (4)	Headwaters to Bull Creek (Spalding/Pike Co.)	Fishing	26
Five Mile Creek (4)	Pike County	Fishing	4
Five Mile Creek (4)	Upson County	Fishing	3
Flat Creek (4)	Spalding County	Fishing	11
Flint River (1,10)	N. Hampton Road to Road S1058/ Woolsey Rd. (Clayton Co.)	Fishing	5
Flint River (1)	Horton Creek to Flat Shoals Rd. (Fayette/Spalding/Pike Co.)	Fishing	23
Flint River (1)	Flat Shoals Rd. to Taylor County line (Pike/Meriwether/Upson/Talbot Co.)	Fishing	43
Flint River (1)	Taylor Co. Line to Horse Creek (Taylor/Upson/Crawford/Macon Co.)	Fishing	49
Flint River (1,24)	Horse Creek to Spring Creek (Macon Co.)	Fishing	16
Flint River (1)	Spring Creek to Hwy 27 (Dooly Co.)	Fishing	20
Flint River (1)	Muckafoonee Creek to Raccoon Creek (Dougherty/Mitchell Co.)	Fishing	23
Flint River (1)	Raccoon Creek to Ichawaynochaway Creek (Mitchell Co.)	Fishing	28
Flint River (1)	Big Slough to 1 mi. downstream State Docks (Decatur Co.)	Fishing	5
Ginger Cake Creek (4)	Fayette County	Fishing	6
Grace Branch (4)	Crawford County	Fishing	2
Grape Creek (2)	Griffin (Spalding Co.)	Fishing	2
Grape Creek (4)	Lamar County	Fishing	3
Haddock Creek (4)	Fayette County	Fishing	4
Hog Crawl Creek (1)	U/S Flint River, NW Cordele (Dooly Co.)	Fishing	8

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Horse Creek (4)	Crawford County	Fishing	6
Horse Creek (1)	Taylor Mill Lake to Flint River (Macon Co.)	Fishing	10
Horseley Creek (4)	Upson County	Fishing	2
Hurricane Branch (4)	Meriwether County	Fishing	3
Hurricane Creek (4)	Upson County	Fishing	3
Ichawaynochaway Creek (4)	Wolf Creek to Little Ichawaynochaway Creek (Terrell/Randolph Co.)	Fishing	1
Ichawaynochaway Creek (4)	Walk Ikey Creek to Falling Creek (Terrell/Randolph/Calhoun Co.)	Fishing	7
Ichawaynochaway Creek (1,10,32)	Calhoun Co. Line to Flint River (Baker Co.)	Fishing	35
Ison Branch (2)	Griffin (Spalding Co.)	Fishing	3
Jerry Reeves Creek (4)	Upson County	Fishing	4
Keg Creek (1)	Hutchins Lake to Line Creek (Coweta Co.)	Fishing	3
Kendall Creek (4)	Meriwether County	Fishing	3
Kinchafoonee Creek (4)	Headwaters to Lanahansee Creek (Marion Co.)	Fishing	10
Kinchafoonee Creek (1)	Marion Co. Line to Terrell Co. Line (Webster Co.)	Fishing	23
Kiokee Creek (10)	Mud Creek to Hwy 62 (Dougherty Co.)	Fishing	3
Lazer Creek (1)	Marshall Creek to Flint River near Talbotton (Talbot Co.)	Fishing	17
Limestone Creek (1)	Lake Blackshear (Crisp Co.)	Fishing	3
Line Creek (4)	Upstream Wynns Pond (Fayette/Coweta Co.)	Fishing	7
Line Creek (1,4)	Wynns Pond to Line Creek WPCP (Fayette/Coweta Co.)	Fishing	4
Line Creek (2)	Line Creek WPCP to Flat Creek (Fayette Co.)	Fishing	2
Line Creek (1,10)	Flat Creek to Flint River (Fayette/Spalding/Coweta Co.)	Fishing	15
Little Muckalee Creek (4)	Headwaters to Galey Creek (Schley Co.)	Fishing	9

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Little Pachitla Creek (4)	Fellows Branch to Bear Creek (Calhoun Co.)	Fishing	7
Little Potato Creek (4)	Downstream Barnesville (Lamar Co.)	Fishing	8
Little Redoak Creek (aka Sandy Creek) (4)	Meriwether County	Fishing	6
Little Turkey Creek (4)	Upson County	Fishing	2
Little White Oak Creek (4)	Upstream White Oak Creek (Coweta Co.)	Fishing	6
Little White Oak Creek (4)	D/S Linch Creek (Coweta/Meriwether Co.)	Fishing	8
Long Branch (4)	Upson County	Fishing	3
Marby Creek (4)	Upson County	Fishing	4
Matthews Creek (4)	Crawford County	Fishing	5
Mill Creek (4)	Meriwether County	Fishing	6
Mock Woodall Creek (4)	Upson County	Fishing	2
Mountain Creek (4)	Pike County	Fishing	6
Muckalee Creek (1)	Little Muckalee Creek to Americus (Sumter Co.)	Fishing	5
Muckalee Creek (2)	Americus to McLittle Bridge Rd. (Sumter Co.)	Fishing	2
Muckalee Creek (1,4,10)	Sumter Co. Line to Pirates Cove Rd., Leesburg (Lee Co.)	Fishing	20
Muckalee Creek (4)	Unnamed tributary 1 mi. u/s Marion/Schley Co. Line to Owens Creek (Marion/Schley Co.)	Fishing	6
Murphy Creek (4)	Headwaters to Flint River (Fayette Co.)	Fishing	4
North Mosquito Creek (4)	Florida State Line to Mosquito Creek (Decatur Co.)	Fishing	7
Pachitla Creek (1)	Parkins Creek to Bay Branch near Edison (Calhoun Co.)	Fishing	5
Pappys Creek (4)	Meriwether County	Fishing	6
Pecan Creek (24)	Lake Blackshear (Sumter Co.)	Fishing	1
Pennahatchee Creek (1)	Little Pennahatchee Creek to Turkey Creek (Dooly Co.)	Fishing	3

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Pigeon Creek (4)	Meriwether County	Fishing	8
Potato Creek (1)	Drake Branch to Flint River near Thomaston (Upson Co.)	Fishing	11
Powder Creek (4)	Pike County	Fishing	5
Red Oak Creek (4)	Meriwether County	Fishing	10
Rocky Ford Branch (4)	Meriwether County	Fishing	2
Rose Creek (4)	Willis Road to Potato Creek (Upson Co.)	Fishing	6
Sandy Mount Creek (4)	U.S. Hwy. 41 to Pennahatchee Creek (Dooly Co.)	Fishing	5
Shoal Creek (4)	Fayette County	Fishing	5
Shoal Creek (2,4)	Griffin (Spalding Co.)	Fishing	5
Slaughter Creek (4)	Christmas Branch to Kinchafoonee Creek (Webster Co.)	Fishing	1
Spring Creek (4)	Upson County	Fishing	3
Spring Creek (1,4)	Headwaters to Flint River near Montezuma (Macon Co.)	Fishing	5
Spring Creek (1,4)	Aycocks Creek to Lake Seminole (Decatur Co.)	Fishing	13
Starling Branch (4)	Upson County	Fishing	2
Sullivan Creek (4)	Upson County	Fishing	4
Swift Creek (4)	Headwaters to Tobler Creek (Upson Co.)	Fishing	14
Ten Mile Creek (4)	Smyrna Road to Potato Creek (Upson Co.)	Fishing	8
Tobler Creek (4)	Upson County	Fishing	23
Town Creek (4)	Headwaters to Carter Creek (Randolph Co.)	Fishing	7
Town Creek (4)	Rigas Road to Muckalee Creek (Sumter Co.)	Fishing	2
Turkey Creek (4)	Byromville Pond to Little Creek (Dooly Co.)	Fishing	3
Ty Ty Creek (4)	Unnamed trib. 1.4 miles u/s Thomas Mill Road to Kinchafoonee Cr. (Sumter Co.)	Fishing	3
Vallhalla Branch (1)	Trib. to Lake Blackshear (Crisp Co.)	Fishing	1

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Walnut Creek (4)	Meriwether County	Fishing	4
White Oak Creek (1)	Little White Oak Creek to Flint River near Alvaton (Meriwether Co.)	Fishing	9
Whitewater Creek (1)	Starr's Millpond to Line Creek (Fayette Co.)	Fishing	5
Whitewater Creek (4)	Downstream Lake Bennett (Fayette Co.)	Fishing	8
Winky Branch (4)	Meriwether County	Fishing	4
Wolf Creek (4)	Upson County	Fishing	5
Wolf Creek (4)	Meriwether County	Fishing	5
Womble Creek (4)	Upson County	Fishing	6
Woolsey Creek (4)	Fayette County	Fishing	6
OCHLOCKONEE RIVER BASIN			
Tired Creek (1)	Wolf Cr. to Parkers Mill Cr. near Cairo (Grady Co.)	Fishing	4
OCMULGEE RIVER BASIN			
Aboothlacoosta Creek (4)	Butts County	Fishing	6
Alcovy River (18)	Headwaters to Walton County Line (Gwinnett Co.)	Fishing	15
Alcovy River (1)	Wrights Creek to Bear Creek (Newton Co.)	Fishing/Recreation	13
Alligator Creek (1,4)	1 mile d/s U.S. Hwy. 280 to Little Ocmulgee River (Wheeler Co.)	Fishing	16
Bay Creek (1)	Beaver Creek to Big Indian Creek (Peach/Houston Co.)	Fishing	3
Beaverdam Creek (4)	Monroe/Bibb Counties	Fishing	6
Big Creek (4)	Headwaters to Burnham Creek (Houston Co.)	Fishing	12
Big Creek (Tucsawhatchee Creek) (1,10)	Hwy 230 to Ocmulgee River (Pulaski Co.)	Fishing	10
Big Haynes Creek (1,23)	Big Haynes Cr. Reservoir to Little Haynes Creek (Rockdale Co.)	Drinking Water	1
Big Indian Creek (4)	Baptist Creek to Bay Creek (Houston Co.)	Fishing	6
Big Indian Creek (4)	Flat Creek to Mossy Creek (Houston Co.)	Fishing	7

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Big Towaliga Creek (4)	Lamar County	Fishing	5
Briar Branch (4)	Upstream Towaliga River (Monroe Co.)	Fishing	2
Buck Creek (4)	Tributary to High Falls Lake (Lamar/Spalding Co.)	Fishing	14
Castleberry Creek (4)	Tributary to Rocky Creek (Monroe/Butts Co.)	Fishing	3
Chambliss Creek (4)	Tributary to Lake Juliette, Forsyth (Monroe Co.)	Fishing	4
Champion Creek (4)	Monroe County	Fishing	3
Coley Creek (4)	Bleckley County	Fishing	4
Coppas Branch (4)	Bibb County	Fishing	2
Crow Branch (4)	Jasper County	Fishing	3
Deer Creek (4)	Tributary to Rum Creek (Monroe Co.)	Fishing	10
Douglas Creek (4)	Upstream Little Sandy Creek (Butts Co.)	Fishing	4
Dry Bone Creek (4)	Jones/Bibb Counties	Fishing	7
Echeconnee Creek (4)	Rock Quarry Road to Knoxville Road (Monroe/Bibb Co.)	Fishing	27
Fambro Creek (4)	Monroe County	Fishing	4
Feagin Creek (4)	Jones County	Fishing	3
Gilmore Branch (4)	Tributary to Towaliga River (Monroe/Butts Co.)	Fishing	3
Hardy [illegible]s Creek (4)	Jasper County	Fishing	6
Herds Creek (4)	Headwaters to Ga. Hwy. 212 (Jasper Co.)	Fishing	3
Indian Creek (4)	Lester Mill Rd., Locust Grove to Towaliga River (Henry/Butts Co.)	Fishing	8
Johnson Creek (2)	Tributary to Cabin Creek, Griffin (Spalding Co.)	Fishing	1
Jordan Creek (1)	Cochran to Ocmulgee River (Bleckley/Pulaski Co.)	Fishing	10
Kinnard Creek (4)	Tributary to Ocmulgee River (Jasper Co.)	Fishing	9
Lamar Branch (4)	Tributary to Echeconnee Creek (Bibb/Monroe Co.)	Fishing	3

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Lee Creek (4)	Tributary to Ocmulgee River (Monroe Co.)	Fishing	6
Little Buck Creek (4)	Lamar County	Fishing	6
Little Falling Creek (4)	Jasper/Jones Counties	Fishing	5
Little Sandy Creek (4)	Butts County	Fishing	4
Little Shellstone Creek (4)	Headwaters to Shellstone Creek (Bleckley Co.)	Fishing	4
Little Sturgeon Creek (4)	Headwaters to Sturgeon Creek (Ben Hill Co.)	Fishing	7
Little Tobesofkee Creek (4)	Lamar/Monroe Counties	Fishing	23
Little Towaliga River (4)	D/S Barnesville Reservoir (Lamar/Monroe Co.)	Fishing	13
Long Branch (4)	Upstream Big Sandy Creek (Butts Co.)	Fishing	4
Mossy Creek (4)	Taylors Mill Pond to Mule Creek (Peach Co.)	Fishing	6
Ocmulgee River (1)	Downstream Lloyd Shoals Dam (Butts/Jasper Co.)	Fishing	3
Ocmulgee River (1)	3 Miles Downstream Lloyd Shoals Dam to Towaliga River (Butts/Jasper/Monroe Co.)	Fishing	14
Ocmulgee River (1,28)	Hwy 18 to Beaverdam Creek (Monroe/Jones/Bibb Co.)	Drinking Water	9
Ocmulgee River (1)	Beaverdam Creek to Walnut Creek (Jones/Bibb Co.)	Drinking Water/Fishing	10
Ocmulgee River (1)	Big Indian Creek to Pulaski/Wilcox Co. Line (Pulaski Co.)	Fishing	25
Ocmulgee River (1,9)	House Creek to Altamaha River (Telfair,Ben Hill, Coffee, Jeff Davis, Wheeler Co.)	Fishing	67
Panther Creek (4)	Tributary to Yellow Water Creek (Butts Co.)	Fishing	4
Plymale Creek (4)	Butts County	Fishing	7
Pole Bridge Creek (15)	DeKalb County	Fishing	10
Pounds Creek (18)	Upstream Lakeview Ct. Lake (Gwinnett Co.)	Fishing	1
Pounds Creek (18)	Downstream Lakeview Court Lake (Gwinnett Co.)	Fishing	1
Prairie Creek (4)	Lamar County	Fishing	5

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Pughs Creek (18)	Tributary to Yellow River (Gwinnett Co.)	Fishing	5
Reedy Creek (4)	Tributary to Tobesofkee Creek (Monroe Co.)	Fishing	4
Richland Creek (4)	Schuffle Creek to Savage Creek (Twiggs Co.)	Fishing	5
Rock Creek (4)	Downstream Lite-N-Tie Rd. (Jones Co.)	Fishing	6
Rocky Creek (4)	Downstream Lake Wildwood (Bibb Co.)	Fishing	4
Rum Creek (4)	Downstream Lake Juliette (Monroe Co.)	Fishing	2
Sabbath Creek (4)	Tributary to Ocmulgee River (Bibb Co.)	Fishing	4
Sand Creek (4)	Jones County	Fishing	7
Sandy Run Creek (1,2,4)	Downstream Warner Robins (Houston Co.)	Fishing	2
Savage Creek (4)	Headwaters to Ocmulgee River (Twiggs Co.)	Fishing	18
Scott Creek (23)	Headwaters to Deer Run Lake (Rockdale Co.)	Fishing	1
Shellstone Creek (4)	U.S. Hwy. 23 to Ocmulgee River (Twiggs/Bleckley Co.)	Fishing	8
South Prong Creek (4)	Headwaters to Big (Tucsawhatchee) Creek (Dooly/Pulaski Co.)	Fishing	12
South Shellstone Creek (1)	Downstream Coley, NW Cochran (Bleckley Co.)	Fishing	4
Spring Branch (4)	Tributary to Wise Creek (Jasper Co.)	Fishing	1
Stalking Head Creek (4)	Jones/Jasper Counties	Fishing	7
Standard Creek (4)	Monroe County	Fishing	2
Stone Mountain Creek (15)	Downstream Stone Mountain Lake (DeKalb Co.)	Fishing	5
Strouds Creek (2)	Social Circle (Walton/Newton Co.)	Fishing	3
Swan Creek (4)	Lamar County	Fishing	4
Todd Creek (4)	Tributary to Tobesofkee River (Monroe Co.)	Fishing	5
Tom George Creek (2)	DeKalb County	Fishing	2
Towaliga River (4)	Thompson Creek to Indian Creek (Spalding/Butts/Monroe Co.)	Fishing	10

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Towaliga River (4)	Indian Creek to High Falls Lake (Butts Co.)	Fishing	7
Towaliga River (1,4,10)	High Falls Lake to Ocmulgee River (Butts/Monroe Co.)	Fishing	27
Town Creek (4)	Jones County	Fishing	4
Troublesome Creek (4)	Spalding County	Fishing	5
Walnut Creek (2)	Downstream McDonough Walnut Creek WPCP (Henry Co.)	Fishing	2
Whitewater Creek (4)	Headwaters to Echeconnee Creek (Crawford Co.)	Fishing	5
Wolf Creek (4)	Bibb County	Fishing	2
Wood Creek (4)	D/S Ga. Hwy. 83 to Echeconnee Creek (Monroe Co.)	Fishing	4
Yellow Creek (4)	Tributary to Little Tobesofkee Creek (Monroe Co.)	Fishing	9
Yellow River (18)	Centerville Creek to Hammock Creek (Gwinnett/DeKalb/Rockdale Co.)	Fishing	8
OCONEE RIVER BASIN			
Apalachee River (18)	Apalachee Road to Williamson Creek (Gwinnett/Barrow/Walton Co.)	Fishing	10
Bay Branch (4)	Tributary to Oconee River (Putnam Co.)	Fishing	1
Beaverdam Creek (4)	Northwest of Smyrna Church (Hancock Co.)	Fishing	2
Beaverdam Creek (4)	Putnam County	Fishing	2
Beaverdam Creek (4)	Hancock County	Fishing	4
Big Indian Creek (1)	Little Indian Creek to Little River (Morgan/Putnam Co.)	Fishing	7
Big Sandy Creek (4)	Clear Creek to Porter Creek (Wilkinson Co.)	Fishing	6
Black Spring Branch (4)	Baldwin County	Fishing	4
Buck Creek (4)	Tributary to Oconee River (Baldwin Co.)	Fishing	4
Buffalo Creek (1,4)	St. Road 787 to Swift Creek (Hancock Co.)	Fishing	9
Camp Creek (4)	Tributary to Oconee River (Baldwin Co.)	Fishing	7
Carter's Mill Creek (4)	Headwaters to Keg Creek (Washington Co.)	Fishing	6

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Cedar Creek (1)	Winder Reservoir to Mulberry River, Winder (Barrow Co.)	Fishing	4
Cedar Creek (4)	Headwaters to King Branch (Jasper Co.)	Fishing	6
Cedar Creek (4)	King Branch to Jones Co. Line (Jasper Co.)	Fishing	9
Commissioner Creek (4)	Jones County	Fishing	9
Commissioner Creek (4)	Beaver Creek to Little Commissioner Creek (Wilkinson Co.)	Fishing	5
Copeland Creek (4)	Hancock County	Fishing	1
Crooked Creek (4)	Bleckley County	Fishing	3
Deep Creek (4)	Washington County	Fishing	5
Fishing Creek (4)	Tributary to Oconee River (Baldwin Co.)	Fishing	12
Ford Creek (4)	Hancock County	Fishing	2
Gap Creek (4)	Jasper County	Fishing	3
Glady Creek (4)	Putnam County	Fishing	3
Glady Creek Tributary (4)	Near Reids Crossroads (Putnam Co.)	Fishing	1
Greenbriar Creek (28)	Salem Scull Shoals Road to Lake Oconee (Oconee/Greene Co.)	Fishing	8
Hard Labor Creek (28)	Big Sandy Creek to Apalachee River (Morgan Co.)	Fishing	4
Hitchcock Branch (4)	Putnam County	Fishing	1
Hog Creek (4)	Tributary to Big Cedar Creek (Jones Co.)	Fishing	7
Hunger and Hardship Creek (4)	Headwaters to Strawberry Creek (Laurens Co.)	Fishing	6
Jacks Creek (1)	D/S Monroe Jacks Creek WPCP (Walton Co.)	Fishing	2
Jenkins Branch (4)	Tributary to Oconee River (Putnam Co.)	Fishing	1
Lake Sinclair Tributary (4)	Near Putnam Beach (Putnam Co.)	Fishing	1
Lake Sinclair Tributary (4)	North of Key Cemetery (Putnam Co.)	Fishing	1

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Lick Creek (4)	Upstream Lake Oconee (Putnam Co.)	Fishing	4
Little Buffalo Creek (4)	Hancock County	Fishing	1
Little Camp Creek (4)	Tributary to Camp Creek (Baldwin Co.)	Fishing	4
Little Cedar Creek (4)	Tributary to Lake Sinclair (Jones Co.)	Fishing	6
Little Creek (4)	Jones County	Fishing	3
Little Creek (4)	Tributary to Town Creek (Hancock Co.)	Fishing	1
Little Keg Creek (4)	Washington County	Fishing	5
Little Red Bluff Creek (4)	Headwaters to Red Bluff Creek (Treutlen Co.)	Fishing	4
Little River Tributary (4)	Near Martin's Mill Road (Putnam Co.)	Fishing	3
Little Rocky Creek (4)	Headwaters to Rocky Creek (Laurens Co.)	Fishing	9
Little Rocky Creek (4)	Twiggs County	Fishing	3
Little Sandy Hill Creek (4)	Washington County	Fishing	3
Log Dam Creek (4)	Tributary to Oconee River (Hancock Co.)	Fishing	5
Long Creek (4)	Hancock County	Fishing	1
Lowry Branch (4)	Jasper County	Fishing	3
Lundy Creek (4)	Hancock County	Fishing	2
Maiden Creek (4)	Wilkinson County	Fishing	2
Mercer Creek (1)	D/S Graham Pond to Red Hill Creek (Laurens/Treutlen Co.)	Fishing	9
Miller Creek (4)	Jones County	Fishing	1
Milsap Creek (4)	Jones County	Fishing	5
Moore Creek (4)	Tributary to Fishing Creek (Jones/Baldwin Co.)	Fishing	6
Murder Creek (1,4,10)	Wolf Creek to Lake Sinclair (Putnam Co.)	Fishing	10
North Oconee River (10)	Curry Creek to Clarke County (Jackson Co.)	Fishing/Drinking Water	7

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Oconee River (1,27)	Lake Sinclair to Fishing Creek (Baldwin Co.)	Drinking Water	5
Oconee River (1)	Fishing Creek to Gumm Creek (Baldwin Co.)	Fishing	20
Oconee River (1)	Gumm Creek to US Hwy 319/80 (Washington/Wilkinson/Laurens Co.)	Fishing/Drinking Water	52
Oconee River (1)	Turkey Creek to Red Bluff Creek (Laurens/Treutlen/Wheeler Co.)	Fishing	26
Oconee River (1)	Red Bluff Creek to Altamaha River (Montgomery/Wheeler Co.)	Fishing	38
Pinkston Creek (4)	Tributary to Buffalo Creek (Hancock Co.)	Fishing	1
Pittman Creek (4)	Jasper County	Fishing	7
Plunkett Creek (4)	Tributary to Whitten Creek (Hancock Co.)	Fishing	1
Porter Creek (4)	Headwaters to Big Sandy Creek (Wilkinson Co.)	Fishing	12
Robinson Creek (4)	Jasper County	Fishing	4
Rock Creek (4)	Putnam County	Fishing	1
Rocky Creek (4)	Tributary to Lake Sinclair (Baldwin Co.)	Fishing	2
Rocky Creek (1,10)	Little Rocky Creek to Turkey Creek (Laurens Co.)	Fishing	6
Rocky Creek (4)	Bleckley County	Fishing	3
Sand Creek (4)	Tributary to Lake Sinclair (Baldwin Co.)	Fishing	3
Sandy Hill Creek (4)	Headwaters to Oconee River (Washington Co.)	Fishing	9
Sandy Run Creek (4)	Tributary to Buffalo Creek (Hancock Co.)	Fishing	2
Sheppard Creek (4)	Jasper County	Fishing	5
Shoal Creek (1)	Little Shoal Creek to Apalachee River (Walton Co.)	Fishing	2
Shoal Creek (4)	Jasper County	Fishing	3
Shoulderbone Creek (4)	Tributary to Oconee River (Hancock Co.)	Fishing	1
Smokey Hollow Creek (20)	Gainesville (Hall Co.)	Fishing	1
South Fork Wolf Creek (4)	Jasper County	Fishing	6

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
South Sandy Creek (4)	Chappells Pond to Big Sandy Creek (Laurens/Wilkinson Co.)	Fishing	5
Swift Creek (4)	Tributary to Buffalo Creek (Hancock Co.)	Fishing	1
Taylor Creek (4)	Jones County	Fishing	7
Tributary 1 to Allen Creek (1,20)	Gainesville (Hall Co.)	Fishing	1
Tributary 4 to Allen Creek (1,20)	Gainesville (Hall Co.)	Fishing	1
Tributary 9 to Allen Creek (1,20)	Gainesville (Hall Co.)	Fishing	1
Tributary to North Oconee River (20)	Gainesville (Hall Co.)	Fishing	3
Tributary to Turkey Creek (4)	Twiggs County	Fishing	2
Tributary to Whitten Creek (4)	Hancock County	Fishing	3
Ugly Creek (4)	Twiggs County	Fishing	4
Whitehouse Branch (4)	Jasper County	Fishing	3
Whiteoak Creek (4)	Jasper County	Fishing	4
Whitten Creek (4)	Hancock County	Fishing	2
Wildcat Branch (4)	Wilkinson County	Fishing	1
Will Hunter Branch (2)	Tributary to North Oconee River, Athens (Clarke Co.)	Fishing	1
Wolf Creek (1,4)	Gray (Jones Co.)	Fishing	3
OGEECHEE RIVER BASIN			
Big Creek (1)	Kelley's Pond to Ogeechee River, Louisville (Jefferson Co.)	Fishing	5
Buckhead Creek (4)	Hills Pond/Lambert Branch to Eightmile Creek (Burke Co.)	Fishing	8
Canoochee Creek (1)	Upstream SR 119, Ft. Stewart (Liberty Co.)	Fishing	7
Flemming Branch (4)	Headwaters to Big Creek (Jefferson Co.)	Fishing	4

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Hannah Branch (4)	Headwaters to Big Creek (Jefferson Co.)	Fishing	4
Joe's Creek (4)	~0.1 mi d/s GA Hwy 102 to Rocky Comfort Creek (Glascock Co.)	Fishing	6
Kittrell Creek (4)	~1.2 mi u/s Kittrell Creek Road to Jordan Mill Pond/Williamson Swamp Creek (Washington Co.)	Fishing	4
Little Lotts Creek (1)	D/S South Main Street, Statesboro (Bulloch Co.)	Fishing	1
Mill Creek (1)	Newsome Branch to Ogeechee River near Statesboro (Bulloch Co.)	Fishing	16
Mill Creek (1)	U/S Taylors Creek, Fort Stewart (Liberty Co.)	Fishing	2
North Newport River (1)	Lower Carrs Neck Creek to Timmons River (Liberty Co.)	Fishing	4
Ogeechee River (1)	Long Creek to Hwy. 102 near Jewell (Hancock/Washington Co.)	Fishing	12
Rocky Comfort Creek (1)	Duhart Creek to Ogeechee River, Louisville (Jefferson Co.)	Fishing	6
Taylors Creek (1)	U/S WPCP Drainage Canal, Fort Stewart (Liberty Co.)	Fishing	3
Tributary to Taylors Creek (1)	Drainage Canal to Taylors Creek, Fort Stewart (Liberty Co.)	Fishing	2
SATILLA RIVER BASIN			
Alabaha River (1)	Tan Trough Cr. to Satilla River (Pierce Co.)	Fishing	12
Bishop Creek (1)	Downstream Hazelhurst (Jeff Davis Co.)	Fishing	2
Hurricane Creek (1)	Whitehead Cr. to d/s Little Cr.(Jeff Davis/Bacon Co.)	Fishing	9
Little Satilla River (1)	Sixty Foot Branch to Satilla River (Pierce/Wayne/Brantley Co.)	Fishing	6
Satilla River (1)	Seventeen Mile River to US Hwy 84/Ga. Hwy. 38 (Ware Co.)	Fishing	27
Seventeen Mile River (1)	Otter Cr. (Douglas) to Twentynine Mile Cr. (Coffee Co.)	Fishing	8
SAVANNAH RIVER BASIN			
Bear Creek (1)	SCS Pond to Unawatti Creek, Lavonia (Franklin Co.)	Fishing	1
Bear Creek (1)	Lavonia (Franklin Co.)	Fishing	1
Beaverdam Creek (1)	Commerce (Jackson/Banks Co.)	Fishing	5

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Beaverdam Creek (4)	Looks Branch to Little Beaverdam Creek (Burke/Jenkins/Screven Co.)	Fishing	9
Beaverdam Creek (1)	McDonald Branch to Brier Creek, near Sylvania (Screven Co.)	Fishing	5
Boggy Gut Creek (4)	McDuffie/Columbia/Richmond Co. Line to Brier Creek (Richmond Co.)	Fishing	7
Broad River (1)	Hwy. 77 to Clarks Hill Lake (Elbert Co.)	Fishing	24
Butler Creek (1)	Boardmans Pond to SR56, South Augusta (Richmond Co.)	Fishing	8
Cedar Creek (1)	Downstream Hartwell WPCP to Little Cedar Creek (Hart Co.)	Fishing	8
Chattooga River (1,31)	Stateline to Lake Tugaloo (Rabun Co.)	Wild/Scenic	36
Coleman River (4)	Tributary to Tallulah River (Rabun Co.)	Fishing	5
Crawford Creek (1,2)	Downstream Columbia Co. WPCP to Tudor Branch (Crawford Co.)	Fishing	2
Davidson Creek (4)	Tributary to Panther Creek near Tallulah Falls (Habersham/Stephens Co.)	Fishing	6
Fitz Branch (4)	Headwaters to Brier Creek (Burke Co.)	Fishing	5
Grindstone Branch (1)	Rhodes Pond to Spirit Creek, Hephzibah (Richmond Co.)	Fishing	1
Hannah Creek (1)	Royston to Broad River (Franklin/Madison Co.)	Fishing	8
Holcomb Creek (4)	Headwaters to Billingsley Creek (Rabun Co.)	Fishing	4
Hoods Creek (4)	Headwaters to Walnut Fork (Rabun Co.)	Fishing	3
Kiokee Creek (1)	Greenbrier Creek to Savannah River near Evans (Columbia Co.)	Fishing	6
Little Bear Creek (1)	Tributary to Unawatti Creek, Lavonia (Franklin Co.)	Fishing	1
Little Panther Creek (4)	Habersham County	Fishing	5
Little Toccoa Creek (4)	Tributary to Toccoa Creek, Toccoa (Stephens Co.)	Fishing	4
McBean Creek (1)	Poorly Branch to Savannah River (Richmond/Burke Co.)	Fishing	14
Middle Fork Broad River (4)	Dicks Creek to upstream Lake Russell (Stephens Co.)	Fishing	4
Moccasin Creek (4)	Tributary to Lake Burton (Rabun Co.)	Fishing	5

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
North Fork Broad River (4)	Habersham/Stephens Co. Line to Old Rock Quarry Rd. near Toccoa (Stephens Co.)	Fishing	5
Panther Creek (1,4)	Upstream Lake Yonah (Habersham/Stephens Co.)	Fishing	9
Phinizy Ditch (1)	Augusta (Richmond Co.)	Fishing	2
Pistol Creek (1)	Headwaters to Clarks Hill Lake near Tignall (Wilkes/Lincoln Co.)	Fishing	8
Sarahs Creek (4)	Headwaters to Rd. S 884 (Rabun Co.)	Fishing	5
Savannah River (1)	Hwy. 368 to Coldwater Creek (Elbert Co.)	Recreation	6
Savannah River (1,9)	US Hwy. 78/278 to Johnsons Landing (Richmond/Burke/Screven Co.)	Fishing	78
Savannah River (1,9)	Johnsons Landing to Brier Creek (Screven Co.)	Fishing/Drinking Water	26
Savannah River (1,9)	Brier Creek to Tide Gate (Screven/Effingham/Chatham Co.)	Fishing/Drinking Water/Coastal Fishing	84
Spirit Creek (1)	Marcum Branch to McDade Pond (Richmond Co.)	Fishing	14
St. Augustine Creek (1)	Walthour Swamp to Front River near Port Wentworth (Effingham/Chatham Co.)	Fishing	7
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
Unawatti Creek (1)	Downstream Lavonia (Franklin Co.)	Fishing	6
Walnut Fork (4)	Headwaters to Hoods Creek (Rabun Co.)	Fishing	4
Warwoman Creek (4)	Finney Creek to Sarahs Creek (Rabun Co.)	Fishing	6
Wildcat Creek (4)	Headwaters to SR 197/Rd. S874 (Rabun Co.)	Fishing	6
SUWANNEE RIVER BASIN			
Alapahoochee River (1)	Confluence of Mud and Grand Bay Cr. to Stateline (Echols Co.)	Fishing	11
Bear Creek (1,3)	U/S Giddons Mill Cr. to d/s Ga. Hwy. 37/76, Adel (Cook Co.)	Fishing	3
Grand Bay Creek (1)	Grand Bay to Alapahoochee River (Lanier/Lowndes Co.)	Fishing	18

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Gum Creek (2)	Headwaters to New River, Tifton (Tift Co.)	Fishing	5
Hat Creek (1)	SR S1989 S.E. of Sycamore to Middle Creek (Turner/Tift/Irwin Co.)	Fishing	13
Heard Creek (10)	Headwaters to Little River, near Tifton (Tift Co.)	Fishing	5
Little River (1)	Wells Mill Cr. to Slaughter Creek (Brooks Co.)	Fishing	16
Rough Creek (1)	U/S Alapaha River near Tifton (Tift Co.)	Fishing	4
Warrior Creek (10)	Briar Creek to Horse Creek (Worth Co.)	Fishing	3
TALLAPOOSA RIVER BASIN			
Baxter Creek (2)	Bremen (Haralson Co.)	Fishing	2
Beach Creek (4)	Haralson County	Fishing	5
Brooks Creek (4)	Carroll/Haralson Counties	Fishing	10
Buck Creek (2)	Downstream Bremen (Carroll Co.)	Fishing	5
Cochran Creek (6)	Upstream Tallapoosa River (Haralson Co.)	Fishing	2
Indian Creek (1)	D/S Brickyard Rd. to Little Tallapoosa River (Carroll Co.)	Fishing	6
Lassetter Creek (4)	Haralson County	Fishing	3
Little River (1)	Baxter Creek to Tallapoosa River (Haralson Co.)	Fishing	10
Little Tallapoosa River (1)	Little Tallapoosa Lake to Hwy 16 (Carroll Co.)	Fishing	11
Little Tallapoosa River (43)	Hwy 16 to Ballard Bridge Rd., Carrollton (Carroll Co.)	Fishing	2
Little Tallapoosa River (1,6)	Carrollton to Buffalo Creek (Carroll Co.)	Fishing	16
Mann Creek (4)	Haralson County	Fishing	6
Mud Creek (4)	Carroll/Paulding Counties	Fishing	4
Swinney Branch (4)	Haralson/Polk Counties	Fishing	4
Tallapoosa River (4)	McClendon Creek to Water Mill Creek (Paulding/Haralson Co.)	Drinking Water	7
Thomasson Creek (4)	Haralson/Paulding Counties	Fishing	4

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Trestle Creek (6)	Temple (Carroll Co.)	Fishing	2
Walker Creek (1)	Blalock Creek to Tallapoosa River (Haralson Co.)	Fishing	7
Water Mill Creek (4)	Haralson/Paulding Counties	Fishing	5
TENNESSEE RIVER BASIN			
Allison Creek (4)	Tributary to Lookout Creek (Dade Co.)	Fishing	2
Arkaqua Creek (1,13)	Pine Ridge Road to Nottely River (Union Co.)	Fishing	4
Big Creek (13)	Tributary to Toccoa River (Gilmer/Fannin Co.)	Fishing	9
Bitter Creek (1)	Headwaters to Brasstown Creek (Union Co.)	Fishing	3
Bryant Creek (4)	Tributary to Cooper Creek (Union Co.)	Fishing	3
Butler Creek (13)	Tributary to Nottely River (Union Co.)	Fishing	3
Canada Creek (13)	Union County	Fishing	2
Charlie Creek (13)	Fannin County	Fishing	2
Conley Creek (13)	Tributary to Lake Nottely (Union Co.)	Fishing	3
Cooper Creek (13)	Tributary to Toccoa River (Fannin Co.)	Fishing	3
Coosa Creek (13)	Union County	Fishing	2
Corbin Creek (4)	Tributary to Hiawassee River (Towns Co.)	Fishing	5
Crawfish Creek (13)	Tributary to Lookout Creek (Dade Co.)	Fishing	3
Crawfish Creek (13)	Tributary to W. Chickamauga Creek (Walker Co.)	Fishing	7
Dooley Creek (13)	Tributary to Nottely River (Union Co.)	Fishing	6
Dry Creek (13)	Tributary to Lookout Creek (Dade Co.)	Fishing	3
East Chickamauga Creek (13)	Downstream Cove Creek (Whitfield/Catoosa Co.)	Fishing	5
Fodder Creek (13)	Towns County	Fishing	3
Gulf Creek (4)	Tributary to Lookout Creek (Dade Co.)	Fishing	6

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Helton Creek (13)	Union County	Fishing	1
Hiawassee River (1)	Upstream Lake Chatuge (Town Co.)	Recreation	10
Hightower Creek (13)	Towns County	Fishing	1
Hog Creek (13)	Towns County	Fishing	2
Hothouse Creek (13)	Tributary to Toccoa River (Fannin Co.)	Fishing	8
Hurricane Creek (4,13)	Tributary to S. Chickamauga Creek (Catoosa Co.)	Fishing	2
Ivylog Creek (13)	Tributary to Lake Nottely (Union Co.)	Fishing	7
Kiutuestia Creek (13)	Union County	Fishing	3
Left Fork Coulter Branch (4)	Walker County	Fishing	5
Little Chickamauga Creek (4)	Walker/Catoosa Counties	Fishing	8
Little Chickamauga Creek (13)	Upstream South Chickamauga Creek (Catoosa Co.)	Fishing	10
Little Fightingtown Creek (4)	Fannin County	Fishing	6
Little Hightower Creek (1)	Downstream Berrong Lake (Towns Co.)	Fishing	1
Lookout Creek (4,13)	Upstream Trenton (Dade Co.)	Fishing	21
Moccasin Creek (13)	Union County	Fishing	2
Noontootlah Creek (13)	Fannin County	Fishing	3
Pope Creek (13)	Tributary to Lookout Creek (Dade Co.)	Fishing	3
Rock Creek (13)	Fannin County	Fishing	5
Skeenah Creek (13)	Fannin County	Fishing	1
Squirrel Town Creek (13)	Dade County	Fishing	5
Stanley Creek (4)	Tributary to Toccoa River (Gilmer/Fannin Co.)	Fishing	4
Star Creek (13)	Tributary to Blue Ridge Lake (Fannin Co.)	Fishing	1

2000-2001 RIVERS/STREAMS SUPPORTING DESIGNATED USES

BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	MILES
Stink Creek (13)	Union County	Fishing	2
Suches Creek (13)	Union County	Fishing	2
Sugar Creek (13)	Fannin County	Fishing	2
Tanyard Creek (13)	Tunnel Hill (Whitfield/Catoosa Co.)	Fishing	3
Toccoa River (1)	Headwaters to Lake Blue Ridge (Union/Fannin Co.)	Recreation	32
Town Creek (13)	Union County	Fishing	3
Upper Bell Creek (13)	Towns County	Fishing	2
West Chickamauga Creek (4)	Mud Creek to Voiles Creek (Walker Co.)	Fishing	4
Wilscot Creek (13)	Fannin County	Fishing	3
Wolf Creek (13)	Union County	Fishing	3

2000-2001 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
ALTAMAHA RIVER BASIN									
Altamaha River (1)	Penholoway Creek to Butler River (Wayne/Glynn/McIntosh Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	23	X	X	3
Bullard Creek (4)	~0.25 mi u/s Altamaha Road to Altamaha River (Jeff Davis Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	8	X	X	3
Five Mile Creek (4)	Headwaters to Altamaha River (Appling/Wayne Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	9	X	X	3
Goose Creek (1)	U/S Rd. S1922 (Walton Griffis Rd.) to Little Goose Creek (Wayne Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	8	X	3	3
Little Ohoopee River (1)	Sardis Creek to Ohoopee River (Emanuel Co.)	Fishing	FC,DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	18	X	3	2
Ohoopee River (1)	Neels Creek to Little Ohoopee River (Johnson/Emanuel Co.)	Fishing	DO,FC,FCG	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Fish Consumption Guidelines due to mercury in fish tissue.	18	X	3	2
Ohoopee River (1)	Little Ohoopee River to U.S. Highway 292 (Emanuel/Candler/Tattnall Co.)	Fishing	DO,FC,FCG	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Fish Consumption Guidelines due to mercury in fish tissue.	23	X	3	2
Ohoopee River (1,9)	Hwy 292 to Hwy 147 (Tattnall Co.)	Fishing	FCG	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Fish Consumption Guidelines due to mercury in fish tissue.	12	X	3	3
Ohoopee River (1,9)	Ga. Hwy 147 to Confluence with Altamaha River (Tattnall Co.)	Fishing	FCG	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Fish Consumption Guidelines due to mercury in fish tissue.	13	X	3	3
Pendleton Creek (1)	Sand Hill Lake to Reedy Creek (Treutlen Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	7	X	3	2
Pendleton Creek (1)	Wildwood Lake to Tiger Creek (Treutlen/Toombs Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	12	X	3	2

2000-2001 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
Thomas Creek (1)	D/S CR203 to Ohoopee River (Tattnall Co.)	Fishing	DO	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	12	X	3	2
CHATTAHOOCHEE RIVER BASIN									
Acorn Creek (1)	Carroll County	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	3
Anneewakee Creek (1,4,16)	House Creek to Lake Monroe (Douglas Co.)	Fishing	FC,Bio	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	3	X	X	3
Baldwin Creek (16)	Douglas County	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	3
Balus Creek (1,20,22,26)	Gainesville (Hall Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	3	X	X	3
Bear Creek (1,16)	Dorsett Shoals Rd. to Little Bear Creek (Douglas Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	3
Big Creek (26)	Hall County	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
Big Creek (1)	Headwaters to Cheatham Creek (Forsyth Co.)	Fishing	FC,Cu	UR,I2	EPD will address nonpoint source (urban runoff) through a watershed protection strategy. Tyson Foods WPCP will be addressed through EPD's Basin Planning Permitting Strategy.	3	X	X	2
Black Creek (4)	Headwaters to Hannahatchee Creek (Stewart Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
Blue John Creek (1,4,21,26)	LaGrange (Troup Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	8	X	X	3
Bustahatchee Creek (4)	Confluence with North Fork to Lake Walter F. George (Quitman Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	1	X	X	3
Camp Creek (1)	Fulton County	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	4	X	X	3
Cavender Creek (4)	Carroll County	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	2	X	X	3

2000-2001 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
Cedar Creek (1)	Coweta County	Fishing	DO	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	2
Centralhatchee Creek (1)	Heard County	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	19	X	3	3
Chattahoochee River (1)	Ga. Hwy. 17, Helen to SR255 (White/Habersham Co.)	Recreation	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	8	X	X	3
Chattahoochee River (1)	Soquee River to Lake Lanier (Habersham/White Co.)	Recreation	FCG	NP	EPD will address nonpoint sources though a watershed protection strategy. Fish Consumption Guidelines due to mercury in fish tissue.	13	X	X	3
Chattahoochee River (1)	Morgan Falls Dam to Peachtree Creek (Fulton/Cobb Co.)	Recreation/Drinking Water	FC,FCG	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999. Fish Consumption Guidelines due to PCBs. PCBs have been banned in the U.S. and levels have been declining.	12	X	X	3
Chattahoochee River (1)	Wahoo Creek to Franklin (Coweta/Carroll/Heard Co.)	Fishing	FC,FCG	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy. Fish Consumption Guidelines due to PCBs. PCBs have been banned in the U.S. and levels have been declining.	21	X	X	3
Chattahoochee River (1)	Oliver Dam to N. Highland Dam (Muscogee Co.)	Fishing	FCG	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy. An areawide stormwater permit was issued 4/14/00. Fish Consumption Guidelines due to PCBs. PCBs have been banned in the U.S. and levels have been declining.	2	X	X	3
Chattahoochee River (1)	N. Highland Dam to Upatoi Creek (Muscogee Co.)	Fishing	FC,FCG	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy. An areawide stormwater permit was issued on 4/14/00. Fish Consumption Guidelines due to PCBs. PCBs have been banned in the U.S. and levels have been declining.	12	X	X	3
Chattahoochee River (1,11)	Downstream W.F. George Dam (Clay Co.)	Fishing	DO,FC	Dam Release,NP	Impairment will be addressed by implementing a developed plan that includes the remedial actions necessary for problem resolution. EPD will address nonpoint sources through a watershed protection strategy.	2	X	3,X	2
Clear Creek (1)	Atlanta (Fulton Co.)	Fishing	FC,DO	CSO,UR	Atlanta's Federal CSO Consent Decree, effective 9/98, requires compliance with water quality standards by 2/1/07. Urban runoff is being addressed in the EPD Stormwater Management Strategy for Metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	3	X	X	2

2000-2001 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
Coheelee Creek (4)	Chancy Mill Creek to Chattahoochee River (Early Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3
Cracker Creek (1)	Douglas County	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	3	X	X	3
Crawfish Creek (16)	Douglas County	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	3	X	X	3
Day Creek (4)	Bluff Springs Branch to Hodchodkee Creek (Stewart Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	1	X	X	3
Drag Nasty Creek (1)	Tributary to W. F. George (Quitman/Clay Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	7	X	3	3
Etta Vista Creek (20)	Gainesville (Hall Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Flowery Branch (26)	Hall County	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Fourmile Creek (7)	Lake Lanier Tributary (Forsyth Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	3
Foxwood Branch (2)	Tributary to Rottenwood Creek (Cobb Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	1	X	X	3
Hannahatchee Creek (1)	U.S. Hwy 27 to Lake W.F. George (Stewart Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	14	X	3	3
Hilly Mill Creek (1,4)	Heard/Coweta Counties	Fishing	FC,Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
Hitchitee Creek (4)	Cany Creek to Sand Branch (Chattahoochee/Stewart Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3
Hodchodkee Creek (4)	SR 27 to Wimberly Mill Branch (Stewart Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	3	X	X	3
Hodchodkee Creek (4)	Day Creek to Foreman Mill Branch (Stewart Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3
Hog Creek (4)	Headwaters to Cemochechobee Creek (Randolph/Clay Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	9	X	X	3

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BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	EVALUATED CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
Hog Waller Creek (17)	Roswell (Fulton Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	4	X	X	3
Kelly Mill Branch (1)	Headwaters to Orr Creek (Forsyth Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	2	X	X	3
Little Hitchitee Creek (4)	Headwaters to Hichitee Creek (Chattahoochee Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
Little Juniper Creek (4)	Headwaters to Kings Mill Pond (Marion/Chattahoochee Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	7	X	X	3
Little Pine Knot Creek (4)	Headwaters to Pine Knot Creek (Chattahoochee Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	4	X	X	3
Long Branch (4)	Coweta County	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	4	X	X	3
Mineral Springs Branch (1,4)	Newnan Upstream from Bonnell (Coweta Co.)	Fishing	Bio	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	1	X	X	3
Mineral Springs Branch (1,4)	Newnan Downstream from Bonnell (Coweta Co.)	Fishing	Tox,Bio	I1,UR	Bonnell went on final WET limits on 12/1/99. EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	3	X	X	1
Mountain Oak Creek (1)	Hamilton (Harris Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3
Mt. Hope Branch (4)	Meriwether County	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	4	X	X	3
Mud Creek (1,7)	South Hall County	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	2	X	X	3
Mulberry Creek (1)	Ossahatchie Creek to Five Points Branch West near Mulberry Grove (Harris Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	8	X	X	3
New River (1,4,26)	Heard/Coweta Counties	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	24	X	X	3
North Fork Balus Creek (20)	Gainesville (Hall Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	2	X	X	3
North Utoy Creek (1)	Atlanta (Fulton Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	6	X	X	3

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Ollie Creek (4)	Meriwether County	Fishing	Bio,DO	NP	EPD will address nonpoint sources through a watershed protection strategy.	1	X	X	2
Panther Creek (1)	Coweta County	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	3
Pataula Creek (4)	Headwaters to Clear Creek (Stewart Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	9	X	X	3
Pataula Creek (1)	Hodchodkee Creek to W. F. George Lake (Quitman/Clay Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
Pea Creek (1)	Fulton County	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	3	X	X	3
Pepperell Creek (2)	LaGrange (Troup Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Pine Knot Creek (4)	Parkers Mill Creek to Little Pine Knot Creek (Marion/Chattahoochee Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
Piney Woods Branch (4)	Headwaters to Tom Keith Rd. (Meriwether Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	2	X	X	3
Richland Creek (18)	Headwaters to Chattahoochee River (Gwinnett Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	5	X	X	3
Roaring Branch (4)	Headwaters to Chattahoochee River (Clay Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	7	X	X	3
Rock Creek (20)	Gainesville (Hall Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Rocky Branch (2)	Columbus (Muscogee Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy. An areawide stormwater permit was reissued 4/14/00.	2	X	X	3
Sawnee Creek (7)	Lake Lanier Tributary (Forsyth Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3

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Shoal Creek (4)	Headwaters (Mountville) to I-85/Ga. Hwy. 403 (Troup Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	X	3
Snake Creek (4)	Coweta County	Fishing	Bio	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	4	X	X	3
Sweetwater Creek (1)	Noses Creek to Chattahoochee River (Cobb/Douglas Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999. EPD will address nonpoint source (urban runoff) in Douglas County through a watershed protection strategy.	14	X	X	3
Tanyard Branch (1)	Atlanta (Fulton Co.)	Fishing	FC	UR,CSO	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999. Atlanta's Federal CSO Consent Decree, effective 9/98, requires compliance with water quality standards by 2/1/07.	2	X	X	3
Tanyard Creek (1,21)	LaGrange (Troup Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	2	X	X	3
Taylor Creek (26)	Dawson/Forsyth Counties	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	3
Tesnatee Creek (1)	Cleveland (White Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	5	X	X	3
Tiger Creek (4)	Headwaters to Upatoi Creek, Columbus (Muscogee Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3
Toto Creek (26)	Dawson County	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Town Creek (4)	Headwaters to Little Creek (Heard Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
Tributary to Flat Shoal Creek (4)	Headwaters to Flat Shoal Creek (Meriwether Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	2	X	X	3
Tributary to Mud Creek (14)	Cobb County	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	3	X	X	3

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Trib. to West Fork Little River (1)	Hall County	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Two Mile Creek (26)	Forsyth County	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	3
Wahoo Creek (4)	Upstream Arnco Mills Lake (Coweta Co.)	Fishing	Bio	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	7	X	X	3
Ward Creek (1,14)	Cobb County	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	6	X	X	3
Weaver Creek (4)	Headwaters to Sawhatchee Creek (Early Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3
Whooping Creek (1)	Carroll County	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	13	X	3	3
Willeo Creek (1)	Cobb/Fulton Counties	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	5	X	X	3
Woodall Creek (1)	Atlanta (Fulton Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	3	X	X	3
COOSA RIVER BASIN									
Allatoona Creek (1,14,24)	Cobb County	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	9	X	X	3
Amicalola Creek (1)	Headwaters near Hwy 52 to Etowah River (Dawson Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	24	X	X	3
Cane Creek (1)	Dry Creek to Chattooga River (Walker/Chattooga Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	7	X	X	3
Cartecay River (1)	Owltown Creek to Coosawattee River (Gilmer Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	3	X	X	3

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Chappel Creek (2)	Trion (Chattooga Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
Chastain Branch (2)	Tributary to Noonday Creek (Cobb Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
Chattooga River (1)	Henry Branch to Lyerly (Chattooga Co.)	Fishing	FC	NP	EPD will address nonpoint source through a watershed protection strategy.	8	X	X	3
Coahulla Creek (1)	Below 728 Road to Mill Creek (Whitfield Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3
Conasauga River (1)	Hwy. 286 to Holly Creek (Whitfield/Murray Co.)	Fishing/Drinking Water	FC,FCG	NP	EPD will address nonpoint sources through a watershed protection strategy. Fish Consumption Guidelines due to PCBs. PCBs have been banned in the U.S. and levels have been declining.	18	X	X	3
Cox Creek	Ellijay (Gilmer Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	3
Etowah River (1)	Clear Creek to Forsyth Co. Line (Dawson Co.)	Fishing	FC,FCG	NP	EPD will address nonpoint sources through a watershed protection strategy. Fish Consumption Guidelines due to mercury in fish tissue.	24	X	X	3
Etowah River (1)	Settingdown Creek to Long Swamp Creek (Cherokee Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
Etowah River (1)	Richland Creek to Euharlee Creek (Bartow Co.)	Fishing	FCG	NP	EPD will address nonpoint sources through a watershed protection strategy. Fish Consumption Guidelines for PCBs. PCBs have been banned in the U.S. and levels have been declining.	4	X	X	3
Euharlee Creek (1)	Hills Creek to upstream Plant Bowen (Bartow Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	4	X	X	3
Holly Creek (1)	Rock Creek to Conasauga River (Murray Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	8	X	X	3
Lavendar Creek (1,29)	Rocky Mountain Project (Floyd Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	8	X	3	3
Little Allatoona Creek (14)	Cobb County	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	3	X	X	3

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Long Swamp Creek (1)	Hwy 53 to Etowah River, near Ball Ground (Pickens/Cherokee Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	8	X	X	3
Mountaintown Creek (1)	Hwy. 282 to Coosawattee River (Gilmer Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3
Oostanaula River (1)	Conasauga/Coosawattee to Oothkalooga Creek (Gordon Co.)	Fishing	FCG	NP	EPD will address nonpoint sources through a watershed protection strategy. Fish Consumption Guidelines for PCBs. PCBs have been banned in the U.S. and levels have been declining.	11	X	X	3
Oostanaula River (1)	Oothkalooga Creek to Hwy 156 (Gordon Co.)	Fishing	FC,FCG	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy. Fish Consumption Guidelines for PCBs. PCBs have been banned in the U.S. and levels have been declining.	5	X	X	3
Oostanaula River (1)	Hwy 156 to Hwy. 140 (Gordon/Floyd Co.)	Fishing	FC,FCG	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy. Fish Consumption Guidelines for PCBs. PCBs have been banned in the U.S. and levels have been declining.	18	X	X	3
Pumpkinvine Creek (1)	Little Pumpkinvine Creek to Etowah River (Paulding/Bartow Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	15	X	X	3
Raccoon Creek (1)	U/S Chattooga River, Berryton (Chattooga Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	3	X	X	3
Raccoon Creek (1)	Pegamore Lake to Etowah River (Paulding/Bartow Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	13	X	X	3
Rocky Creek (17)	Fulton County	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	1	X	X	3
Sharp Mountain Creek (1)	Rock Creek to Etowah River (Cherokee Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	14	X	X	3
Tails Creek (1)	Hwy. 282 to Carters Lake (Gilmer Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	3	X	X	3
Talking Rock Creek (1)	Ga. Hwy. 136 to Pickens/Gilmer County Line (Pickens Co.)	Fishing	FC,FCG	NP	EPD will address nonpoint sources through a watershed protection strategy. Fish Consumption Guidelines due to mercury in fish tissue.	19	X	X	3
Tributary to Oothkalooga Creek (2)	Peters Street to Oothkalooga Creek, Calhoun (Gordon Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	1	X	X	3

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FLINT RIVER BASIN									
Angelica Creek (4)	Unnamed Tributary 1.9 miles U/S US Hwy 19 to Lake Collins (Sumter Co.)	Fishing	Bio	NP	EPD will address through a watershed protection strategy.	2	X	X	3
Avera Creek (4)	Headwaters to Beaver Creek (Crawford Co.)	Fishing	Bio,pH	NP	EPD will address nonpoint sources through a watershed protection strategy.	4	X	X	3
Aycocks Creek (1,10)	Kaney Head Creek to Spring Creek (Miller Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	15	X	3	3
Bailey Branch (4)	Headwaters to Browns Millpond (Sumter Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
Baptist Branch (4)	Downstream Blakely (Early Co.)	Fishing	Bio	UR,M	EPD will address nonpoint source (urban runoff) through a watershed protection strategy. City of Blakely under Order to make overall facility and operational and maintenance improvements.	2	X	X	3
Basin Creek (4)	Upson County	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
Beaver Creek (4)	Headwaters to Spring Creek (Crawford Co.)	Fishing	Bio,DO	NP	EPD will address nonpoint sources through a watershed protection strategy.	11	X	X	2
Beaver Creek (1)	Headwaters to Patsilga Creek, Butler (Taylor Co.)	Fishing	FCG	NP	EPD will address nonpoint sources through a watershed protection strategy. City of Butler LAS completed and discharge eliminated 12/5/98. Fish Consumption Guidelines due to mercury in fish tissue.	6	X	X	3
Bell Creek (1)	Headwaters, d/s Thomaston, to Potato Creek (Upson Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	4	X	X	3
Buck Creek (1)	Fox Branch to Flint River near Oglethorpe (Schley/Macon Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	16	X	3	3
Dry Creek (1)	Headwaters, d/s Blakely, to Spring Creek (Early Co.)	Fishing	DO	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	12	X	X	2
Flat Creek (1)	Lake Peachtree to Line Creek, Peachtree City (Fayette Co.)	Fishing	DO	NP	EPD will address nonpoint sources through a watershed protection strategy.	4	X	X	2
Flint River (1,42)	Hartsfield Airport to Hwy 138 (Clayton Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	8	X	X	3

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Flint River (1,42)	Hwy 138 to N. Hampton Road (Clayton Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	8	X	X	3
Flint River (1,42)	Road S1058/Woolsey Rd. to Horton Creek (Clayton/Fayette/Spalding Co.)	Drinking Water/Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued for Clayton County in 1999. EPD will address nonpoint source (urban runoff) in Fayette and Spalding Counties through a watershed protection strategy.	9	X	X	3
Fowltown Creek (1)	D/S Armena Rd. To Kinchafoonee Creek (Lee Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
Heads Creek (4)	D/S Griffin Reservoir to Wildcat Creek (Spalding Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	2	X	X	3
Kinchafoonee Creek (1)	Ga. Hwy. 45 (Webster Co. Line) to Lake Chehaw/Worth (Terrell/Sumter/Lee/Dougherty Co.)	Fishing	FCG	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy. Fish Consumption Guidelines due to mercury in fish tissue.	40	X	X	3
Lanahassee Creek (1)	W. Fork Lanahassee Creek to Kinchafoonee Creek (Webster Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
Lee Creek (4)	D/S Lake Henry to Beaver Creek (Crawford Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	1	X	X	3
Lewis Creek (4)	Pike County	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	2	X	X	3
Lime Creek (1)	Little Lime Creek to Lake Blackshear (Sumter Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy for the basin.	5	X	X	3
Little Whitewater Creek (aka Big Whitewater Creek) (4)	Black Creek to Whitewater Creek (Taylor Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
Mercer Mill Creek (Mill Creek) (4)	Boy Scout Road to Flint River (Worth Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	7	X	X	3
Middle Creek (4)	Headwaters to Kinchafoonee Creek (Terrell Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	8	X	X	3
Muckaloochee Creek (4)	Little Muckaloochee Creek to Smithville Pond (Sumter Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3

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North Branch (4)	Crawford County	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	4	X	X	3
Patsiliga Creek (4)	Headwaters to McCants Mill Pond (Talbot/Taylor Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	15	X	X	3
Patsiliga Creek (1)	Beaver Cr. to Flint River, Butler (Taylor Co.)	Fishing	FCG,FC	NP	City of Butler completed LAS, discharge eliminated 12/5/98. Fish Consumption Guidelines due to mercury in fish tissue. EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
Pessell Creek (4)	Headwaters to Kinchafoonee Creek (Sumter Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	8	X	X	3
Potato Creek (1,4)	Headwaters to U.S. Hwy. 333 (Spalding/Lamar Counties)	Fishing	Bio	NP,UR	EPD will address through a watershed protection strategy. Griffin Potato Creek WPCP attained compliance with its WET limit 6/01.	11	X	X	3
Rambulette Creek (4)	Headwaters to Whitewater Creek (Taylor Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	9	X	X	3
Red Oak Creek (1)	Little Red Oak Creek to Flint River near Imlac (Meriwether Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	8	X	X	3
Shoal Creek (4)	Little Shoal Creek to Little Creek (Marion Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	3	X	X	3
Spring Creek (1,4)	SR62 near Arlington to Aycocks Creek (Early/Miller Co.)	Fishing	DO,Bio	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	22	X	X	2
Spring Creek (25)	Lake Blackshear (Sumter Co.)	Fishing	Zn*,Pb*	NP	EPD will address nonpoint sources through a watershed protection strategy for the basin.	2	X	X	3
Sullivan Creek (1,34,42)	Clayton County	Fishing	FC,Cu	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	5	X	X	2
Swift Creek (1)	Tobler Creek to Flint River (Upson Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3
Swift Creek (1)	U/S Lake Blackshear (Turner/Crisp Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	7	X	X	3
Town Branch (4)	Thomaston (Upson Co.)	Fishing	Bio	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	4	X	X	3
Tributary to Nash Creek (2)	Fayetteville (Faytette Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3

2000-2001 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
Turkey Creek (1)	Pennahatchee Creek, NW Cordele to Flint River (Dooly Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	3
Ulcohatchee Creek (1)	Headwaters to Auchumpkee Creek (Crawford Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	16	X	X	3
White Oak Creek (1)	Chandlers Creek to Bear Creek (Coweta/Meriwether Co.)	Fishing	DO	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	14	X	X	2
Whitewater Creek (4)	Upstream Lees Lake (Fayette Co.)	Fishing	Bio	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	6	X	X	3
Whitewater Creek (4)	Headwaters to Little Whitewater Creek (Taylor Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	9	X	X	3
Willingham Spring Creek (4)	Upson County	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	3	X	X	3
Wolf Creek (4)	Headwaters to Ichawaynochaway Creek (Terrell Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	9	X	X	3
OCHLOCKONEE RIVER BASIN									
Attapulgus Creek (1)	Callahan Br. to Little Attapulgus Cr. (Decatur Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	8	X	3	3
Barnetts Creek (1)	West Branch to Ochlockonee River, W. of Thomasville (Thomas/Grady Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	8	X	3	2
E. Br. Barnetts Creek (1)	Horse Cr. to Barnetts Cr. near Ochlocknee (Thomas Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	2
Little Tired Creek (1,2,3)	SR188 downstream Cairo to Tired Cr. (Grady Co.)	Fishing	DO,FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	6	X	3	2
Ochlockonee River (1)	Oquina Creek to Stateline (Thomas/Grady Co.)	Fishing	FCG	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Fish Consumption Guidelines due to mercury in fish tissue.	33	X	3	3
Olive Creek (2)	Headwaters to upstream U.S. Hwy. 19, Thomasville (Thomas Co.)	Fishing	DO,FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	2

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BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	EVALUATED CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
Tired Creek (1)	Turkey Cr. to Ochlockonee River (Grady Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	6	X	3	3
OCMULGEE RIVER BASIN									
Beaver Ruin Creek (2,18)	Gwinnett County	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999.	8	X	3	3
Big Grocery Creek (4)	Headwaters to Ocmulgee River (Houston Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	4	X	X	3
Big Haynes Creek (18)	Headwaters to Brushy Creek (Gwinnett Co.)	Fishing/Drinking Water	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999.	9	X	3	3
Big Haynes Creek (1,23)	Brushy Creek to Little Panther Creek (Rockdale Co.)	Drinking Water	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
Big Haynes Creek (23)	Little Haynes Creek to Yellow River (Rockdale Co.)	Drinking Water	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	3
Big Horse Creek (1,4)	Alligator Creek to Ocmulgee River (Telfair Co.)	Fishing	DO,Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. EPD will address nonpoint sources through a watershed protection strategy.	15	X	3,X	2
Big Indian Creek (4)	Mossy Creek to Ocmulgee River (Houston Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	7	X	3	3
Big Sandy Creek (4)	Upstream Indian Springs (Butts Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	8	X	3	3
Bluff Creek (4)	Ten Mile Creek to Ocmulgee River (Pulaski Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	4	X	X	3
Boar Tusk Creek (2)	Headwaters to Yellow River (Rockdale Co.)	Fishing	pH	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	3

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BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	EVALUATED CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
Bromolow Creek (1,18)	Headwaters to Beaver Ruin Creek (Gwinnett Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999.	5	X	3	3
Brown Branch (4)	Headwaters (Locust Grove) to Wolf Creek (Henry Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	3
Brushy Fork Creek (1,18)	Lake Carlton to Big Haynes Creek (Gwinnett Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	3
Butlers Creek (4)	Tributary to Ocmulgee River (Jones Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	3
Calaparchee Creek (4)	Upstream Lake Wildwood (Monroe/Bibb Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	13	X	3	3
Cedar Creek (18)	Headwaters to Alcovy River (Gwinnett Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999.	4	X	3	3
Cedar Creek (4)	Headwaters to Brushy Creek (Wilcox Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	7	X	X	3
Cole Creek (4)	Tributary to Tobesofkee Creek (Lamar/Monroe Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	6	X	3	3
Crooked Creek (4)	Cypress Lake to Ocmulgee River (Dodge Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	4	X	X	3
Deep Creek (4)	Headwaters to Echeconnee Creek (Crawford Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	7	X	X	3
Doless Creek (1)	Headwaters to Dolittle Creek (DeKalb Co.)	Fishing	DO,FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999.	2	X	3	2
Eightmile Creek (4)	Tributary to Towaliga River (Monroe Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	3
Flat Creek (4)	~0.4 mi u/s of US Hwy 41 to Big Indian Creek (Houston Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3

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Folsom Creek (4)	~0.2 mi d/s CR 33 to Ocmulgee River (Wilcox Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	9	X	X	3
Gladesville Creek (4)	Headwaters to Little Falling Creek (Jasper Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	3
Gum Swamp Creek (4)	Reedy Creek to Ga. Hwy. 257 (Bleckley/Dodge Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	12	X	X	3
Hansford Branch (4)	Monroe County	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
Harmon Pye Branch (4)	Tributary to Wise Creek (Jasper Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Hartley Branch (4)	Tributary to Deep Creek (Crawford Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Herds Creek (4)	D/S Ga. Hwy. 212 to Ocmulgee River (Jasper Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	6	X	3	3
Horse Creek (4)	Headwaters to Alligator Creek (Dodge/Telfair Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	17	X	X	3
House Creek (4)	Headwaters to Haw Pond Creek (Wilcox Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	7	X	X	3
Jackson Creek (1,18)	Gwinnett County	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999.	7	X	3	3
Limestone Creek (4)	Okeetuck Creek to Big Indian Creek (Houston Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	3	X	X	3
Limestone Creek (1)	Headwaters to Ocmulgee River (Pulaski Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	7	X	3	2
Little Chehaw Creek (4)	Headwaters to Chehaw Creek (Jones Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	3

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BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	EVALUATED CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
Little Deer Creek (4)	Headwaters to Deer Creek (Monroe Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	6	X	3	3
Little Deer Creek Tributary (4)	Headwaters to Little Deer Creek (Monroe Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Little Ocmulgee River (1)	Wilcox Creek to Alligator Creek (Wheeler Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	12	X	3	2
Long Branch (4)	Tributary to Ocmulgee River (Jasper Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	3
Malholms Creek (4)	Headwaters (Jenkinsburg) to Tussahaw Creek (Butts Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	6	X	3	3
Mill Dam Creek (4)	Monroe County	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	3
Mossy Creek (4)	Mule Creek to Lake Joy (Peach/Houston Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	8	X	X	3
No Business Creek (1,18)	Headwaters to Norris Lake (Gwinnett Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999.	6	X	3	3
North Branch South River (2)	Atlanta (Fulton Co.)	Fishing	FC	UR,CSO	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999. Atlanta's Federal CSO Consent Order, effective 9/98, requires compliance with water quality standards by 2/1/07.	3	X	3	3
Ocmulgee River (1)	Walnut Creek to Tobesofkee Creek (Bibb Co.)	Fishing	FCG	UR	Urban runoff in Macon/Bibb County is being addressed in the EPD Stormwater Management Strategy. An areawide stormwater permit was reissued 4/14/00. Fish Consumption Guidelines due to PCBs in Flathead Catfish. PCBs have been banned in the U.S. and levels have been declining.	11	X	X	3

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BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	EVALUATED CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
Ocmulgee River (1)	Tobesofkee Creek to Echeconnee Creek (Bibb/Twiggs Co.)	Fishing	FC,FCG	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued 4/14/00. Fish Consumption Guidelines due to PCBs in Flathead Catfish. PCBs have been banned in the U.S. and levels have been declining.	7	X	3,X	3
Ocmulgee River (1)	Echeconnee Creek to Sandy Run Creek (Twiggs/Houston Co.)	Fishing	FCG	UR	Urban runoff in Macon/Bibb County is being addressed in the EPD Stormwater Management Strategy. An areawide stormwater permit was reissued 4/14/00. Fish Consumption Guidelines due to PCBs in Flathead Catfish. PCBs have been banned in the U.S. and levels have been declining.	10	X	X	3
Ocmulgee River (1)	Sandy Run Creek to Big Indian Creek (Houston/Twiggs/Bleckley Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	23	X	3	3
Ocmulgee River (1,2)	Cedar Creek to House Creek (Wilcox/Dodge/Telfair Co.)	Fishing	Hg	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	36	X	3	2
Otter Creek (4)	~1.7 mi u/s GA 182 (Old River Road) to Ocmulgee River (Ben Hill Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	4	X	X	3
Pew Creek (1,18)	Gwinnett County	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999.	4	X	3	3
Phinazee Creek (4)	Lamar/Monroe Counties	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	6	X	3	3
Red Creek (4)	Tributary to Rocky Creek (Monroe Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	3
Rock Creek (4)	Upstream Lite-N-Tie Rd. (Jones Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Rocky Creek (4)	Jasper County	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	3

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BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	EVALUATED CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
Rocky Creek (4)	Upstream Big Sandy Creek (Monroe/Butts Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	6	X	3	3
Rocky Creek (4)	D/S English Rd. (CR152) to Towaliga River (Monroe Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	3
Rocky Creek (4)	Upstream Lake Wildwood (Monroe/Bibb Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	7	X	3	3
Rocky Creek (1)	1 mi. u/s Rocky Creek Road toTobesofkee Creek, Macon (Bibb Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued 4/14/00.	5	X	3	3
Rum Creek (4)	Rum and Town Creeks, Upstream Lake Juliette (Monroe Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	6	X	3	3
Sand Branch (4)	Tributary to Towaliga River (Monroe Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
Scoggins Creek (4)	Tributary to Ocmulgee River (Jones Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
South River (1,23)	Hwy 20 to Snapping Shoals Creek (Henry/Newton Co.)	Fishing	FC,FCG	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Fish Consumption Guidelines due to PCBs in fish tissue. PCBs have been banned in the U.S. and levels have been declining.	11	X	3	3
South River (1,23)	Snapping Shoals to Jackson Lake (Newton Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	7	X	3	3
Sturgeon Creek (4)	Dickson Mill Creek to Ocmulgee River (Ben Hill Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
Ten Mile Creek (4)	~0.7 mi u/s GA Hwy 257 to Bluff Creek (Pulaski Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	7	X	X	3
Third Branch (4)	Tributary to Ocmulgee River (Jones Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	3

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BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	EVALUATED CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
Tobesofkee Creek (4)	Barnesville to Cole Creek (Lamar/Monroe Co.)	Fishing	Bio	NP	William Carter Co. closed and eliminated all discharges on 6/29/01. Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	8	X	3	3
Tobesofkee Creek (1,4)	Lake Tobesofkee to Rocky Creek (Bibb Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued 4/14/00.	10	X	3	3
Tobler Creek (4)	Tributary to Ocmulgee River (Monroe Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	6	X	3	3
Tributary to Tobesofkee Creek (1,3,4)	Barnesville (Lamar Co.)	Fishing	Bio	I1	William Carter Co. closed and eliminated all discharges on 6/29/01. Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
Walnut Creek (4)	Downstream Hwy 42 (Crawford Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	3
White Creek (4)	Lamar/Monroe Counties	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	3
Wood Creek (4)	Headwaters to d/s Ga. Hwy. 83 (Lamar/Monroe Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	3
Yellow River (1,23)	Hammock Creek to Big Haynes Creek (Rockdale Co.)	Drinking Water	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	3
OCONEE RIVER BASIN									
Allen Creek (1,20)	Monroe Drive to 1 mi. d/s Ga. Hwy. 11, Gainesville (Hall/Jackson Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	3
Alligator Creek (4)	Headwaters to Ugly Creek (Twiggs Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	6	X	3	3
Apalachee River (18)	Headwaters to Apalachee Road (Gwinnett Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	6	X	X	3

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BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	EVALUATED CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
Apalachee River (1)	Marburg Creek to Lake Oconee (Oconee/Morgan/Greene Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	35	X	3	3
Big Cedar Creek (1)	Hog Creek to Lake Sinclair (Jones/Putnam/Baldwin Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	11	X	3	3
Big Indian Creek (1)	I-20 to Little Indian Creek (Morgan Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	11	X	3	3
Bottoms Branch (20)	Tributary 5 to North Walnut Creek, Gainesville (Hall Co.)	Fishing	DO	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	2
Carr Creek (1)	Headwaters to North Oconee River, Athens (Clarke Co.)	Fishing	Bio,pH,FC	I1,UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
Cedar Creek (4)	Headwaters to Maiden Creek (Wilkinson Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	11	X	X	3
Crooked Creek (4)	Putnam County	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	3
Crooked Creek (4)	Headwaters to Commissioner Creek (Jones Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3
Crooked Creek (4)	Headwaters to Turkey Creek (Laurens Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	3	X	X	3
Cypress Creek (4)	Little Cypress Creek to Oconee River (Montgomery Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	4	X	X	3
East Fork Trail Creek (1)	Headwaters to West Fork Trail Creek, Athens (Clarke Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	3
E. T. Creek (1,20)	Headwaters to North Walnut Creek, Gainesville (Hall Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Hunnicutt Creek (aka Mitchell Bridge Branch) (1)	Headwaters to Middle Oconee River, Athens (Clarke Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3

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BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	EVALUATED CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
Keg Creek (4)	Little Keg Creek to Buffalo Creek (Washington Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	8	X	X	3
Lamars Creek (4)	Headwaters to Buffalo Creek (Washington Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	8	X	X	3
Limestone Creek (4)	Kaolin Road to Keg Creek (Washington Co.)	Fishing	Bio	I1,I2,NP	Various point source discharges in the area including some kaolin mining operations may be contributing to the degradation in the creek. Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	8	X	3	3
Limestone Creek (4)	Mount Vernon to Oconee River (Montgomery Co.)	Fishing	Bio	NP	Mount Vernon WPCP is in compliance with its NPDES permit. EPD will address nonpoint sources through a watershed protection strategy.	2	X	X	3
Little Commissioner Creek (1,4)	Ga. Hwy. 18 to Commissioner Creek (Wilkinson Co.)	Fishing	Bio,FC,pH	I1,I2,NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. EPD will address nonpoint sources through a watershed protection strategy.	9	X	3,3,X	3
Little Fishing Creek (4)	Baldwin County	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	3
Little River (1,10)	Glady Creek to Lake Sinclair (Putnam Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	8	X	3	3
Lotts Creek (4)	Headwaters to Oconee River (Wheeler Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3
Middle Oconee River (1,2,10)	Big Bear Creek to McNutt Creek (Clarke Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	12	X	3	3
Mulberry River (1)	Little Mulberry River to Middle Oconee River (Barrow Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	18	X	3	3
North Oconee River (1)	Jackson County to Sandy Creek (Clarke Co.)	Fishing/Drinking Water	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	3
North Oconee River (1)	Trail Creek to Oconee River (Clarke Co.)	Fishing	FC	UR,M	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Athens No. WPCP in compliance with permit limits.	8	X	3	3

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BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	EVALUATED CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
North Walnut Creek (20)	Gainesville (Upstream Hall County Camp)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
North Walnut Creek (20)	Gainesville (Downstream Hall County Camp)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Ochwalkee Creek (aka Okeewalkee Creek) (4)	Mayberry Road to u/s Little New York Road (Laurens Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3
Oconee River (1,28)	Barnett Shoals to Lake Oconee (Oconee/Greene Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	16	X	3	3
Peterson Creek (4)	Headwaters to Oconee River (Wheeler Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	8	X	X	3
Red Bluff Creek (4)	Little Red Bluff Creek to Oconee River (Treutlen Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	3	X	X	3
Reedy Creek (4)	Headwaters to Turkey Creek (Laurens Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	7	X	X	3
Rocky Creek (4)	Bay Branch to Buckhorn Branch (Laurens Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
Sandy Creek (4)	Headwaters to Harrison's Lake/Little Sandy Creek (Jones/Twiggs Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	6	X	3	3
Sandy Run Creek (4)	Hancock County	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	3
Tiger Creek (4)	Headwaters to Buffalo Creek (Hancock/Washington Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3
Tobler Creek (4)	Baldwin County	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	8	X	3	3
Town Creek (1,4)	Peavy Branch to Oconee River (Hancock/ Baldwin Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	16	X	3	3

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BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	EVALUATED CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
Tributary 2 to Allen Creek (1,20)	Gainesville-Downstream Old Landfill (Hall Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Tributary 5 to Allen Creek (1,20)	Gainesville (Hall Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Tributary to North Walnut Creek (20)	Gainesville (Hall Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Turkey Creek (1)	Rocky Creek to Oconee River (Laurens Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	11	X	3	3
Walnut Creek (1)	Caney Fork to Middle Oconee River (Hall/Jackson Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	14	X	3	3
Wheeler Creek (18)	Headwaters to Duncan Creek (Gwinnett/Barrow Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3
Zoie Brown Creek (4)	Tributary to Buffalo Creek (Hancock Co.)	Fishing	Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	3
OGEECHEE RIVER BASIN									
Black Creek (1)	Ash Branch to Mill Creek near Blitchton (Bulloch/Bryan Co.)	Fishing	DO,FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	11	X	X	2
Bull Creek (1)	Strickland Pond to Canoochee River near Daisy (Evans Co.)	Fishing	DO	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	6	X	X	2
Canoochee Creek (1)	Taylors Creek to Canoochee River, Fort Stewart (Liberty Co.)	Fishing	DO	M	The Hinesville/Ft. Stewart WPCP will have its permit reissued based on the completed TMDL.	4	X	X	2
Canoochee River (1)	Ga. Hwy. 192 to Fifteen Mile Creek near Metter (Emanuel/Candler Co.)	Fishing	DO,FC,FCG	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy. Fish Consumption Guidelines due to mercury in fish tissue.	21	X	X	2
Canoochee River (1)	Fifteen Mile Creek to Cedar Cr. (Candler/Evans Co.)	Fishing	FCG	NP	EPD will address nonpoint sources through a watershed protection strategy. Fish Consumption Guidelines due to mercury in fish tissue.	14	X	X	3
Canoochee River (1,10)	Cedar Creek to Lotts Creek (Evans Co.)	Fishing	FCG	NP	EPD will address nonpoint sources through a watershed protection strategy. Fish Consumption Guidelines due to mercury in fish tissue.	13	X	X	3

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BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	EVALUATED CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
Canoochee River (1)	Lotts Cr. to confluence with Ogeechee River (Liberty/Bryan Co.)	Fishing	FCG	NP	EPD will address nonpoint sources through a watershed protection strategy. Fish Consumption Guidelines due to mercury in fish tissue.	56	X	X	3
Dry Branch (4)	GA Hwy 24 to Rocky Creek (Burke Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3
Eightmile Creek (4)	Headwaters to Buckhead Creek (Burke Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
Jackson Branch (1)	Upstream King Finishing Company from SR17 to Co. Rd. 39, Dover (Screven Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
Little Ogeechee River (1)	Two Mile Creek to Hamburg Mill Pond near Culverton (Hancock/Washington Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	9	X	X	3
Lotts Creek (1)	U.S. Hwy. 301 to Little Lotts Creek near Register (Bulloch Co.)	Fishing	DO	NP	EPD will address nonpoint sources through a watershed protection strategy.	8	X	X	2
Ogeechee Creek (1)	Rd. S2178 to Ogeechee River near Oliver (Screven Co.)	Fishing	DO	NP	EPD will address nonpoint sources through a watershed protection strategy.	7	X	X	2
Ogeechee River (1)	Powell Creek to Beaverdam Creek near Powelton (Hancock Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3
Ogeechee River (1)	Hwy. 102 to U.S.Hwy 301 (Washington/Glascock/Jefferson/ Jenkins/Emanuel/Burke/Bulloch Co.)	Fishing	FCG	NP	EPD will address nonpoint sources through a watershed protection strategy. Fish Consumption Guidelines due to mercury in fish tissue.	98	X	X	3
Ogeechee River (1)	U.S. Hwy. 301 to Black Creek (Bulloch/Bryan Co.)	Fishing	FCG	NP	EPD will address nonpoint sources through a watershed protection strategy. Fish Consumption Guidelines due to mercury in fish tissue.	59	X	X	3
Ogeechee River (1)	Black Creek to Richmond Hill (Bryan/Effingham/Chatham Co.)	Fishing	FCG	NP	EPD will address nonpoint sources through a watershed protection strategy. Fish Consumption Guidelines due to mercury in fish tissue.	21	X	X	3
Peacock Creek (1)	Hwy. 144 to North Newport River near McIntosh (Liberty Co.)	Fishing	DO,FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	17	X	X	2
Rocky Comfort Creek (1)	Joes Creek to Ivey Branch near Edgehill (Glascock/Jefferson Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	10	X	X	3

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BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	EVALUATED CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
Taylors Creek (1)	Downstream WPCP Discharge to Drainage Canal, Fort Stewart	Fishing	DO	M	The Hinesville/Ft. Stewart WPCP will have its permit reissued based on the completed TMDL. Impairment will also be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	2
SATILLA RIVER BASIN									
Buffalo Creek (1)	Little Buffalo Cr. to Satilla River (Brantley Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	6	X	3	2
Hog Creek (1)	Downstream CR185 to Hurricane Cr. near Nicholls (Coffee Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	10	X	3	3
Little Satilla River (1,10)	Big Satilla Cr. to Sixty Foot Branch (Pierce/Wayne/Brantley Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	10	X	3,3	2
Satilla River (1)	Pudding Cr. to Smut Br. near Pearson (Atkinson Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	8	X	3	2
Satilla River (1)	U.S. Highway 84/Ga. Hwy. 38 to 6 miles downstream Hwy 15/121 (Ware/Pierce/Brantley Co.)	Fishing	FCG	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Fish Consumption Guidelines due to mercury in fish tissue.	23	X	3	3
Satilla River (1,9)	Six miles d/s of Ga. Hwy. 15 to Bullhead Bluff (Pierce/Brantley/Camden Co.)	Fishing	FCG	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Fish Consumption Guidelines due to mercury in fish tissue.	76	X	3	3
Satilla River (1)	Rose Cr. to White Oak Cr. (Camden Co.)	Fishing	DO	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	19	X	3	2
Seventeen Mile River (1)	Twentynine Mile Cr. to Satilla River (Coffee Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	13	X	4,3	2
SAVANNAH RIVER BASIN									
Beaverdam Creek (1)	Downstream Commerce (Jackson Co.)	Fishing	DO	M	TMDL approved 3/00 for DO. Permit for Commerce Northside WPCP was modified based on the TMDL on 8/23/00. Permit contains compliance schedule to meet limits by 7/15/02.	1	X	3	2

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BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	EVALUATED CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
Brier Creek (1,9)	Hwy 305 to Savannah River (Burke/Screven Co)	Fishing	FCG	NP	EPD will address nonpoint sources through a watershed protection strategy. Fish Consumption Guidelines due to mercury in fish tissue.	45	X	X	3
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
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
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
Headstall Creek (4)	U/S Tudor Road to Brier Creek (McDuffie Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
Jones Creek (2)	Tributary to Savannah River near Evans (Columbia Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	3
Little River (1)	Rocky Creek to Clarks Hill Lake (Wilkes Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	8	X	3	3
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
Reed Creek (2)	Bowen Pond to Savannah River (Columbia Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	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
Rocky Creek (1,2,9)	Washington to Little River (Wilkes Co.)	Fishing	Bio	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	12	X	X	3
Savannah River (1,11,31)	Lake Hartwell to Lake Russell (Hart/Elbert Co.)	Recreation	DO	Dam Release	EPD will continue to work with the Corps of Engineers to assess and implement feasible actions to address TMDL.	8	X	3	2
Savannah River (1,9,11,30)	Clarks Hill Lake to Stevens Creek Dam (Columbia Co.)	Drinking Water	DO	Dam Release	EPD will continue to work with the Corps of Engineers to assess and implement feasible actions to address TMDL.	9	X	3	2
Savannah River (1,9,30)	Stevens Creek Dam to US Hwy 78/278 (Columbia/Richmond Co.)	Drinking Water	DO,FC	Dam Release,UR	EPD will continue to work with the Corps of Engineers to assess and implement feasible actions to address TMDL. EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	9	X	3,X	2

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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 4/14/00.	7	X	X	3
Toccoa Creek (1)	Little Toccoa Creek to Lake Hartwell (Stephens Co.)	Fishing	FC	M,UR	City of Toccoa has been under an order to make sewage collection system improvements. 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
Whites Creek (1)	Downstream Thomson WPCP (McDuffie Co.)	Fishing	Tox	M	Thomson under Order to meet whole effluent toxicity limits. Paying stipulated penalities for not meeting permit requirements.	2	X	3	1
ST. MARYS RIVER BASIN									
N. Prong St. Marys River (1)	Headwaters to Cedar Cr. (Charlton Co.)	Fishing	FCG,DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Fish Consumption Guidelines due to mercury in fish tissue.	19	X	3,3	2
N. Prong St. Marys River (1)	Cedar Cr. to S. Prong St. Marys River (Charlton Co.)	Fishing	FCG	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Fish Consumption Guidelines due to mercury in fish tissue.	9	X	3	3
Spanish Creek (1)	Long Branch to St. Marys River (Charlton Co.)	Fishing	DO,FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3,3	2
St. Marys River (1,9)	Confluence of North & South Prong of St. Marys River to St. Marys Cut (Charlton/Camden Co.)	Fishing	FCG	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Fish Consumption Guidelines due to mercury in fish tissue.	55	X	3	3
St. Marys River (1)	Upstream Cabbage Bend to Catfish Cr. (Camden Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	15	X	3	2
SUWANNEE RIVER BASIN									

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BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	EVALUATED CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
Alapaha River (1)	Sand Creek to U.S. Hwy. 129/Ga. Hwy. 11 (Irwin/Tift/Berrien Co.)	Fishing	DO,FCG	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Fish Consumption Guidelines due to mercury in fish tissue.	16	X	3,3	2
Alapaha River (1,9)	U.S. Hwy. 129/Ga. Hwy. 11 to Stateline (Berrien/Atkinson/Lanier/Lowndes/ Echols Co.)	Fishing	FCG	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Fish Consumption Guidelines due to mercury in fish tissue.	102	X	3	3
Bear Creek (1)	City of Adel Lake to Withlacoochee River (Cook Co.)	Fishing	DO,FC	M	WPCP is a LAS with a hydrograph controlled release. Engineers are working on replacement sprinklers due to high water table in the LAS area including Bear Creek. Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3,3	2
Big Creek (1)	SR107 to Alapaha River near Irwinville (Irwin Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	2
Cow Creek (1)	Headwaters to Alapaha River (Clinch/Lanier/Echols Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	14	X	3	2
Deep Creek (1)	W. Fork Deep Cr. to Lake Cr., E. of Ashburn (Turner Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	2
Franks Creek (1,2)	St. Rt. S1780 to Little River near Hahira (Lowndes Co.)	Fishing	DO,FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3,3	2
Giddens Mills Creek (1,3)	U/S U.S. Hwy. 41/SR 7 to Bear Cr., Adel (Cook Co.)	Fishing	DO	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	2
Hardy Mill Creek (1)	U.S. Hwy. 319, S. of Tifton to Withlacoochee River (Tift/Berrien Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	17	X	3	2
Horse Creek (1)	Headwaters near Sylvester to Warrior Cr. (Worth Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	13	X	3	2
Little Brushy Creek (1)	Stump Cr. to Reedy Cr. S. of Ocilla (Irwin Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3,3	2

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BASIN/STREAM (Data Source)	LOCATION	WATER USE CLASSIFICATION	CRITERION VIOLATED	EVALUATED CAUSE(S)	ACTIONS TO ALLEVIATE	MILES	305(b)	303(d)	Priority
Little River (10)	Ashburn Branch, W. of Sycamore to Warrior Cr. (Turner/Tift/Colquitt Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	41	X	3	2
Morrison Creek (1,3)	Adel	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	2
Negro Branch (1)	Headwaters to Piscola Cr., Quitman (Brooks Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	2
New River (1)	Reedy Cr. to Gum Branch near Lenox (Cook Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	7	X	3,3	2
New River (1)	Brushy Cr. to Withlacoochee River, E. of Sparks (Berrien/Cook Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	2
Okapilco Creek (1)	Upstream SR S1540 to U.S. Hwy. 319, Moultrie (Colquitt Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	10	X	3	2
Okapilco Creek (1)	SR 37 to Hog Cr., S. of Moultrie (Colquitt Co.)	Fishing	DO	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	10	X	3	2
Okapilco Creek (1)	SR 76, Quitman to Withlacoochee River (Brooks Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. EPD will address nonpoint sources through a watershed protection strategy.	5	X	3,X	2
Reedy Creek (1)	Little Creek (upstream U.S. Hwy. 319/SR 35) to Little Brushy Cr., S. of Ocilla (Irwin Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	10	X	3	2
Sand Creek (1)	Headwaters E. of Sycamore to Alapaha River (Turner/Irwin Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	14	X	3,3	2
Southside Branch (2)	Tributary to New River, Tifton (Tift Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Suwannee Canal (1)	Okefenokee Swamp (Charlton/Ware Co.)	Fishing	FCG	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Fish Consumption Guidelines due to mercury in fish tissue.	27	X	3	3

2000-2001 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
Suwannee River (1,9)	Mainstem-Suwannee Canal to Stateline (Charlton/Ware/Clinch/Echols Co.)	Fishing	FCG	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Fish Consumption Guidelines due to mercury in fish tissue.	40	X	3	3
Town Creek (10	Headwaters to Warrior Cr. near Sylvester (Worth Co.)	Fishing	DO	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	2
Tributary to Withlacoochee River (1)	Upstream Morris Pond, Nashville (Berrien Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	2
Ty Ty Creek (1)	Little Cr. near Ty Ty to Tucker Cr. near Omega (Worth/Tift Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	10	X	3,3	2
Warrior Creek (1)	Horse Cr. to Rock Cr. near Norman Park (Worth/Colquitt Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	10	X	3	2
Willacoochee River (1)	Turkey Branch, upstream SR90/U.S. Hwy. 319 N. of Ocilla to SR 90, S.E. of Ocilla (Irwin Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	13	X	3	2
Willacoochee River (1)	SR 158 to Alapaha River (Berrien Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	11	X	3	2
Withlacoochee River (1,9)	New River to Bay Branch (Cook/Berrien/Lowndes Co.)	Fishing	FCG	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Fish Consumption Guidelines due to mercury in fish tissue.	23	X	3	3
Withlacoochee River (1,9)	Bay Branch to Little River (Lowndes Co.)	Fishing	FC,FCG	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Fish Consumption Guidelines due mercury in fish tissue.	9	X	3	3
Withlacoochee River (1,9)	Little River to Stateline (Lowndes/Brooks Co.)	Fishing	FCG	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Fish Consumption Guidelines due to mercury in fish tissue.	33	X	3	3
TALLAPOOSA RIVER BASIN									
Little Tallapoosa River (1)	Buffalo Creek to Stateline (Carroll Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	14	X	X	3

2000-2001 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
Tallapoosa River (1)	Hwy. 100 to Stateline (Haralson Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	10	X	X	3
Tallapoosa River (1)	Water Mill Creek to Beach Creek (Haralson Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	21	X	X	3
TENNESSEE RIVER BASIN									
Bearmeat Creek (13)	Tributary to Hiawassee River (Towns Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	2	X	X	3
Brasstown Creek (1,13)	Little Bald Cove to Stateline (Union/Towns Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	11	X	3	3
Butternut Creek (13)	Blairsville (Union Co.)	Fishing	Bio,FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	2	X	X	3
Chattanooga Creek (1,13)	High Point to Flintstone (Walker Co.)	Fishing	Bio,FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	7	X	X	3
Chattanooga Creek (1)	Flintstone to Stateline (Walker Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	4	X	X	3
Corn Creek (1)	Tributary to Brasstown Creek, Young Harris (Towns Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
Dry Creek (1,13)	Upstream East Chickamauga Creek (Catoosa Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3
East Chickamauga Creek (1)	Tanyard Creek to Dry Creek (Catoosa Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	3	X	X	3
Fightingtown Creek (1)	CR 159 to Stateline (Fannin Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	7	X	X	3
Hemptown Creek (1)	Mitchell Branch to Young Stone Creek (Fannin Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	10	X	X	3
Little Tennessee River (1)	Dillard to Stateline (Rabun Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	3	X	X	3
Lookout Creek (1)	Trenton to Stateline (Dade Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	14	X	X	3

2000-2001 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
Lower Youngcane Creek (13)	Union County	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	2	X	X	3
Mill Creek (1)	Towns County	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
Nottely River (1,13)	Downstream Lake Nottely (Union Co.)	Recreation	DO	Dam Release	EPD will continue to work with TVA to assess and implement feasible actions to address TMDL.	2	X	3	2
Nottely River (1)	Right/Left Forks to US Hwy 19 (Union Co.)	Recreation	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
Peavine Creek (1,13)	Upstream South Chickamauga Creek (Catoosa Co.)	Fishing	Bio,FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	8	X	X	3
Rock Creek (1,13)	Tributary to Chattooga Creek (Dade/Walker Co.)	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	14	X	X	3
Tiger Creek (1)	Catoosa/Whitfield Counties	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	11	X	X	3
Toccoa River (1,13)	Downstream Lake Blue Ridge (Fannin Co.)	Recreation	DO,FC	Dam Release,NP	EPD will continue to work with TVA to assess and implement feasible actions to address TMDL. EPD will address nonpoint sources through a watershed protection strategy.	7	X	3,X	2
Weaver Creek (13)	Fannin County	Fishing	Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	2	X	X	3
Yewell Branch (1)	Darr Cove to Brasstown Creek (Town Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
Youngcane Creek (1)	Little Youngcane Creek to Nottely Lake (Union Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	4	X	X	3

*Indicates minimal data set.

2000-2001 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
ALTAMAHA RIVER BASIN									
Alex Creek (1)	Mason Cowpen Branch to Altamaha River (Wayne Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	2
Beards Creek (1)	Spring Branch to Altamaha River (Tattnall Co.)	Fishing	FC	M	Glennville WPCP currently upgrading to a constructed wetlands system due to be complete by 5/02.	11	X	2	1
Big Cedar Creek (1)	Little Cedar Creek to Ohoopee River (Johnson Co.)	Fishing	DO,FC	M,NP	Wrightsville Pond WPCP will be addressed through EPD's Basin Planning Permitting Strategy. Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	2
Cobb Creek (1)	Oconee Creek to Altamaha River (Toombs Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	13	X	3	2
Doctors Creek (1)	U/S Jones Creek (Long Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	2
Jacks Creek (1,4)	U.S. Hwy. 1 to Ohoopee River (Emanuel Co.)	Fishing	DO,FC,Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. EPD will address nonpoint sources through a watershed protection strategy.	9	X	3,3,X	2
Jones Creek (1)	Still Creek to Doctors Creek (Long Co.)	Fishing	DO	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	11	X	3	2
Little Ohoopee River (1)	Gully Branch to Neeley Creek (Washington Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	14	X	3	2
Little Ohoopee River (1)	Neeley Creek to Sardis Creek (Johnson Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	15	X	3	2
Milligan Creek (1)	Uvalda to Altamaha River (Montgomery/Toombs Co.)	Fishing	FC,DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	11	X	3	2

2000-2001 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
Oconee Creek (1)	Headwaters to Cobb Creek (Montgomery/Toombs Co.)	Fishing	FC,DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	11	X	3	2
Ohoopee River (1)	Dyers Creek to Big Cedar Creek (Washington/Johnson Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	15	X	3	3
Penholoway Creek (1,10)	Little Creek to Altamaha River (Wayne Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	13	X	3	2
Rocky Creek (1)	Ga. Hwy. 130 to Little Rocky Creek (Toombs Co.)	Fishing	FC,DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	10	X	3	2
Rocky Creek (1)	Little Rocky Creek to Ohoopee River (Toombs/Tattnall Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	11	X	3	2
Swift Creek (1)	Old Normantown Rd. To Pendleton Creek (Toombs Co.)	Fishing	FC,DO	M,UR	Lyons North WPCP in compliance with NPDES permit requirements. Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	2
Ten Mile Creek (1)	Little Ten Mile Creek to Altamaha River (Appling Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	13	X	3	2
Tiger Creek (1)	Little Creek to Pendleton Creek (Montgomery/Toombs Co.)	Fishing	FC,DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	16	X	3	2
Yam Grandy Creek (1)	D/S Crooked Creek (Emanuel Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	2
CHATTAHOOCHEE RIVER BASIN									
Arrow Creek (1,15)	Atlanta (Fulton Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	3	X	X	3
Ball Mill Creek (1,15)	Fulton/DeKalb Counties	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	3	X	X	3

2000-2001 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
Big Creek (1)	Hwy 400 to Chattahoochee River (Fulton Co.)	Fishing/Drinking Water	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	5	X	X	3
Bishop Creek (2,14)	Cobb County	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	2	X	X	3
Bubbling Creek (2,15)	DeKalb County	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	2	X	X	3
Bull Creek (1,38)	Columbus (Muscogee Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy. An areawide stormwater permit was issued on 4/14/00.	11	X	X	3
Burnt Fork Creek (2,15)	DeKalb County	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	6	X	X	3
Buttermilk Creek (14)	Cobb County	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	4	X	X	3
Chattahoochee River (1)	SR255 to Soquee River (White/Habersham Co.)	Recreation	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	11	X	3	3
Chattahoochee River (1,2,9,28)	Peachtree Creek to Utoy Creek (Fulton/Cobb Co.)	Fishing	Temp,FC,FCG	I1,UR,CSO	EPD working with Georgia Power to assess and implement appropriate action with respect to the temperature issue. Cobb County South Cobb WPCP passed toxicity testing requirements. Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999. Atlanta's Federal CSO Consent Decree, effective 9/98, requires compliance with water quality standards by 2/1/07. Fish Consumption Guidelines due to PCBs and is a partial support. PCBs have been banned in the U.S. and the levels have been declining.	9	X	X	2

2000-2001 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
Chattahoochee River (1,9)	Utoy Creek to Pea Creek (Fulton/Douglas Co.)	Fishing	FC,FCG	UR,CSO	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999. EPD will address nonpoint source (urban runoff) in Douglas County through a watershed protection strategy. Atlanta's Federal CSO Consent Decree, effective 9/98, requires compliance with water quality standards by 2/1/07. Fish Consumption Guidelines due to PCBs and is a partial support. PCBs have been banned in the U.S. and levels have been declining.	14	X	X	3
Chattahoochee River (1)	Pea Creek to Wahoo Creek (Fulton/Douglas/Coweta/CarrollCo.)	Fishing	FC,FCG	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999. EPD will address nonpoint source (urban runoff) in Douglas, Coweta and Carroll Counties through a watershed protection strategy. Fish Consumption Guidelines due to PCBs and is a partial support. PCBs have been banned in the U.S. and levels have been declining.	21	X	X	3
Chattahoochee River (1)	Upatoi Creek to Railroad at Omaha (Chattahoochee/Stewart Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	31	X	X	3
Crooked Creek (1)	Tributary to Chattahoochee River (Gwinnett Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	2	X	X	3
Dixie Creek (2,26)	LaGrange (Troup Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	3
East Fork Little River (25)	Downstream Hwy 52 to Lake Lanier (Hall Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	6	X	3	3
Flat Creek (1)	Headwaters, Gainesville to Lake Lanier (Hall Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy for the basin.	6	X	X	3
Flat Shoal Creek (1)	West Point (Troup/Harris Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	26	X	3	3

2000-2001 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
Foe Killer Creek (17)	Fulton County	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	7	X	X	3
House Creek (16)	Douglas County	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
James Creek (1)	Forsyth County	Fishing	FC	NP,UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
Johns Creek (1)	Headwaters to Chattahoochee River (Fulton Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	4	X	X	3
Lee Branch (1,21)	LaGrange (Troup Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Level Creek (1)	Headwaters to Chattahoochee River (Gwinnett Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	5	X	X	3
Limestone Creek (20)	Upstream Brenau Lake (Hall Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Limestone Creek (20,22)	Downstream Brenau Lake (Hall Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Long Cane Creek (1,4)	Panther, Blue John & Long Cane Creeks (d/s LaGrange) to Chattahoochee River (Troup Co.)	Fishing	Bio,FC	UR	EPD will address nonpoint sources (urban runoff) through a watershed protection strategy for the basin.	14	X	X	3
Long Island Creek (1)	Headwaters to Chattahoochee River (Fulton Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	5	X	X	3
Longwood Park Creek (20)	Gainesville (Hall Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3

2000-2001 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
Lullwater Creek (1,15)	DeKalb County	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	2	X	X	3
Marsh Creek (1,17)	Fulton County	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	4	X	X	3
Mobley Creek (16)	Douglas County	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	7	X	X	3
Mossy Creek (1,10)	Totherow Rd. near Clermont to Chattahoochee River (White/Hall Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	7	X	3	3
Mud Creek (14)	Ga. Hwy. 120 to Noses Creek (Cobb Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	5	X	X	3
Nancy Creek (1,2,10,15)	Headwaters to Peachtree Creek, Atlanta (DeKalb/Fulton Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	16	X	X	3
New River (1)	Corinth (Heard Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	3
Nickajack Creek (1,10,14)	Headwaters to Chattahoochee River (Cobb Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	11	X	X	3
North Fork Peachtree Creek (2,15,18)	Headwaters to Peachtree Creek (Gwinnett/DeKalb/Fulton Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	14	X	X	3
Olley Creek (2,14)	Cobb County	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	11	X	X	3
Orr Creek (1)	U/S Castleberry Rd. (Tyson Foods) to Big Creek (Forsyth Co.)	Fishing	FC,Cu	UR,I1,I2	EPD will address nonpoint sources (urban runoff) through a watershed protection strategy. Tyson Foods WPCP will be addressed through EPD's Basin Planning Permitting Strategy.	3	X	X	2

2000-2001 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
Park Branch (1,21)	LaGrange (Troup Co.)	Fishing	FC,Cu	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. EPD will address nonpoint sources (urban runoff) through a watershed protection strategy.	2	X	3,X	2
Peachtree Creek (1,43)	I-85 to Chattahoochee River, Atlanta (Fulton Co.)	Fishing	FC	UR,CSO	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999. Atlanta's Federal CSO Consent Decree requires compliance with water quality standards by 2/1/07.	7	X	X	3
Peavine Creek (1,15)	DeKalb County	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	3	X	X	3
Proctor Creek (1,43)	Headwaters to Chattahoochee River, Atlanta (Fulton Co.)	Fishing	FC	UR,CSO	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999. Atlanta's Federal CSO Consent Decree requires compliance with water quality standards by 2/1/07.	9	X	X	3
Rottenwood Creek (1,10,14)	Headwaters to Chattahoochee River (Cobb Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	9	X	X	3
Sandy Creek (1)	I-285 to Chattahoochee River (Fulton Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	2	X	X	3
Sewell Mill Creek (1,10,14)	Cobb County	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	4	X	X	3
Slaughterhouse Creek (20)	Gainesville (Hall Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Sope Creek (1,2,10,14)	Headwaters to Chattahoochee River (Cobb Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	11	X	X	3
Soquee River (1)	Goshen Creek to SR 17, Clarkesville (Habersham Co.)	Fishing	FC	NP	EPD will address nonpoint sources throught a watershed protection strategy for the basin.	29	X	X	3

2000-2001 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
South Fork Balus Creek (20)	Gainesville (Hall Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
South Fork Limestone Creek (20)	Gainesville (Hall Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
South Fork Mud Creek (1)	Cornelia (Habersham Co.)	Fishing	Tox	M	Cornelia WPCP passed last two consecutive toxicity tests in 6/01 and 9/01 and is meeting toxicity limits in permit and water quality standards for toxicity achieved.	2	X	1	1
South Fork Peachtree Creek (1,10,15)	Atlanta (Fulton Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	15	X	X	3
South Utoy Creek (8)	Headwaters to Fairburn Rd., Atlanta (Fulton Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	5	X	X	3
Suwanee Creek (1)	Mill Creek to Chattahoochee River (Gwinnett Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	4	X	X	3
Sweetwater Creek (1)	U/S Pine Valley Rd. To Noses Creek (Paulding/CobbCo.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999. EPD will address nonpoint source (urban runoff) in Paulding County through a watershed protection strategy.	10	X	X	3
Tesnatee Creek (1)	Town Creek to Chestatee River (White/Lumpkin Co.)	Fishing	FC	NP	EPD will address nonpoint sources throught a watershed protection strategy for the basin.	5	X	X	3
Troup Branch (21)	LaGrange (Troup Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Utoy Creek (1,8,10)	Atlanta (Fulton Co.)	Fishing	FC,Cu,Zn	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An area wide stormwater permit was reissued in 1999.	5	X	X	2
Wahoo Creek (1,22,26)	SR 52 to Lake Lanier (Lumpkin/Hall Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	3

2000-2001 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
Wahoo Creek (1,4)	Downstream Arnco Mills Lake (Coweta Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy. Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	3
Weracoba Creek (2,38)	Columbus (Muscogee Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy. An areawide stormwater permit was issued on 4/14/00.	6	X	X	3
West Fork Little River (1)	Headwaters to above Lake Lanier (White/Hall Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	11	X	3	3
White Oak Creek (1)	Fulton County	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	2	X	X	3
Wolf Creek (1,4)	Headwaters to Chattahoochee River (Douglas/Carroll Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	10	X	3	3
COOSA RIVER BASIN									
Acworth Creek (14,35)	Tributary to Lake Acworth (Cobb Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	1	X	X	3
Armuchee Creek (1)	Oostanaula River Tributary (Floyd Co.)	Fishing	CFB,FC	I2,NP	DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining. EPD will address nonpoint sources through a watershed protection strategy.	20	X	X	1,3
Beech Creek (1)	Downstream Hicks Lake, near Rome (Floyd Co.)	Fishing	CFB,FC	I2,NP	DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining. EPD will address nonpoint sources through a watershed protection strategy.	10	X	X	1,3
Big Cedar Creek/Cedar Creek (1,6)	Cedar Creek Headwaters, Cedartown to Coosa River, Lake Weiss (Polk/Floyd Co.)	Fishing	FC,CFB	UR,I2	EPD will address nonpoint sources (urban runoff) through a watershed protection strategy. DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining.	35	X	X	3,1

2000-2001 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
Big Dry Creek	Rome (Floyd Co.)	Fishing	FC,CFB	UR,I2	EPD will address nonpoint sources (urban runoff) through a watershed protection strategy. DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining.	3	X	X	3,1
Burwell Creek	Rome	Fishing	CFB	I2	DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining.	3	X	X	1
Butler Creek (14,35)	Cobb County	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	6	X	X	3
Chattooga River (1,40)	Cane Creek, Trion to Henry Branch (Chattooga Co.)	Fishing	FC	NP	EPD will address nonpoint source through a watershed protection strategy.	7	X	X	3
Conasauga River (1)	Holly Creek to Oostanaula River (Murray/Gordon Co.)	Fishing	FC,FCG	M,UR	Dalton□s Federal Consent Decree, effective 1/01, is a comprehensive action which requires improvements with the overall operations of the land application system. EPD will address nonpoint source (urban runoff) thorugh a watershed protection strategy. Fish Consumption Guidelines due to PCBs and is a partial support. PCBs have been banned in the U.S. and the levels have been declining.	24	X	X	3
Connesenna Creek	Etowah River Tributary (Bartow Co.)	Fishing	CFB	I2	DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining.	6	X	X	1
Coosa River (1,10,28)	Rome to Hwy 100 (Floyd Co.)	Fishing	CFB,FCG,FC	I2,UR	DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining. Note: Fish Consumption Guidelines due to PCBs and is a not support. EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	16	X	X	1,3

2000-2001 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
Coosa River (1)	Hwy 100 to Stateline (Floyd Co.)	Fishing	CFB,FCG,DO	I2,NP	DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining. Fish Consumption Guidelines due to PCBs and is a partial support. EPD will address nonpoint sources through a watershed protection strategy.	15	X	X	1,2
Coosawattee River (1)	Confluence with Ellijay River to Mountaintown Creek (Gilmer Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	9	X	X	3
Dozier Creek (1)	Oostanaula River Tributary (Floyd Co.)	Fishing	CFB	I2	DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining.	3	X	X	1
Ellijay River (1)	Upstream Coosawattee River (Gilmer Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	2	X	X	3
Etowah River (1,10,24,44)	Lake Allatoona to Richland Creek (Bartow Co.)	Fishing	FC,FCG	NP	EPD will address nonpoint sources through a watershed protection strategy. Fish Consumption Guidelines due to PCBs and is a partial support. PCBs have been banned in the U.S. and levels have been have been declining.	12	X	X	3
Etowah River (1)	Euharlee Creek to US Hwy 411 (Bartow Co.)	Fishing	FC,FCG	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy. Fish Consumption Guidelines due to PCBs and is a partial support. PCBs have been banned in the U.S. and levels have been have been declining.	10	X	X	3
Etowah River (1)	Hwy. 411 to Coosa River (Bartow/Floyd Co.)	Fishing	CFB,FC,FCG	I2,NP	DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining. Fish Consumption Guidelines due to PCBs and is a partial support. EPD will address nonpoint sources through a watershed protection strategy.	21	X	X	1,3
Flat Creek (1)	Upstream Coosawattee River (Gilmer Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	1	X	X	3
Hamilton Creek	Coosa River Tributary (Floyd Co.)	Fishing	CFB	I2	DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining.	5	X	X	1

2000-2001 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
Horseleg Creek	Rome (Floyd Co.)	Fishing	CFB	I2	DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining.	4	X	X	1
Kings Creek	Coosa River Tributary (Floyd Co.)	Fishing	CFB	I2	DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining.	4	X	X	1
Little Dry Creek	Rome (Floyd Co.)	Fishing	CFB	I2	DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining.	6	X	X	1
Little Noonday Creek (14)	Cobb County	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	3	X	X	2
Mt. Hope Creek	Coosa River Tributary (Floyd Co.)	Fishing	CFB	I2	DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining.	4	X	X	1
Oostanaula River (1,2)	Hwy 140 to Coosa River (Floyd Co.)	Fishing/Drinking Water	CFB,FCG,FC	I2,NP	DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining. Fish Consumption Guidelines due to PCBs and is a partial support. EPD will address nonpoint sources through a watershed protection strategy.	14	X	X	1,3
Owl Creek (24,41)	Lake Allatoona Tributary (Cherokee Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	2	X	X	3
Pine Log Creek (1)	Cedar Creek to Salacoa Creek (Gordon Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3
Proctor Creek (14,24)	Cobb County	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	4	X	X	3
Rowland Springs Branch (24)	Lake Allatoona Tributary (Bartow Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3

2000-2001 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
Rubes Creek (14,41)	Cobb/Cherokee Counties	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for Cobb County. An areawide stormwater permit was reissued for Cobb County in 1999. EPD will address nonpoint source (urban runoff) in Cherokee County through a watershed protection strategy.	7	X	X	3
Silver Creek	Rome (Floyd Co.)	Fishing	CFB,FC	I2,UR	DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining. EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	9	X	X	1,3
Smith Creek/Cabin Creek (1)	Smith Creek Headwaters to Coosa River, Lake Weiss (Floyd Co.)	Fishing	CFB	I2	DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining.	5	X	X	1
Spring Creek (1)	Walker/Chattooga County	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	3
Spring Creek (1)	Etowah River Tributary (Floyd Co.)	Fishing	CFB,FC,Hg	I2,NP	DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining. EPD will address nonpoint sources through a watershed protection strategy.	2	X	X	1,2
Stamp Creek (1,24)	Lake Allatoona Tributary (Bartow Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	3
Tanyard Creek (14,24)	White Lake to Lake Allatoona (Cobb Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	4	X	X	3
Tom's Creek	Etowah River Tributary (Bartow Co.)	Fishing	CFB	I2	DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining.	1	X	X	1
Tributary to Allatoona Creek (14)	Cobb County	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	2	X	X	3
Tributary to Pettit Creek (2)	Cartersville (Bartow Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	1	X	X	3

2000-2001 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
Two Run Creek (1)	Clear Creek to Etowah River (Bartow Co.)	Fishing	CFB,FC	I2,NP	DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining. EPD will address nonpoint sources through a watershed protection strategy.	10	X	X	1,3
Webb Creek (1)	Coosa River Tributary (Floyd Co.)	Fishing	CFB,FC	I2,NP	DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining. EPD will address nonpoint sources through a watershed protection strategy.	4	X	X	1,3
Woodward Creek (1)	Oostanaula River Tributary (Floyd Co.)	Fishing	CFB,FC	I2,NP	DNR commercial fishing ban due to PCBs which originated from General Electric facility in Rome. Cleanup operations completed in the 1980s. PCB concentrations in fish tissue have been declining. EPD will address nonpoint sources through a watershed protection strategy.	8	X	X	1,3
FLINT RIVER BASIN									
Beaver Creek (1)	Upstream Spring Hill Creek, SW Marshallville (Macon Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	3
Beaver Creek (1)	Spring Hill Creek to Flint River (Macon Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	9	X	X	3
Big Slough (1)	Near Pelham (Mitchell Co.)	Fishing	DO,FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	4	X	X	2
Brantley Creek (1)	Downstream Dawson WPCP (Terrell Co.)	Fishing	Tox	M	Dawson WPCP passed last two consecutive toxicity tests in 3/01 and 7/01 and is meeting toxicity limits in permit and water quality standards for toxicity achieved.	2	X	1	1
Camp Creek (1,42)	Headwaters to Flint River (Clayton Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	9	X	X	3
Cooleewahee Creek (1)	Piney Woods Branch to Flint River near Newton (Dougherty/Baker Co.)	Fishing	FC,Bio	NP	EPD will address nonpoint sources through a watershed protection strategy.	16	X	X	3
Elkins Creek (1)	Bull Creek to Flint River near Molena (Pike/Upson Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	11	X	X	3

2000-2001 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
Fish Pond Drain (1)	U.S. Hwy. 84, Donalsonville to Wash Pond (Seminole Co.)	Fishing	FC,DO	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	7	X	3,X	2
Flint River (1,42)	Upstream Hartsfield Airport (Clayton Co.)	Fishing	FC,Cu,Zn	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	1	X	X	2
Gulley Creek (24)	Upstream Lake Blackshear (Crisp Co.)	Fishing	DO	NP	EPD will address nonpoint sources through a watershed protection strategy.	4	X	X	2
Gum Creek (1,4)	Downstream Cordele to Lake Blackshear (Crisp Co.)	Fishing	FC,Bio	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	6	X	X	3
Muckaloochee Creek (1)	Smithville Pond (aka Wells Mill Pond) to Muckalee Creek (Lee Co.)	Fishing	FC	M,NP	Smithville Pond WPCP will be addressed through EPD's Basin Planning Permitting Strategy. EPD will address nonpoint sources through a watershed protection strategy for the basin.	10	X	X	3
Mud Creek (1,42)	Downstream Hapeville (Fulton/Clayton Co.)	Fishing	FC,Cu,Zn	UR,I1	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999. Ford plant discharge under compliance schedule to eliminate discharge.	5	X	X	2
Potato Creek (1)	U.S. Hwy. 333 to Upson Co. Line (Lamar Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy for the basin.	11	X	X	3
Sweetwater Creek (4,25)	Headwaters to Flint River, Andersonville (Sumter/Macon Co.)	Fishing	pH,Bio	NP,UR	EPD will address through a watershed protection strategy.	9	X	X	3
Tributary to Flint River (1)	College Park (Clayton Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy for metropolitan Atlanta. An areawide stormwater permit was reissued in 1999.	1	X	X	3
Turkey Creek (1)	Newnan to Reese Lake (Coweta Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	4	X	X	3
White Oak Creek (1)	Newnan - I-85 to Chandlers Creek (Coweta Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	6	X	3	3

2000-2001 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
Whitewater Creek (1)	Big Whitewater Creek to Cedar Creek (Taylor/Macon Co.)	Fishing	FC,pH	NP	EPD will address nonpoint sources through a watershed protection strategy.	17	X	X	3
Whitewater Creek (1)	Cedar Creek to Flint River (Macon Co.)	Fishing	FC,pH	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	13	X	X	3
Wildcat Creek (1)	Heads Creek to Flint River (Spalding Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	2	X	X	3
OCHLOCKONEE RIVER BASIN									
Aucilla River (1)	Masse Branch to Brooks County line near Boston (Thomas Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	10	X	3	2
Big Creek (1)	Headwaters to Little Cr. near Meigs (Mitchell/Thomas Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	12	X	3	2
Big Creek (1)	Woodhaven Rd. E. of Coolidge to Ochlockonee River (Thomas Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	12	X	3	2
Bridge Creek (1)	Mill Cr. to upstream Ga. Hwy. 111 near Moultrie (Colquitt Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	7	X	3	2
Bridge Creek (1)	Upstream Ga. Hwy. 111 near Moultrie to Ochlockonee River (Colquitt/Thomas Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	10	X	3	2
Little Attapulgus Creek (1)	Downstream Crescent Lake to Attapulgus Creek (Decatur Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	3
Little Creek (1)	Ga. Hwy. 37 to Ochlockonee River near Moultrie (Colquitt Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	2
Little Ochlockonee River (1)	Slocumb Branch to downstream SR 111 near Moultrie (Colquitt Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	2

2000-2001 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
Little Ochlockonee River (1)	Big Cr. to Ochlockonee River near Ochlocknee (Thomas Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	2
Lost Creek (1)	Upstream Ga. Hwy. 93 N.E. of Cotton to Little Ochlockonee River (Mitchell/Colquitt Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	2
Ochlockonee River (1)	Headwaters, upstream Ga. Hwy. 112 near Sylvester to Bay Branch, E. of Bridgeboro (Worth Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	8	X	3	2
Ochlockonee River (1)	D/S Ga. Hwy. 270 to Wolf Pit Branch (d/s Giles Millpond) (Colquitt Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	7	X	3	2
Ochlockonee River (1,10)	SR 37 downstream Moultrie to Bridge Creek (Colquitt/Thomas Co.)	Fishing	DO,FC,FCG	UR,M	Moultrie facility in compliance with permit limits. Moultrie NPDES Permit to be revised in accordance with TMDL for DO when finalized. Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Fish Consumption Guidelines due to mercury in fish tissue and is a partial support.	14	X	3	2
Ochlockonee River (1)	Bridge Cr. to Oquina Creek (Thomas Co.)	Fishing	DO,FCG	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Fish Consumption Guidelines due to mercury in fish tissue and is a partial support.	16	X	3	2
Oquina Creek (1)	Bruces Branch to Cassidy Rd., Thomasville (Thomas Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
Parkers Mill Creek (1,2)	Headwaters to Tired Cr., Cairo (Grady Co.)	Fishing	FC	M	Cairo began operating its land application system in 3/98. The system has not operated as designed. Other treatment options are being considered. Impairment will also be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	3

2000-2001 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
Swamp Creek (1)	SR 262 to Stateline (Decatur Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	2
Wards Creek (1)	Pine Cr. to McKeever Slough E. of Metcalf (Thomas Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	2
OCMULGEE RIVER BASIN									
Alcovy River (1)	Cedar Creek to Bay Creek (Walton Co.)	Fishing/Drinking Water	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	3
Alligator Creek (1)	Batson Creek to Lime Sink Creek (Dodge/Laurens Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	12	X	3	2
Almand Branch (1,2)	Tanyard Branch to Snapping Shoals (Rockdale Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	3
Bay Creek (1,4)	Headwaters to Beaver Creek (Peach/Houston Co.)	Fishing	Bio,FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	9	X	3	3
Big Cotton Indian Creek (1)	Panther Creek to Brush Creek (Henry Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	3
Big Flat Creek (1)	Headwaters to Flat Creek (Walton Co.)	Fishing	Tox,FC	M,UR	In July 2001, the City of Loganville completed facility construction and began startup operations of the upgraded facility. The City went from a rotating biological contact system to a sequencing batch reactor. Loganville WPCP passed last two consecutive toxicity tests in 8/01 and 10/01 and is meeting toxicity limits in permit and water quality standards for toxicity achieved. The permit for the facility contains a fecal coliform bacteria limit of 200/100ml. Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	13	X	1,3	1

2000-2001 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
Big Sandy Creek (1)	Aboothlacoosta Creek to Ocmulgee River (Butts/Monroe Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	10	X	3	3
Cabin Creek (1,4)	Headwaters, Griffin to Towaliga River (Spalding Co.)	Fishing	Bio,Tox, FC, DO	I1,UR	Spring Industries under Order to attain compliance with permit limits by 12/1/01. Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	16	X	3	2
Camp Creek (1,2)	Headwaters to Jackson Creek (DeKalb/Gwinnett Co.)	Fishing	FC	UR	An areawide stormwater permit was reissued in 1999. Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	6	X	3	3
Cobbs Creek (1,15)	Headwaters to Shoal Creek (DeKalb Co.)	Fishing	FC	UR	An areawide stormwater permit was reissued in 1999. Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	7	X	3	3
Conley Creek (1,15)	Headwaters to South River (Clayton/DeKalb Co.)	Fishing	FC	UR	An areawide stormwater permit was reissued in 1999. Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	3
Doolittle Creek (1,15)	Headwaters to South River (DeKalb Co.)	Fishing	FC	UR	An areawide stormwater permit was reissued in 1999. Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	3
Falling Creek (1,4,10)	Little Falling Creek to Ocmulgee River (Jones Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	3
Gum Swamp Creek (1)	Hwy 257 to Little Creek (Dodge Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	19	X	3	2
Honey Creek (1,23)	Headwaters to South River (DeKalb/Rockdale Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	13	X	3	3
Hopkins Creek (1,2)	Headwaters to Alcovy River (Gwinnett Co.)	Fishing	FC	UR	An areawide stormwater permit was reissued in 1999. Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	3

2000-2001 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
Horse Creek (1,3)	Headwaters to Ocmulgee River, Warner Robins (Houston Co.)	Fishing	DO,pH	M,UR	Warner Robins relocated discharge from Horse Creek to the Ocmulgee River on 8/31/99. EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	4	X	2	1
House Creek (1)	Ball Creek to Little House Creek (Wilcox/Ben Hill Co.)	Fishing	DO,pH,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. EPD will address nonpoint sources through a watershed protection strategy.	8	X	3	2
Intrenchment Creek (1,15)	Headwaters to South River, Atlanta (Fulton/DeKalb Co.)	Fishing	FC	UR,CSO	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999. Atlanta's Federal CSO Consent Decree, effective 9/98, requires compliance with water quality standards by 2/1/07.	6	X	3	3
Jacks Creek (1)	Headwaters to Yellow River (Gwinnett Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999.	4	X	3	3
Little Haynes Creek (1,23)	Hwy 20 to Big Haynes Creek (Walton/Rockdale Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	11	X	3	3
Little Stone Mountain Creek (1,15)	Headwaters to Stone Mountain Lake (DeKalb Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999.	3	X	3	3
Little Suwanee Creek (1,18)	Tributary to Yellow River (Gwinnett Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999.	2	X	3	3
McClain Branch (1,2,23)	Headwaters to Honey Creek (Rockdale Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
Shetley Creek (1,2)	Headwaters to Bromolow Creek (Gwinnett Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999.	2	X	3	3

2000-2001 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
Shoal Creek (1,18)	Headwaters to Alcovy River, Lawrenceville (Gwinnett Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999.	5	X	3	3
Shoal Creek (1,2,15)	Headwaters to South River (DeKalb Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999.	7	X	3	3
Snapfinger Creek (1,2,15)	DeKalb County	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999.	18	X	3	3
Snapping Shoals Creek (1,23)	Almand Branch to South River (Rockdale/Newton Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	10	X	3	3
South River (1,15,34,44)	Atlanta to Flakes Mill Road (Fulton/DeKalb Co.)	Fishing	FC	UR,CSO	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permiit was reissued in 1999. Atlanta□s Federal CSO Consent Decree requires compliance with water quality standards by 2/1/07.	16	X	3	3
South River (1,2,15)	Flakes Mill Road to Pole Bridge Creek (DeKalb Co.)	Fishing	FC	UR,CSO	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999. Atlanta□s Federal CSO Consent Decree requires compliance with water quality standards by 2/1/07.	9	X	3	3
South River (1,15,23)	Pole Bridge Creek to Hwy 20 (Rockdale/Henry Co.)	Fishing	FC	UR,CSO	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Atlanta□s Federal CSO Consent Decree requires compliance with water quality standards by 2/1/07.	15	X	3	3
Stone Mountain Creek (1,2,15)	Headwaters to Stone Mountain Lake (DeKalb Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999.	4	X	3	3

2000-2001 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
Sugar Creek (1,15)	U/S Memorial Drive to South River (DeKalb Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999.	6	X	3	3
Sugar Creek (1)	Turnpike Creek to Little Ocmulgee River (Telfair Co.)	Fishing	DO,pH	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	2
Sweetwater Creek (1,2,18)	Lee Daniel Creek to Yellow River (Gwinnett Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999.	6	X	3	3
Swift Creek (1,15)	Headwaters to Yellow River (DeKalb Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999.	5	X	3	3
Tobesofkee Creek (1)	Cole Creek to Todd Creek (Monroe Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	8	X	3	3
Town Branch (1,4)	Headwaters (Jackson) to Aboothlacoosta Creek (Butts Co.)	Fishing	Bio,FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	3
Turkey Creek (1,18)	Headwaters to Yellow River (Gwinnett Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999.	4	X	3	3
Turnpike Creek (1,10)	Hwy 280 to Sugar Creek (Telfair Co.)	Fishing	DO,FC,pH	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	24	X	3	2
Tussahaw Creek (1,4)	Wolf Creek to Lake Jackson (Butts Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	6	X	3	3
Walnut Creek (1,4)	Headwaters to Ocmulgee River (Jones/Bibb Co.)	Fishing	Bio,FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued on 4/14/00.	20	X	3	3

2000-2001 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
Watson Creek (1,18)	Headwaters to Yellow River (Gwinnett Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999.	3	X	3	3
Wise Creek (1,4)	Headwaters to Ocmulgee River (Jasper Co.)	Fishing	Bio,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	6	X	3	3
Yellow River (1,18)	Sweetwater Creek to Centerville Creek (Gwinnett Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued in 1999.	15	X	3	3
Yellow River (1)	Big Haynes Creek to Jackson Lake (Newton Co.)	Fishing/Drinking Water	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	25	X	3	3
Yellow Water Creek (1,4)	1 mile d/s Stark Road (Rd. S763), Jackson to Ocmulgee River (Butts Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	7	X	3	3
OCONEE RIVER BASIN									
Anne Court Branch (1,2)	Headwaters to Middle Oconee River, Athens (Clarke Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Apalachee River (1)	Williamson Creek to Marburg Creek (Barrow/Walton Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	7	X	3	3
Beaverdam Creek (1,28)	Oliver Creek to Lake Oconee, S. of Greensboro (Greene Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	3
Big Sandy Creek (1,4)	Porter Creek to Oconee River (Wilkinson/Laurens Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	14	X	3	3
Bluff Creek (1)	D/S Wiggins Road to Oconee River (Washington Co.)	Fishing	DO,pH	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	2

2000-2001 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
Brooklyn Creek (1,2)	Headwaters to Middle Oconee River, Athens (Clarke Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
Buffalo Creek (1,4)	Keg Creek to Oconee River (Washington Co.)	Fishing	pH,Zn	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	10	X	3	2
Carver Branch (2)	Tributary to Trail Creek, Athens (Clarke Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Cedar Creek (1)	Headwaters to Winder Reservoir (Barrow Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	3
Cedar Creek (1,2)	Headwaters to Oconee River, Athens (Clarke Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	3
Cloverhurst Branch (2)	Athens (Clarke Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
Commissioner Creek (1)	Little Commissioner Creek to Upstream Oconee River (Wilkinson Co.)	Fishing	pH	NP,I2	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	16	X	3	3
Fishing Creek (1,28)	McWhorter Creek to Lake Oconee (Greene Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	3
Kingswood Branch (1,2)	Tributary to McNutt Creek, Athens (Clarke Co.)	Fishing	FC,pH	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Little River (1,2)	Social Circle to Nelson Creek (Walton/Newton Co.	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	3
Little River (1)	Shoal Creek to Gap Creek (Morgan/Putnam Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	14	X	3	3

2000-2001 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
Little Sugar Creek (1,28)	Headwaters to Lake Oconee (Morgan Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	3
Marburg Creek (1)	Masseys Lake to Apalachee River (Barrow Co.)	Fishing	FC, Tox	UR,M	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. The Winder Marburg Cr. WPCP is to complete WET tests for reissuance of its permit in 2003 as part of the application process.	7	X	3	1
Middle Oconee River (1)	Mulberry River to Big Bear Creek (Jackson/Clarke Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	11	X	3	3
N. Bypass Branch (2)	Tributary to Middle Oconee River, Athens (Clarke Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
North Oconee River (1)	Chandler Creek to Bordens Creek (Jackson Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	12	X	3	3
North Oconee River (1)	Bordens Creek to Curry Creek (Jackson Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	8	X	3	3
North Oconee River (1,2)	Sandy Creek to Trail Creek, Athens (Clarke Co.)	Drinking Water/Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
Ochwalkee Creek (aka Okeewalkee Creek) (1)	U/S Little New York Rd. to Oconee River (Laurens/Wheeler Co.)	Fishing	DO,pH,Bio	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. EPD will address nonpoint sources through a watershed protection strategy.	18	X	3,3,X	2
Oconee River (1,28)	Confluence of North & Middle Oconee Rivers, Athens to Barnett Shoals Dam (Clarke/Oconee Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	3
Oconee River (1)	Long Branch to Turkey Creek (Laurens Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	3

2000-2001 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
Pughes Creek (1)	Indian Branch to Oconee River (Laurens Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	8	X	3	2
Richland Creek (1)	Upstream Greensboro to Interstate 20 (Greene Co.)	Fishing	FC	NP,UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	3
Richland Creek (1)	Interstate 20 to Beaverdam Creek (Greene Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	8	X	3	3
Rooty Creek (1,4)	Rd. S926, Eatonton to Little Creek, (Putnam Co.)	Fishing	FC,Bio	NP,UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	3
Sugar Creek (1,28)	South Sugar Creek to Lake Oconee (Morgan Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	7	X	3	3
Tanyard Creek (1)	U/S North Oconee River, Athens (Clarke Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Town Creek (1,2)	Hwy. 15 to Richland Creek, Greensboro (Greene Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	3
Town Creek (1,28)	Penfield to Lake Oconee (Greene Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	7	X	3	3
Trail Creek (1,2)	East Fork Trail Creek to North Oconee River, Athens (Clarke Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
Tributary 7 to Allen Creek (1,20)	Gainesville-West Side of New Landfill (Hall Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Tributary 8 to Allen Creek (1,20)	Gainesville-East Side of New Landfill (Hall Co.)	Fishing	FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3

2000-2001 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
Tributary to Little River (1,9)	Eatonton to Little River (Putnam Co.)	Fishing	Tox,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	1
Turkey Creek (1)	Horse Branch to Rocky Creek (Laurens Co.)	Fishing	FC	M,NP	The City of Dudley WPCP will be addressed through EPD's Basin Planning Permitting Strategy. Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	10	X	3	3
Unnamed Tributary to Middle Oconee River	Downstream closed UGA Botanical Gardens Landfill (Milledge Ave. Site), Athens (Clarke Co.)	Fishing	Benzene, Chloroform	I2	Closed landfill (used by UGA in the 1970's) for chemical waste disposal is under hazardous waste site remediation and monitoring.	1	X	2	1
West Fork Trail Creek (1,2)	Athens (Clarke Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	3
OGEECHEE RIVER BASIN									
Buckhead Creek (1)	Downstream Spring Mill Branch to Ogeechee River, Millen (Jenkins Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	4	X	X	3
Casey Canal (1)	Head of Canal to DeRenne Ave., Savannah (Chatham Co.)	Fishing	DO,FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy. An areawide stormwater permit was reissued to the City of Savannah in 4/14/00.	3	X	X	2
Casey Canal (1)	DeRenne Ave. to Montgomery Crossroad, Savannah (Chatham Co.)	Fishing	DO,FC,FCG	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy. An areawide stormwater permit was reissued to the City of Savannah in 4/14/00. Fish Consumption Guidelines due to levels of Dieldrin in the fish tissue of striped mullet and is a partial support. Dieldrin is a pesticide that has been restricted from use in the U.S.	3	X	X	2
Cedar Creek (1)	Water Hole Creek to Canoochee River, Claxton (Evans Co.)	Fishing	DO,FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	6	X	X	2
Fifteenmile Creek (1)	Stocking Head Branch to Canoochee River near Metter (Candler Co.)	Fishing	DO,FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	2

2000-2001 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
Hayners Creek (known upstream as Casey Canal) (1)	Casey Canal (Montgomery Crossroad) to Vernon River (Chatham Co.)	Fishing	DO,FC,FCG	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy. An areawide stormwater permit was reissued to Chatham County in 4/14/00. Fish Consumption Guidelines due to levels of Dieldrin in the fish tissue of striped mullet and is a partial support. Dieldrin is a pesticide that has been restricted from use in the U.S.	2	X	X	2
Horse Creek (1)	Little Horse Creek to Ogeechee River near Rocky Ford (Screven Co.)	Fishing	DO,FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	5	X	X	2
Jackson Branch (1)	Downstream King Finishing Company from SR17 to Ogeechee River, Dover (Screven Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	1	X	X	3
Little Ogeechee River (1)	Little Ogeechee Pond to below US Hwy. 17 near Burroughs (Chatham Co.)	Fishing	FC	UR	Urban runoff is being addressed in the EPD Stormwater Management Strategy. An areawide stormwater permit was reissued to Chatham County in 4/14/00.	6	X	X	3
Nevills Creek (1)	Bay Gull Creek to Ogeechee River near Rocky Ford (Bulloch Co.)	Fishing	DO	NP	EPD will address nonpoint sources through a watershed protection strategy.	3	X	X	2
N.Fork Ogeechee River (1)	Hwy. 77 to Ogeechee River near Crawfordville (Greene/Taliaferro Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	13	X	X	3
Sculls Creek (1)	Richardson Creek to Ogeechee River near Scarboro (Jenkins Co.)	Fishing	DO,FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	4	X	X	2
S. Newport River (1)	Upstream US Hwy. 17, South Newport (Liberty/McIntosh Co.)	Fishing	FC,Se	NP	EPD will address nonpoint sources through a watershed protection strategy.	3	X	X	2
Tenmile Creek (1)	Upstream Canoochee River, Excelsior (Candler Co.)	Fishing	DO,FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	3	X	X	2
Williamson Swamp Creek (1)	Hwy. 24 to Limestone Creek, Davisboro (Washington/Jefferson Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	12	X	X	3

2000-2001 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
Williamson Swamp Creek (1)	Mill Creek to Ogeechee River, Wadley (Jefferson Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	9	X	X	3
SATILLA RIVER BASIN									
Big Creek (1)	S. Prong Big Cr. to Satilla River (Brantley Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	2
Big Satilla Creek (1)	Headwaters near Hazlehurst to Sweetwater Cr. near Baxley (Jeff Davis/Appling Co.)	Fishing	DO,FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	34	X	3	2
Boggy Creek (1)	Dry Creek to Little Satilla Cr. N. of Screven (Wayne Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	2
Broxton Creek (1)	Seven Cr. to Seventeen Mile River near Broxton (Coffee Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	6	X	3	2
City Drainage Canal (2)	Trib. to Satilla River, Waycross (Ware Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	3
Colemans Creek (1)	Dry Branch S. of Surrency to Big Satilla Cr. near Screven (Appling/Wayne Co.)	Fishing	DO,FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	17	X	3	2
Hog Creek (1)	Hurricane Cr. to Satilla River S. of Nicholls near Bickley (Coffee/Ware Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	15	X	3	2
Hurricane Creek (1)	Downstream Little Cr. to Ten Mile Cr. near Alma (Bacon Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	20	X	3	2
Little Hurricane Creek (1)	Ga. Hwy. 32 to Hurricane Cr. (Bacon/Ware/Pierce Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	22	X	3	2

2000-2001 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
Little Satilla Creek (1)	Keene Bay Branch to Dry Branch near Odum (Wayne Co.)	Fishing	DO,FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	10	X	3	2
Little Satilla Creek (1)	Boggy Cr. to Little Satilla River near Screven (Wayne Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	2
Pudding Creek (1)	Park Bay to Satilla River N. of Pearson (Atkinson Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	2
Red Bluff Creek (1)	Little Red Bluff Cr. to Satilla River E. of Pearson (Atkinson Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	7	X	3	2
Reedy Creek (1)	Headwaters to Big Satilla Cr. near Screven (Appling/Wayne Co.)	Fishing	DO,FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	13	X	3	2
Roses Creek (1)	Upstream Ga. Hwy. 206 to Seventeen Mile River near Broxton (Coffee Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	2
Satilla Creek (1)	Hunters Cr. E. of Ocilla to Satilla River (Irwin/Coffee Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	7	X	3	2
Satilla River (1)	Satilla Cr. to Reedy Cr. near Douglas (Coffee Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	12	X	3	2
Seventeen Mile River (1)	Twenty Mile Cr. N. of Douglas to Otter Cr. downstream Gen. Coffee St. Park (Coffee Co.)	Fishing	DO,FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	7	X	4,3	2
Sweetwater Creek (1)	Black Water Cr. to Big Satilla Cr. near Baxley (Appling Co.)	Fishing	DO,FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	12	X	3	2
SAVANNAH RIVER BASIN									

2000-2001 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
Bear Creek (1)	Downstream Lavonia WPCP (Franklin Co.)	Fishing	DO	M	The TMDL for DO for Bear Creek was finalized March 2000. The permit for the Lavonia WPCP was modified on 8/24/00 to include the limits given in the TMDL. The permit was issued with an Order which contained a compliance schedule to meet the limits by 8/24/03.	2	X	3	2
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
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
Buck Creek (1)	Downstream Sylvania WPCP to Savannah River (Screven Co.)	Fishing	DO,Cu	M	The permit for the Sylvania WPCP was reissued 7/31/01. It contains lower ammonia limits to prevent toxicity and to reduce the oxygen demand. The permit also contains monitoring requirements for copper.	12	X	2	2
Butler Creek (1)	Phinizy Ditch to Savannah River, Augusta (Richmond Co.)	Fishing	DO,FC,Se	UR	TMDLs for DO and fecal coliform bacteria were finalized March 2000. The permit for the Augusta WPCP was reissued on 6/15/01. No changes needed to be made to the permit based on the DO and fecal coliform bacteria TMDLs. The permit was issued with a monitoring requirement for selenium. Urban runoff is being addressed in the EPD Stormwater Management Strategy. An areawide stormwater permit was reissued to Augusta/Richmond County 4/14/00. Impairment will also be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3,3,X	2
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
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
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

2000-2001 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
Eastanollee Creek (1,2,3)	Toccoa to Lake Hartwell (Stephens Co.)	Fishing	[Zn,FC,Cu],Tox	M,UR,I1	Facility has been under an Order to make sewage collection system improvements. The Permit for the Toccoa Eastanollee Creek WPCP was reissued 7/19/00 with limits for copper and zinc based on TMDLs for these metals. The permit contains a 36-month compliance schedule to meet the limits. The permit includes a limit of 200/100ml for fecal coliform bacteria. The permit also has a WET limit and a 36-month schedule to meet it. The TMDL for zinc was redone by the EPA 7/2/01. Coats American permit was reissued based on this TMDL (permit appealed). The permit for Toccoa Eastanollee is to be modified based on modified TMDL. Impairment will also be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	14	X	[3],X	2,1
Ebenezer Creek (1)	Long Bridge to Savannah River near Springfield (Effingham Co.)	Fishing	DO,pH	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Multiagency study ongoing to address issues and implement solutions.	6	X	3,X	2
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
Fortson□s Creek (2)	Elberton to Beaverdam Creek (Elbert Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	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□s permit contains a fecal coliform limit and the facility is in compliance with the limit.	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
Little River (1)	Confluence of N. & S. Forks to Kettle Creek near Washington (Taliaferro/Wilkes Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	6	X	X	3

2000-2001 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
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
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
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	X	3
Rocky Creek (1)	SR 56 to below New Savannah Road, Augusta (Richmond Co.)	Fishing	FC,Tox	UR,I2	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. An areawide stormwater permit was reissued to Augusta/Richmond County in 4/14/00. Southern Wood Piedmont site under remediation.	2	X	3,X	3,1
Runs Branch (Ebenezer Creek) (1)	Cowpen Creek to Little Ebenezer Creek near Clyo (Effingham Co.)	Fishing	DO,FC	NP	EPD will address nonpoint sources through a watershed protection strategy.	11	X	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
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
Stekoa Creek (1)	Clayton to Chattooga River (Rabun Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	14	X	3	3
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

2000-2001 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
ST. MARYS RIVER BASIN									
Boone Creek (1)	Upstream St. Marys River (Charlton Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	6	X	3	2
Corn House Creek (1)	Upstream St. Marys River (Charlton Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	7	X	3	2
Horsepen Creek (1)	Headwaters to St. Marys River (Camden Co.)	Fishing	DO,FC	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	2
St. Marys Trib. 5 (1)	Upstream St. Marys River (Charlton Co.)	Fishing	DO	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	2
SUWANNEE RIVER BASIN									
Alapaha River (1)	U.S. Hwy. 280 to Sand Creek (Wilcox/BenHill/Turner/Irwin Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	29	X	3	2
Bear Creek (1)	Reedy Cr. to Indian Cr. near Berlin (Colquitt Co.)	Fishing	DO	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	7	X	3	2
Cane Creek (1)	Rooty Branch to Okeefenokee Swamp near Homerville (Clinch Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	6	X	3	2
Cat Creek (1)	Beaverdam Cr. downstream SR 37 to Withlacoochee River near Ray City (Berrien/Lowndes Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	8	X	3	2
Double Run Creek (1)	Upstream SR 90 to Alapaha River near Rebecca (Turner Co.)	Fishing	DO,Hg	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	2
Fivemile Creek (1)	Downstream Gaskins Pond to Big Cr. near Nashville (Berrien/Lanier Co.)	Fishing	DO	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	10	X	3	2

2000-2001 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
Greasy Branch (1)	U.S. Hwy. 84/SR38 to Okeefenokee Swamp (Ware Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	10	X	3	2
Indian Creek (1)	Upstream Little River near Berlin (Colquitt Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	2
Little River (10)	Newell Branch, d/s Hwy. 32 to Ashburn Branch, W. of Sycamore (Turner Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	4	X	3	2
Mill Creek (1)	Reynolds Cr. to Alapaha River (Wilcox Co.)	Fishing	DO	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	3	X	3	2
MudCreek (also known as Mud Swamp Creek) (2)	D/S Valdosta Mud Cr. WPCP to Alapahoochee River (Lowndes Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	10	X	3	3
Mule Creek (1)	Headwaters to Reedy Cr. near Pavo (Thomas/Brooks Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	8	X	3	2
New River (1,2)	Westside Branch to Gum Cr. downstream Tifton (Tift Co.)	Fishing	DO,FC	M,UR	Tifton facility in compliance with permit limits. Permit to be revised in accordance with TMDL for DO when finalized. Dissolved Oxygen data collected from trend monitoring station in 1998 complied with water quality standards. Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	5	X	3	2
Piscola Creek (1)	Downstream Whitlock Branch @ Ozell Road to Okapilco Creek near Boston (Thomas/Brooks Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	25	X	3	2
Suwannee Creek (1)	Headwaters to Little Suwannee Cr. near Manor (Clinch/Ware Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	16	X	3	2
Suwannoochee Creek (1)	Bear Branch to Lees Bay (Clinch Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	30	X	3	2

2000-2001 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
Suwannoochee Creek (1)	Lees Bay to Suwannee River (Clinch Co.)	Fishing	DO,Cd	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	11	X	3	2
Tatum Creek (1)	Tower Rd. to Jones Cr. (Clinch Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	11	X	3	2
Tenmile Creek (1)	Averys Millpond to Big Cr. near Nashville (Berrien/Lanier Co.)	Fishing	DO	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	2
Toms Creek (1)	Headwaters to Stateline (Echols Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	23	X	3	2
Turkey Branch (2)	Headwaters to Willacoochee River downstream Fitzgerald (Ben Hill Co.)	Fishing	DO,[FC,Cd,Cu,Pb,Zn ,Hg,Tox]	M	The permit for Fitzgerald WPCP was issued 6/15/99 with a WET limit and a compliance schedule to meet it by 6/15/02. The facility has been in compliance with the WET limit since September 2000. Copper was removed from the 6/15/99 permit based on 12 months of data which indicated that copper wasn□t present at levels of concern in the effluent. Completed TMDLs will be evaluated to determine if any permit modifications are necessary. Fitzgerald□s WPCP has a fecal coliform limit of 200/100ml. Impairments will also be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	8	X	4,[3]	2
Two Mile Branch (2)	Headwaters to Sugar Cr., Valdosta (Lowndes Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
Ty Ty Creek (1)	Tucker Cr. to Warrior Cr. near Omega (Colquitt Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	9	X	3	2
Warrior Creek (1)	Rock Cr. to Ty Ty Cr. near Norman Park (Colquitt Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	8	X	3	2
West Fork Deep Creek (1)	Downstream SR S1798 to downstream SR 159 N. of Ashburn (Turner Co.)	Fishing	DO	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	2

2000-2001 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
Westside Branch (2)	Tributary to Little River, Tifton (Tift Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	2	X	3	3
Withlacoochee River (1)	Headwaters (Hardy Mill Creek) to New River (Berrien Co.)	Fishing	DO,FCG	NP	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution. Fish Consumption Guidelines due to mercury in fish tissue and is a partial support.	17	X	3	2
TALLAPOOSA RIVER BASIN									
Buffalo Creek (1)	Downstream Southwire Corp. (Carroll Co.)	Fishing	Cu	I2	EPD Hazardous Waste Management Branch is working with the Southwire Corporation to complete final site cleanup.	3	X	2	2
Buffalo Creek (1)	Upstream Little Tallapoosa River (Carroll Co.)	Fishing	FC,Cu	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	6	X	X	2
Tributary to Baxter Creek (2)	Bremen (Haralson Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Tributary to Buck Creek (2)	Bremen (Haralson Co.)	Fishing	FC	UR	Impairment will be addressed by implementing a locally developed plan that includes the remedial actions necessary for problem resolution.	1	X	3	3
Tributary to Buffalo Creek (1)	Carrollton (Carroll Co.)	Fishing	Cu	I2	EPD Hazardous Waste Management Branch is working with the Southwire Corporation to complete final site cleanup.	1	X	2	2
TENNESSEE RIVER BASIN									
Dry Creek (1)	Headwaters to State Line, Chattanooga Creek (Walker Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy for the basin.	5	X	X	3
McFarland Branch (1)	Rossville to Stateline (Walker Co.)	Fishing	FC,DO	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy for the basin.	1	X	X	2
Nottely River (1,13)	US Hwy 19 to Lake Nottely (Union Co.)	Recreation	FC	NP	EPD will address nonpoint sources through a watershed protection strategy for the basin.	8	X	X	3
South Chickamauga Creek (1,10,13)	Ringgold to Stateline (Catoosa Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy for the basin.	15	X	X	3

2000-2001 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
West Chickamauga Creek (1)	Mill Creek to Crawfish Creek (Walker Co.)	Fishing	FC	NP	EPD will address nonpoint sources through a watershed protection strategy for the basin.	16	X	X	3
West Chickamauga Creek (1)	Hwy 2 to Stateline (Catoosa Co.)	Fishing	FC	UR	EPD will address nonpoint source (urban runoff) through a watershed protection strategy.	7	X	X	3

*Indicates minimal data set.

2000-2001 LAKES/RESERVOIRS NOT FULLY SUPPORTING DESIGNATED USES

LAKE NAME	LOCATION	BASIN	SUPPORT CATEGORY	WATER USE CLASSIFICATION	CRITERION VIOLATED	POTENTIAL CAUSE(S)	ACRES AFFECTED	305(b)	303(d)	Priority
Acworth (1,14,35)	Upper/Mid-Lake Cobb County	Coosa	Partial Support	Fishing	FC	UR	194	X	X	3
Albany By-Pass Pond (1)	Dougherty County	Flint	Partial Support	Fishing	FCG(DDE/DDD)	UR,NP	20	X	X	3
Allatoona (1)	Cherokee, Cobb, & Bartow Counties	Coosa	Partial Support	Drinking Water/Recreation	FCG(PCBs)	UR	10,571	X	3	3
Allatoona (1)	Tanyard Creek Embayment	Coosa	Partial Support	Drinking Water/Recreation	FCG(PCBs),FC	UR	84	X	3,X	3
Allatoona (1)	Little River Embayment	Coosa	Partial Support	Drinking Water/Recreation	FCG(PCBs),FC, Chlorophyll a	NP,UR	950	X	3,X,X	3
Allatoona (1)	Carters Creek Embayment	Coosa	Partial Support	Drinking Water/Recreation	FCG(PCBs),FC	UR	255	X	3,X	3
Banks(1)	Lanier County	Suwannee	Partial Support	Fishing	FCG(Hg)	NP	2900	X	3	3
Big Haynes Reservoir (Black Shoals Lake) (1)	Rockdale County	Ocmulgee	Partial Support	Drinking Water	FCG(Hg)	NP	650	X	4	3
Goat Rock (1)	Harris County	Chattahoochee	Partial Support	Drinking Water/Recreation	FCG(PCBs)	NP	941	X	3	3
Harding (1)	Bartletts Ferry, Harris County	Chattahoochee	Partial Support	Recreation/Drinking Water	FCG(PCBs)	NP	5,851	X	3	3
Hartwell (1)	Tugaloo Arm/Main Body - Hartwell	Savannah	Not Support	Recreation	FCG(PCBs)	I2	55,950	X	3	3
High Falls (1)	Monroe County	Ocmulgee	Partial Support	Recreation	FCG(PCBs)	UR,NP	699	X	3	3
Jackson (1)	Newton, Butts and Jasper Counties	Ocmulgee	Partial Support	Recreation	FCG(PCBs)	UR,NP	4,102	X	3	3
Jackson (1)	Newton, Butts and Jasper Counties	Ocmulgee	Partial Support	Recreation	FCG(PCBs),FC	UR,NP	650	X	3,4	3
Little Ocmulgee State Park Lake (Gum Creek Swamp) (1)	Telfair and Wheeler Counties	Ocmulgee	Partial Support	Fishing	FCG(Hg)	NP	224	X	4	3
Oliver (1)	Near Columbus	Chattahoochee	Partial Support	Drinking Water/Recreation	FCG(PCBs)	NP	2,150	X	3	3
Reed Bingham (1)	Reed Bingham State Park (Colquitt/Cook Counties)	Suwannee	Partial Support	Fishing	FCG(Hg)	NP	179	X	X	3

2000-2001 LAKES/RESERVOIRS NOT FULLY SUPPORTING DESIGNATED USES

LAKE NAME	LOCATION	BASIN	SUPPORT CATEGORY	WATER USE CLASSIFICATION	CRITERION VIOLATED	POTENTIAL CAUSE(S)	ACRES AFFECTED	305(b)	303(d)	Priority
Sinclair (1,3)	Putnam, Baldwin, and Hancock Counties	Oconee	Partial Support	Recreation	Temp	I1	650	X	4	3
Treutlen County PFA (Sand Hill Lake) (1)	Treutlen County	Altamaha	Partial Support	Fishing	FCG(Hg)	NP	166	X	4	3
West Point (1)	Troup and Heard Counties	Chattahoochee	Partial Support	Recreation	FCG(PCBs)	UR,NP	22,911	X	3	3
Yonah (1)	Habersham County	Savannah	Partial Support	Fishing	FCG(Hg)	NP	325	X	X	3

* Indicates minimal data set

2000-2001 ESTUARINE WATERS NOT FULLY SUPPORTING DESIGNATED USES

ESTUARY NAME (Data Source)	LOCATION	BASIN	WATER USE CLASSIFICATION	USE SUPPORT CATEGORY	CRITERION VIOLATED	POTENTIAL CAUSE(S)	SQUARE MILES AFFECTED	305(b)	303(d)	Priority
Brunswick River (1,5)	Brunswick	Satilla	Fishing	N	DO	I1,M	11	X	3	2
Dupree Creek (3,5)	Brunswick	Satilla	Fishing	N	SB,FCG(toxaphene)	I1	1	X	3	3
Gibson Creek (1,5)	Brunswick	Satilla	Fishing	N	PCBs,Hg,SB,FCG(PCBs,Hg)	I2	1	X	3	2
Purvis Creek (1,5)	Brunswick	Satilla	Fishing	N	Hg,Cd,PCBs,CFB,SB, FCG(PCBs,Hg)	I1,I2	1	X	3	2
Savannah Harbor (1,45)	SR25 (Old US Hwy 17) to Elba Island Cut	Savannah	Coastal Fishing	P	FC,DO	UR,M,I1	4	X	3,X	3,2
St. Simons Sound (1,5)	Brunswick	Satilla	Fishing	N	DO	I1,M,UR,NP	66	X	3	2
Terry Creek (1)	Brunswick	Satilla	Fishing	N	SB,FCG(PCBs,Hg,toxaphene)	I1,I2	1	X	3	3
Turtle River System (1,5)	Brunswick: Turtle River, Buffalo River, and South Brunswick River (Glynn Co.)	Satilla	Fishing	N	SB,FCG(PCBs,Hg)	I1,M	18	X	3	3

APPENDIX B

WATERS ADDED TO THE GEORGIA 303(d) LIST BY THE USEPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

Mr. Alan W. Hallum, Chief
Water Protection Branch
Georgia Department of Natural Resources
Environmental Protection Division
4220 International Parkway, Suite 101
Atlanta, Georgia 30354

SUBJ: Correction to the August 29, 2002 Letter to Georgia EPD Removing Waters or Pollutants from Attachment 2 of Georgia's §303(d) List

Dear Mr. Hallum:

Enclosed is the updated decision document concerning the August 29, 2002, removal of waters or pollutants from Georgia's §303(d) List. Camp Creek (3130006050) in Schley County, Georgia was included in the list of waters in the background section of the August 29, 2002 decision document. However, Camp Creek was inadvertently not included in the final decision section of the August 29, 2002, decision document. Enclosed is an updated copy of the August 29, 2002, decision document. By this letter, we are correcting this clerical mistake and have included a corrected copy of the August 29, 2002 decision document.

If you have any comments or questions, please feel free to call me at (404) 562-9470, or have a member of your staff contact Curry Jones at (404) 562-9302.

Sincerely,

for James D. Giattina, Director
Water Management Division

Enclosure

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

OCT 2 5 2002

OCT 3 0 2002

Alan W. Hallum, Chief
Water Protection Branch
Environmental Protection Division
Georgia Department of Natural Resources
4220 International Parkway - Suite 101
Atlanta, Georgia 30354

Dear Mr. Hallum:

Enclosed for your information, is the revised list of waters and pollutants of concern which were added to Georgia's §303(d) list, by EPA action, on December 31, 1996. This revision has been made in order to remove waters and pollutants of concern from Georgia's 2002 §303(d) list and to clarify that total maximum daily loads (TMDLs) have been established for a number of waters and pollutants. It is requested that the Georgia Environmental Protection Division incorporate this list of waters and pollutants of concern into its current §303(d) list.

Enclosure A, includes both the final decision document and responsiveness summary document which supports the delisting of thirteen (13) waters in the Chattahoochee and Flint River Basins. Enclosure B, includes the revised list of waters and pollutants of concern remaining on Attachment # 2 of Georgia's §303(d) list. In addition, Enclosure B also identifies waters for which TMDLs have been established.

If you have any comments or questions, please feel free to contact me at (404) 562-9326 or Curry Jones of my staff at (404) 562-9302.

Sincerely,

Gail Mitchell

Gail Mitchell, Chief
Standards, Monitoring and TMDL Branch
Water Management Division

Enclosures: (A & B)

cc: Mr. Eric E. Huber
Mr. Douglas P. Haines
Mr. Kesler T. Roberts
Mr. S. Randall Humm

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

AUG 29 2002

Mr. Alan W. Hallum, Chief
Water Protection Branch
Georgia Environmental Protection Division
4220 International Parkway
Suite 101
Atlanta, Georgia 30354

SUBJ: Removal of waters from Attachment 2 of Georgia's §303(d) list

Dear Mr. Hallum:

Enclosed for your information, are copies of EPA Region 4's final Decision Document and Responsiveness Summary concerning the July 15, 2002, proposed removal of waters and/or pollutants of concern from Attachment #2 of Georgia's current §303(d) list. The §303(d) list was prepared pursuant to §303(d) of the Clean Water Act, U.S.C. §1313(d), and EPA implementing regulations, 40 C.F.R. §130.7(b). With this action, 13 waterbodies will be delisted from Attachment #2 of Georgia's 2002 §303(d) list. The waterbodies are identified in the Decision Document which is attached.

If you have any questions concerning this matter, please contact me at 404-562-9236.

Sincerely,

Beverly H. Banister, Director
Water Management Division

Enclosures (2)

cc: Eric E. Huber
EarthJustice Legal Defense Fund

Kesler T. Roberts
Georgia Legal Watch

Enclosure A

AUGUST 28, 2002

RESPONSIVENESS SUMMARY
CONCERNING EPA'S JULY 15, 2002
PUBLIC NOTICE PROPOSING THE REMOVAL
OF WATERS AND/OR POLLUTANTS FROM
GEORGIA'S §303(d) LIST

Public Participation Activity Conducted:

On July 15, 2002, EPA Region 4 published an abbreviated public notice in the legal advertising section of the Atlanta Journal-Constitution. Additionally, Region 4 mailed detailed public notices to Georgia Environmental Protection Division (EPD), the Plaintiffs in the Georgia total maximum daily load (TMDL) lawsuit against EPA (Sierra Club et al. v. Hankinson et al., 1:94-cv-2501-MHS), and persons, identified as potentially interested parties that are on a mailing list maintained by EPA Region 4. This public notice requested comments from the public on EPA's proposed removal of waters and/or pollutants of concern from Attachment #2 of the State of Georgia's §303(d) list. The following waters and §303(d) listed pollutants of concern were proposed for removal from Attachment #2 of the State of Georgia's §303(d) list:

WATERBODY	LOCATION (COUNTY)	POLLUTANT	GOOD CAUSE JUSTIFICATION FOR REMOVAL
FLINT RIVER BASIN			
3130010070 Fishpond Drain	Seminole County	pollutant unknown, waterbody dry at time of listing	more recent and accurate data
3130009020 Pachitla Creek	Randolf and Calhoun Counties	biota/habitat	more recent and accurate data
3130008070 Big Slough	Grady and Mitchell Counties	pollutant unknown, waterbody dry at time of listing	more recent and accurate data
3130008040 Cooleewahee Creek	Baker and Dougherty Counties	biota	more recent and accurate data

3130008030 River Bend (Baconton; Wethington Slough)	Mitchell County	pollutant unknown, waterbody dry at time of listing	more recent and accurate data
3130007080 Lower Kinchafoonee Creek	Terrell and Lee Counties	habitat	more recent and accurate data
3130005170 Whitewater Creek	Macon and Taylor Counties	biota	more recent and accurate data
3130009030 Chickasawhatchee Creek	Terrell County	biota/habitat	more recent and accurate data
3130007010 Muckalee Creek	Schley County	habitat	more recent and accurate data
3130006050 Camp Creek	Schley County	biota/habitat	more recent and accurate data
CHATTAHOOCHEE RIVER BASIN			
3130001070 Mossy Creek	White County	biota	more recent and accurate data
3130001010 Soque River	Habersham County	biota/habitat/sediment	more recent and accurate data
3130001060 Mud Creek	Habersham County	biota	more recent and accurate data

Matters on Which Public Was Consulted:

As a result of settlement negotiations in the Georgia TMDL lawsuit (Sierra Club et al. v Hankinson et al., 1:94-cv-2501-MHS), EPA had the following commitment:

> "If Georgia fails to propose for public comment by June 30, 2002, TMDLs for each waterbody identified in Georgia's 2002 Section 303(d) list, whether such Section 303(d) list is prepared by Georgia or by EPA, and that such is located in the Chattahoochee/Flint Basins, then EPA shall propose such TMDLs by August 30, 2002. In the event EPA proposes such TMDLs, EPA will establish TMDLs following public notice and comment

within a reasonable time, and, where significant comment is not received, expects to establish TMDLs by February 2003, unless Georgia submits and EPA approves such TMDLs prior to EPA establishing such TMDLs."

The public was consulted on the proposed removal of a number of §303(d) listed waters and pollutants of concern. During 2001 and 2002, EPA Region 4 had collected and evaluated water quality related data and information about these waters and pollutants and prepared documents supporting preliminary determinations of these evaluations.

Summary of Public's Comments:

No comments were received concerning the proposed action during the public comment period.

Four requests for additional information were received and documents and the requested information were sent to the requestor.

Description of the Effectiveness of the Public Participation Program:

The public participation process in the matter of EPA's proposed removal of waters and/or pollutants from Attachment #2 of Georgia's §303(d) list was considered to be an important one. The number of comments received from the public, including local organizations, was not significant. However, past experience indicates that the opportunity for public participation in this matter was effective.

AUGUST 29, 2002

DECISION DOCUMENT CONCERNING THE JULY 15, 2002, PROPOSED REMOVAL OF WATERS OR POLLUTANTS OF CONCERN FROM GEORGIA'S §303(d) LIST

BACKGROUND

On December 31, 1996, the U.S. Environmental Protection Agency (EPA) added a number of waters and pollutants of concern to Georgia's §303(d) list. Among these listings were certain waters in the Chattahoochee and Flint River Basins in the State of Georgia.

During 2001 and 2002, personnel of the Science and Ecosystem Support Division and the Water Management Division of EPA Region 4 conducted on-site investigations of waters in these river basins. Based on the data and information collected during these investigations, EPA Region 4 determined that several waters are not impaired for the §303(d) listed pollutant(s) of concern. These waters were added to Georgia's §303(d) list by EPA on December 31, 1996.

40 C.F.R. §130.7(b)(6)(iv) allows for the removal of unimpaired waters and/or pollutants of concern from the §303(d) list provided good cause justification can be documented. For that reason, EPA determined that it was appropriate to propose the removal of these unimpaired waters from EPA's portion of Georgia's §303(d) list.

On July 15, 2002, EPA proposed removing the following waters/pollutants identified in Attachment 2 of the Georgia §303(d) list:

WATERBODY	COUNTY LOCATION	POLLUTANT
3130010070 Fishpond Drain[1]	Seminole County	pollutant unknown, waterbody dry at time of listing
3130009020 Pachitla Creek[2]	Randolf and Calhoun Counties	biota/habitat
3130008070 Big Slough[1]	Grady and Mitchell Counties	pollutant unknown, waterbody dry at time of listing

3130008040 Cooleewahee Creek[3]	Baker and Dougherty Counties	biota
3130008030 River Bend (Baconton; Wethington Slough)[2]	Mitchell County	pollutant unknown, waterbody dry at time of listing
3130007080 Lower Kinchafoonee Creek[4]	Terrell and Lee Counties	habitat
3130005170 Whitewater Creek[5]	Macon and Taylor Counties	biota
3130009030 Chickasawhatchee Creek[6]	Terrell County	biota/habitat
3130007010 Muckalee Creek [2]	Schley County	habitat
3130006050 Camp Creek [2]	Schley County	biota/habitat
3130001070 Mossy Creek[7]	White County	biota
3130001010 Soque River[7]	Habersham County	biota/habitat/ sediment
3130001060 Mud Creek [2]	Habersham County	biota

[1] This water remains on Georgia EPD's main 303(d) list for dissolved oxygen and fecal coliform -TMDLs proposed
[2] New data show that this waterbody is not impaired
[3] This water remains on Georgia EPD's main 303(d) list for biota and fecal coliform -TMDLs proposed
[4] This water remains on Georgia EPD's main 303(d) list for fish consumption guideline exceedance due to mercury -TMDL proposed
[5] This water remains on Georgia EPD's main 303(d) list for biota and pH -TMDLs proposed
[6] The portion of this waterbody upstream of Brantley Creek remains on EPA's portion of the 303(d) list for biota -TMDL proposed
[7] This water remains on Georgia EPD's main 303(d) list for fecal coliform -TMDL proposed

REVISIONS TO THE JULY 15, 2002 PROPOSED ACTION

EPA has not received any written comments from the public or other agencies which request reconsideration of the proposed action.

EPA has determined that no revisions need to be made to the public noticed proposed action to remove the aforementioned waters and/or pollutants of concern from EPA's portion (Attachment #2) of Georgia's §303(d) list.

FINAL DECISION

The following waters and/or pollutant of concern are removed from Attachment #2 of Georgia's 2002 §303(d) list.

Camp Creek, 3130006050, Schley County, biota/habitat

Fishpond Drain, 3130010070, Seminole County
pollutant unknown, waterbody dry at time of listing

Pachitla Creek, 3130009020, Randolf and Calhoun Counties
biota/habitat

Big Slough, 3130008070, Grady and Mitchell Counties
pollutant unknown, waterbody dry at time of listing

Cooleewahee Creek, 3130008040, Baker and Dougherty Counties
biota

River Bend (Baconton; Wethington Slough), 3130008030, Mitchell County
pollutant unknown, waterbody dry at time of listing

Lower Kinchafoonee Creek, 3130007080, Terrell and Lee Counties
habitat

Whitewater Creek, 3130005170, Macon and Taylor Counties
biota

Chickasawhatchee Creek, 3130009030, Terrell County
biota/habitat

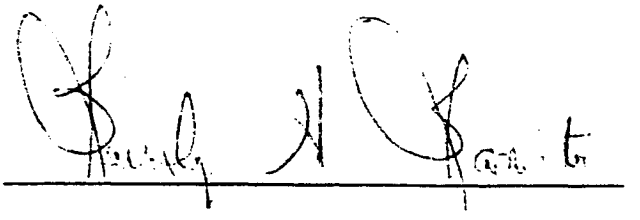
Muckalee Creek, 3130007010, Schley County
habitat

Mossy Creek, 3130001070, White County
biota

Soque River, 3130001010, Habersham County
biota/habitat/sediment

Mud Creek,3130001060, Habersham County
biota

CONCURRENCE:



8-29-02

Date

Beverly H. Banister, Director
Water Management Division
Region 4
U.S. Environmental Protection Agency

Enclosure B

WATERSHED IDENTIFICATION	WATER	LOCATION	POLLUTANT(S)	PRIORITY
ALTAMAHA RIVER BASIN				
3070103200	Tobesofkee Creek	Monroe, Bibb, and Lamar	Biota [1], Habitat [7]	3
3070101240	Little River	Morgan and Putnam	Habitat [7]	3
3070101070	Lower Middle Oconee River	Barrow, Clarke, and Jackson	[7]	3
3070101060	Middle Mulberry River	Barrow and Jackson	Habitat [7]	3
3070101050	Upper Mulberry River	Hull, Barrow, and Jackson	Habitat/Sediment [7]	3
3070101020	Walnut Creek	Hall and Jackson	Habitat [7]	3
3070101010	North Oconee River	Hall and Jackson	Habitat [7]	3
CHATTAHOOCHEE RIVER BASIN				
3130006020	Spring Creek	Macon	Biota [1], Habitat	3
3130005180	Red Oak Creek	Meriwether	Habitat	3
3130001050	White Creek	White [4]	Biota [1], Habitat/Sediment	3
3130001020	Hazel Creek	Habersham	Biota [1], Habitat/Sediment	3
COOSA RIVER BASIN				
3150108190	Lower Little Tallapoosa River	Carroll	Habitat/Sediment	3
3150108180	Little Tallapoosa River	Carroll	Biota [1], Habitat	3
3150104170	Dykes and Conaseena Creeks	Bartow and Floyd [2]	Habitat/Sediment	3
3150104150	Euharlee Creek	Polk and Bartow	Biota [1]	3

3150104080	Canton Creek	Cherokee	Biota [1], Habitat	3
3150104040	Long Swamp Creek	Pickens and Cherokee	Biota [1], Habitat	3
3150104030	Settingdown and Bannister Creeks	Dawson and Forsyth [2]	Biota [1], Habitat	3
3150103020	Oothklooga Creek	Gordon and Bartow	Biota [1], Habitat/Sediment	3
3150102070	Lower Coosawattee River	Gordon, Gilmer, and Murray	Habitat	3
3150102060	Pinelog Creek	Bartow and Gordon	Sediment	3
3150102050	Sallacoa Creek	Pickens and Gordon	Biota [1], Habitat	3
OCHLOCKONEE RIVER BASIN				
3120002070	Tired Creek	Grady	Biota [1, 7]	3
OGEECHEE RIVER BASIN				
3060203070	Bull and Cedar Creeks	Evans and Tattnall [6]	Biota [1], Habitat	3
3060203050	Lotts Creek	Bulloch	[3]	
3060203020	Fifteen Mile Creek	Emanuel and Candler	[3]	
3060202080	Black Creek	Bulloch	Biota [1], Habitat	3
SAVANNAH RIVER BASIN				
3060104080	South Fork Broad River	Madison and Oglethorpe	Biota [1, 7]	3
3060104070	South Creek/Biger Creek	Madison [2]	Biota [1], Sediment	3
3060104060	Broad River	Madison	Biota [1], Habitat	3
3060104030	Middle Fork Broad River	Franklin, Habersham, and Stephens	Habitat [7]	3
3060104020	Lower North Fork Broad River	Franklin	Biota [1], Habitat	3

3060104010	North Fork Broad River	Franklin and Stephens	Habitat [7]	3
3060102140	Lake Hartwell Tributaries	Franklin and Hart		3
	Crawford Creek		Biota [1]	
	Little Crawford Creek		Biota [1], Habitat	
	Little Shoal Creek		Biota [1,7], Habitat [7]	
	Shoal Creek [2]		Habitat	
3060102110	Toccoa Creek	Stephens	Biota [1,7]	3
	Scott Creek	Rabun County - entire length of 3.5 miles	Fecal coliform, Biota, Sediment [7]	3
	Saddle Gap Creek	Rabun County - entire length of 2.0 miles	Fecal coliform, Biota, Sediment [7]	3
	Chechero Creek	Rabun County - entire length of 1.5 miles	Fecal coliform, Biota, Sediment [7]	3
	She Creek	Rabun County	Fecal coliform, Biota	3
	Stekoa Creek	from upstream of Clayton, Georgia area to Chattooga River (Rabun County) - entire length of 13 miles	Biota [7] Sediment [7]	3
	Pool Creek	Rabun County - entire length of 1.6 miles	Sediment [7]	3
	Warwoman Creek (upper)	from source to Black Diamond Road (Rabun County) - 3.5 miles	Sediment [7]	3

	Roach Mill Creek	Rabun County - entire length of 1.5 miles	Biological community and habitat impairment	3
	Law Ground Creek	Rabun County - entire length of 2.3 miles	Sediment [7]	3

[1] A designated "Biota" pollutant reflects that the biological community is impacted and further monitoring studies are needed to determine factor(s) that cause the impairment.

[2] The name of the waterbody has been revised since EPA=s December 1996 addition to Georgia's §303(d) list.

[3] This water segment was dry at the time of the July - August 1996 investigation. No existing water quality-related data or information was available in order to determine the actual status of the water with respect to compliance with applicable water quality standards. No pollutant(s) of concern could be identified at the time of the December 1996 listing. Additional data regarding water quality was gathered in March - April 1997 when water was present in each of these segments. Analyses of the data is pending.

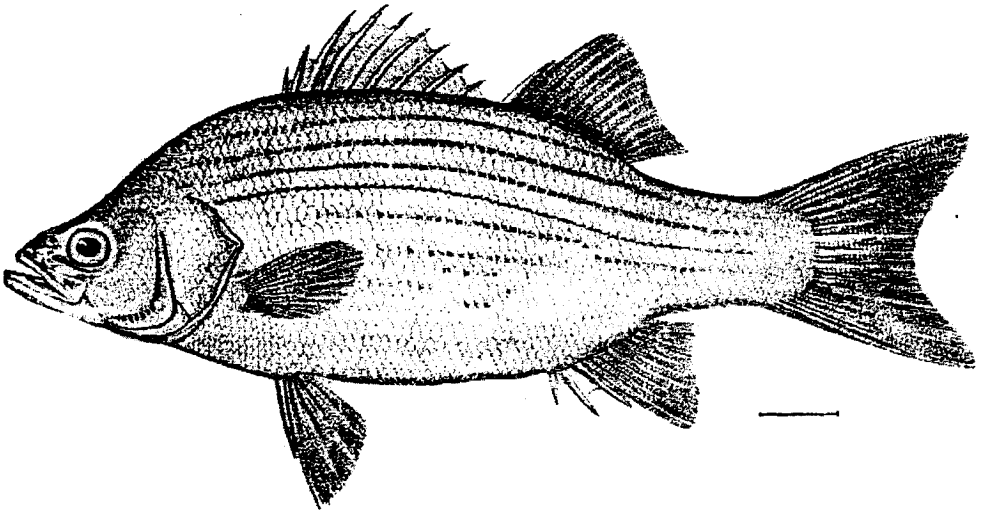
[4] The watershed identification has been revised since EPA's December 1996 addition to Georgia's §303(d) list.

[5] Water was not wadeable at the time of the July - August 1996 investigation and water quality data collection was not done at that time. Data collection is planned for the summer of 1998.

[6] Bull Creek was dry at the time of the July - August 1996 investigation. Additional data regarding water quality was gathered in March - April 1997 when water was present in the segment. Analyses of the data is pending. Cedar Creek has identified pollutants of Biota and Habitat.

[7] TMDL has been established, but water/pollutant remain on list until it is confirmed that water quality standards have been attained.

APPENDIX C
FISH CONSUMPTION GUIDELINES
(Reproduction of *Guidelines for Eating Fish from Georgia Waters - 2002*)



THE WHITE BASS.

Roccus chrysops (Raf.). Gill. [p. 48.]

PLATE III.

Image Credits:

Front Cover: NOAA Historic Photo Collection, National Marine Fisheries Service; White Bass. From *The Fisheries and Fisheries Industries of the United States* (1880's). Atlases undertaken by Deputy Commissioner George Brown Goode.U.S. Fish and Wildlife Service (USFWS): Snowy Egret (p. iv); Fisherman (p. 1); Sunfish (p. 2); Raccoon (pp. 3 & 6); Yellow Bullhead (p. 5). All Line Drawings by Robert Shallenberger, USFWS. Diagram of Fish Fat Areas (p. 7): Taken from U.S. EPA Brochure, Document # EPA-823-B-97-009; U.S.EPA Watershed Clip

APPENDIX C
Guidelines for Eating Fish from Georgia Waters - 2002 Update

(This Appendix is a Partial Reproduction of *Guidelines For Eating Fish From Georgia Waters - 2002 Update*; Some of the graphics, a River Basins of Georgia map, and the index were removed from this reproduction.)

Introduction

Fishing is a popular pastime in Georgia. Whether you go alone to relax and enjoy nature, with your friends to enjoy camaraderie and "fish tales" or with your family to pass on a sport you learned as a child, fishing is a fun and rewarding sport enjoyed by many people.

Not only does fishing give people an excuse to get away from the hustle and bustle of daily life, but it can also put a healthy, satisfying meal on the table. Fish is low in saturated fat, high in protein, and can have substantial health benefits when eaten in place of other high-fat foods. The quality of sport fish caught in Georgia is very good; however, polychlorinated biphenyls (PCBs), mercury, chlordane, DDT residues (DDE/DDD), and dieldrin have been found in some fish. In most cases, the levels of these chemicals are low. However, to help ensure the good health of Georgians, the Georgia Department of Natural Resources (DNR) has developed guidelines for how often certain species of fish can be safely eaten. These guidelines are based on the best scientific information and procedures available. As more advanced procedures are developed, these guidelines may change.

It is important to keep in mind that the consumption recommendations are based on health-risk calculations for someone eating fish with similar contamination over a period of 30 years or more.

These guidelines are not intended to discourage people from eating fish, but should be used as a guide for choosing to eat fish from Georgia waters.

The guidelines are non-binding recommendations EPD determines based on the body of water a fish comes from, the species of fish and the amount of fish a person consumes. The purpose of these guidelines is to provide detailed information in an understandable format for people who eat fish. Waters listed in the fish consumption guidelines are not necessarily assessed as impaired using USEPA guidelines for Section 303(d) of the Clean Water Act.

The river basin where tested sites are located has been identified in the tables. The fourteen major river basins in Georgia are shown on the map provided, preceding the consumption guidance tables. The listings for lakes have been divided into those with a surface area of 500 acres or more, and small lakes and ponds less than 500 acres in size. The Georgia rivers have also been divided into freshwater rivers and creeks, and estuarine systems. An index is provided at the back of the booklet for quick page reference to lake, river and estuarine locations that have been tested.

Are Georgia's Fish Safe to Eat?

Yes. The quality of fish in Georgia is good. Fish and seafood are nutritious and can play a role in maintaining a healthy well-balanced diet. This booklet provides you with the guidance and recommendations to use in eating fish in a healthy and informed manner. The Georgia Department of Natural Resources (DNR) has one of the most progressive fish testing programs in the southeast. A variety of different fish species were tested for 43 separate contaminants, including metals, organic chemicals and pesticides. Many of these contaminants did not appear in any fish. However, two contaminants, PCBs and mercury, were frequently detected in significant amounts in a few species from some bodies of water in Georgia. Three additional contaminants, chlordane, DDT residues (DDE/DDD), and dieldrin were also detected infrequently. This publication provides you with information on those five contaminants: PCBs, mercury, chlordane, DDT/DDE/DDD and dieldrin.

In some areas, fish are contaminated with low concentrations of PCBs, which stands for polychlorinated biphenyls. It is now illegal to manufacture PCBs; however, in the past, these synthetic oils were used regularly as fluids for electrical transformers, cutting oils, and carbonless paper. Although they were banned in 1976, they do not break down easily and remain in aquatic sediments for years. Over time levels of PCBs are decreasing.

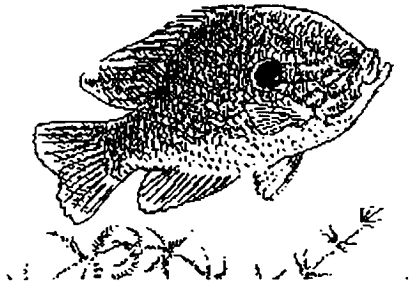
Mercury is a naturally occurring metal that does not break down as it cycles between land, water, and air. As mercury cycles through the environment it is absorbed and ingested by plants and animals. Most of the mercury absorbed or ingested will be returned to the environment but some will remain in the plant and animal tissues. It is not known where the mercury in Georgia's fish originated. Mercury may be present in fish because of the mercury content of soils and rocks in the southeast, from municipal and industrial sources, or from fossil fuel use. Scientific evidence is growing that mercury is transported long distances through the upper atmosphere, making its control a global environmental issue. Although mercury has always been present, scientific research shows that the amount of mercury cycling through the environment has increased significantly following the dawn of the Industrial Revolution in the late 1800s.

Chlordane is a man-made pesticide used in the U.S. from the late 1940s to the early 1980s. Historically, chlordane was used as an agricultural pesticide, but in 1978 it was restricted to termite control use only. It is now banned for all uses. Chlordane is persistent in the environment and may remain in aquatic sediments for years.

How Do Georgia's Fish Compare?

Georgia has one of the most extensive fish monitoring programs in the southeast. This is not because Georgia has highly contaminated fish, but because the DNR has made a serious commitment to evaluate fish quality and provide detailed information to the people of Georgia. Review and comparison of data collected nationally on fish tissue contamination that the U.S.EPA has assembled shows that the quality of fish in Georgia is similar to that in surrounding southeastern states.

How Do Fish Become Contaminated?



Contaminants get into water as a result of storm water runoff, industrial and municipal discharges, agricultural practices, nonpoint source pollution and other factors. When it rains, chemicals from the land and in the air are washed into the water.

Contaminants are carried downstream by rivers and creeks into lakes, reservoirs, and estuaries. Contaminants can get into fish in a variety of ways. Fish absorb PCBs, chlordane and other pesticides from either water, suspended sediments, or their food. These chemicals concentrate in the fat of fish tissue and in fatty fish such as carp and catfish. Cleaning and cooking a fish to remove fat will lower the amount of PCBs, chlordane or other pesticides in a fish meal. Larger, older fish and fish which eat other fish may accumulate more contaminants than smaller, younger fish. Contaminants are not usually detected in panfish such as crappie and bluegill.

Once in the water, mercury is converted to methylmercury by bacteria and other processes. Fish absorb methylmercury from their food and from water as it passes over their gills. Mercury is bound to proteins in fish tissue, including muscle.

What is Being Done?

The DNR is committed to protecting Georgia's rivers, streams, lakes and other waters. Both PCBs and chlordane have been banned and the levels of these chemicals are steadily decreasing over time.

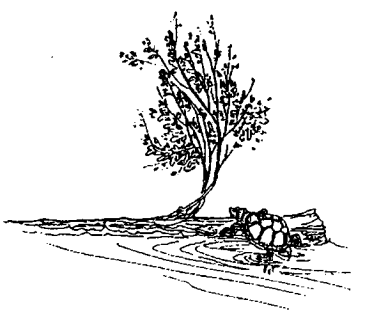
The Department began this progressive program to evaluate problem areas and to protect public health by giving people the information they need to make decisions about eating fish from different waters. The DNR's fish testing program is ongoing. Testing on additional lakes and rivers is balanced with retesting of waters where changes may be occurring. Contaminant levels in fish change very slowly and sampling the same species of fish from the same locations over time will allow the DNR to document changes and trends in contamination levels.

Georgia has more than 70,150 miles of rivers and streams and more than 425,382 acres of lakes, reservoirs and ponds. It will not be possible for the DNR to sample every stream and lake in the state. However, high priority has been placed on the 26 major reservoirs which make up more than 90% of the total lake acreage. Waterways listed in this guide will continue to be sampled as part of a five year rotating schedule of river basin planning and monitoring to track any trends in fish contaminant levels. The Department has also made sampling fish in rivers and streams downstream of urban and/or industrial areas a high priority. The DNR also focuses attention on areas which are frequented by a large number of anglers.

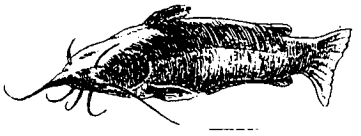
Most lakes and rivers contain a wide variety of fish and selecting which species of fish to test is important. The DNR samples fish that are top predators (high in the food chain) and fish that feed on the bottom. For this reason, largemouth bass and channel catfish are usually the primary species tested. Hybrid bass are also tested in areas with good fisheries for this species. Smaller fish, such as crappie, bluegill and redbreast sunfish, are tested in secondary studies after testing the larger target fish. This is because smaller fish accumulate contaminants more slowly and in smaller amounts than larger fish and bottom feeders.

To prevent future contamination, the Department seeks to identify pollution sources and to work with industries, cities, farms and others to reduce the threat posed by pollutants. In many cases this means implementing new technologies or practices that eliminate the use or creation of contaminants and thus the need to dispose of or discharge these chemicals. State laws have tough Restrictions and penalties for discharge of toxic substances. The DNR is responsible for enforcing these laws in Georgia and for ensuring compliance with these regulations.

Individuals can play a role in preventing contamination of Georgia's waters by recycling and disposing of chemicals, such as oil, antifreeze, paint, and other wastes properly. Manufacturers are working to reduce the use of mercury in their products, but it is still found in common household products such as thermostats, electrical switches, thermometers, some batteries, and fluorescent and mercury vapor lamps. To protect Georgia's waterways from contamination, individuals, industries, farmers and others must learn to modify their day-to-day activities and work practices to apply new ways to prevent pollution. The DNR will continue to work closely with these groups to improve water quality in Georgia. Planning, regulations, facilities modernization, public education and other activities will play a major role in protecting Georgia's waters for future generations.



Benefits of Eating Fish



Fish has long been recognized as a nutritious "protein food". It's nutritional value as a protein source is greater than that for beef, pork, chicken or milk. Additionally, the types and amounts of dietary fats are generally more "heart healthy" than the fats found in other protein foods. Fish is also an important source of the fatty acids which are critical for the development of the brain and nervous system. Fish is an excellent source of several vitamins, and also contributes appreciable amounts of dietary calcium, iron and zinc. These minerals are essential nutrients that tend to be low in people's diets. Many studies suggest that eating fish regularly may help protect against heart and inflammatory diseases.

These guidelines are based on a range in fish meal size from 4 to 8 ounces (1/4 to 1/2 pound). Where the guidelines recommend only 1 meal per week or month, you may prefer to have two smaller meals over that period.

Risks of Contaminated Fish

These guidelines were designed to protect you from experiencing health problems associated with eating contaminated fish. PCBs, methylmercury, chlordane, DDE/DDD and dieldrin build up in your body over time. It may take months or years of regularly eating contaminated fish to accumulate levels which would affect your health. Keep in mind that these guidelines are based on eating fish with similar contamination over a period of 30 years or more. Current statistics indicate that cancer will affect about one in every four people nationally, primarily due to smoking, diet and hereditary risk factors. If you follow Georgia's consumption guidelines, the contaminants in the fish you eat may not increase your cancer risk at all. At worst, using the United States Environmental Protection Agency's (U.S. EPA) estimates of contaminant potency, your cancer risk from fish consumption should be less than 1 in 10,000.

PCBs, chlordane, DDD/DDE and dieldrin can cause cancer in laboratory animals exposed to large amounts, and may cause cancer in humans. Effects other than cancer from these chemicals may include developmental problems in children whose mothers were exposed to them before or during pregnancy. Studies of people who have been exposed to very large quantities of these chemicals (pesticide workers, etc.), have indicated a relationship between high exposures and health effects on the nervous system, digestive system and liver, and the immune system. Exposure to methlymercury has not been linked to cancer. Methylmercury is a concern because of it's potential to damage the nervous system, especially in the developing fetus and young child.

The consumption advice provided in this booklet is developed in a conservative manner. It is intended to protect both children and adults from cancer and the other potential toxic effects of these chemicals.

Special Notice for Pregnant Women, Nursing Mothers and Children

If you are pregnant or a nursing mother, or plan to become pregnant soon, you and children under 6 years of age are sensitive to the effects of contaminants such as mercury. DNR's guidelines are designed to be protective for these sensitive groups. In early 2001 the U.S. EPA issued a national advisory recommending that these sensitive groups limit consumption of all freshwater fish to one meal per week due to mercury. People may wish to follow U.S. EPA's recommendation, especially in areas where DNR has not tested fish and offered detailed guidelines. For most other healthy adults, DNR's recommendations may actually be overly conservative.

Ways to Reduce Risk

Keep smaller fish for eating. Generally, larger older fish may be more contaminated than younger, smaller fish. You can minimize your health risk by eating smaller fish (within legal size limits) and releasing the larger fish.

Vary the kinds of fish you eat. Contaminants build up in large predators and bottom-feeding fish, like bass and catfish, more rapidly than in other species. By substituting a few meals of panfish, such as perch, sunfish and crappie, you can reduce your risk.

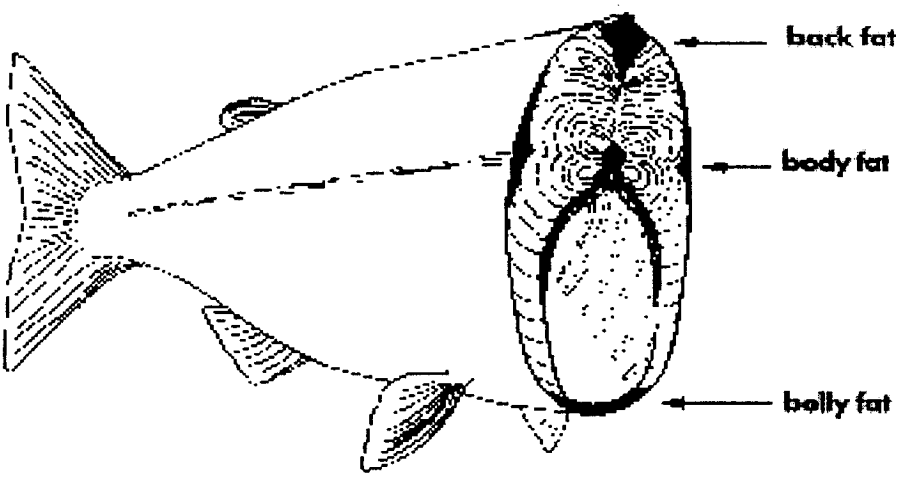
Eat smaller meals when you eat big fish and eat them less often. If you catch a big fish, freeze part of the catch (mark container or wrapping with species and location), and space the meals from this fish over a period of time.

Clean and cook your fish properly. How you clean and cook your fish can reduce the level of contaminants by as much as half in some fish. Some chemicals have a tendency to concentrate in the fatty tissues of fish. By removing the fish's skin and trimming fillets according to the following diagram, you can reduce the level of chemicals substantially. Mercury is bound to the meat of the fish, so these precautions will not help reduce this contaminant.

Remove the skin from fillets or steaks. The internal organs (intestines, liver, roe, and so forth), and skin are often high in fat and contaminants.

Trim off the fatty areas shown in black on the drawing. These include the belly fat, side or body fat, and the flesh along the top of the back. Careful trimming can reduce some contaminants by 25 to 50%.

Cook fish so fat drips away. Broil, bake or grill fish and do not use the drippings. Deep-fat frying removes some contaminants, but you should discard and not reuse the oil for cooking. Pan frying removes few, if any, contaminants.



Using These Guidelines

Check the following pages (or *Index*), for the area where you fish. The lakes and rivers on the list are arranged in alphabetical order. If your fish or fishing location is NOT in this booklet, follow the suggestions in *Guidelines to Reduce Risk.*

The current *Georgia Sport Fishing Regulations* should be consulted for the legal sizes and creel limits for different species in a water body. Some legal size limit information is provided in the following tables. The regulations also provide detailed information on how to measure fish length or other seafood size measures.

If your fish or fishing location is in the booklet, it does not necessarily mean that there is a contaminants problem, but only that the fish have been tested. Meal advice will depend on what contaminant(s) were found and how much was found in different species and sizes of fish. Follow these instructions carefully.

- Measure fish from the tip of the nose to the end of the tail fin.
- On the charts find your lake or river and the species and size of fish you caught. If there is no frequency listed for a particular size fish, that size has not been tested or is illegal to keep. For rivers, the size that was tested was the common creel size for that species.
- Listed below are the four different recommended meal frequencies that are possible for different species and sizes of fish.

no restriction
1 meal per week
1 meal per month
do not eat

- For the purposes of these guidelines, one meal is assumed to range from 1/4 to 1/2 pound of fish (4-8 ounces) for a 150 pound person. Subtract or add 1 ounce of fish to the range for every 20 pounds of body weight. For example, one meal is assumed to be 3 - 7 ounces for a 130 pound person and 5 - 9 ounces for a 170 pound person.

Fish Consumption Guidelines

The tables for public lakes have been separated into two categories based on size. The first set of lakes are those with a surface area of 500 or more acres. The second listing of public lakes includes those having less than 500 acres in surface area. These include Georgia DNR Public Fishing Areas (PFAs) and State Parks with small lakes and ponds, and municipal or other public fishing impoundments.

These guidelines are based on a range in fish meal size from 4 to 8 ounces (1/4 to 1/2 pound). Where the guidelines recommend only 1 meal per week or month, you may prefer to have two smaller meals over that period.

GEORGIA PUBLIC LAKES 500 ACRES OR LARGER

Lake Allatoona *Coosa River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Black Crappie	No Restrictions			
Carp	No Restrictions	No Restrictions	1 meal/week	PCBs
White Bass	No Restrictions	1 meal/week		PCBs
Largemouth Bass		No Restrictions	1 meal/week	Mercury
Spotted Bass	No Restrictions	1 meal/week		Mercury
Golden Redhorse		No Restrictions		
Channel Catfish	No Restrictions	No Restrictions		
Hybrid Bass			1 meal/week	Mercury

Lake Andrews *Chattahoochee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		1 meal/week	1 meal/week	Mercury
Channel Catfish			No Restrictions	

Banks Lake *Suwannee River Basin*

Species	Less than 12"	12 - 16"	Over 16"	Chemical
Largemouth Bass		1 meal/month		Mercury
Bluegill Sunfish	No Restrictions			

Big Haynes Reservoir (Black Shoals) *Ocmulgee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		1 meal/month		Mercury
Channel Catfish	No Restrictions	1 meal/week		Mercury

Lake Blackshear *Flint River Basin*

Species	Less than 12"	12 - 16"	Over 16"	Chemical
Largemouth Bass *		No Restrictions *	No Restrictions	
Flathead Catfish			No Restrictions	
Spotted Sucker		No Restrictions	No Restrictions	
*Only Largemouth Bass 14 inches and longer may be legally retained.				

Lake Blue Ridge *Tennessee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass	No Restrictions*	1 meal/week		Mercury
White Bass		1 meal/week		Mercury
Channel Catfish		No Restrictions	1 meal/week	Mercury
* Lake Blue Ridge has no minimum size on Largemouth Bass				

Lake Burton *Savannah River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass	No Restrictions*	No Restrictions	1 meal/week	Mercury
White Catfish	No Restrictions	No Restrictions		
Channel Catfish			No Restrictions	
Bluegill Sunfish	No Restrictions			
Spotted Bass		1 meal/week		Mercury
* Lake Burton has no minimum size on Largemouth Bass				

Carters Lake *Coosa River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions	No Restrictions	
Spotted Bass	No Restrictions	No Restrictions		
Channel Catfish		No Restrictions	No Restrictions	
Walleye		No Restrictions	No Restrictions	

Lake Chatuge *Tennessee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions	No Restrictions	
Channel Catfish		No Restrictions	No Restrictions	
Spotted Bass		1 meal/week		Mercury

Clarks Hill Lake (J. Strom Thurmond) *Savannah River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions	1 meal/week	Mercury
Black Crappie	No Restrictions	No Restrictions		
White Perch	No Restrictions			
Redear Sunfish	No Restrictions			
Hybrid Bass		No Restrictions	No Restrictions	
Striped Bass	No Restrictions	No Restrictions	No Restrictions	
Channel Catfish	No Restrictions	No Restrictions	No Restrictions	
Spotted Sucker			No Restrictions	

Goat Rock Lake *Chattahoochee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions	1 meal/month	PCBs, Mercury
White Bass	1 meal/month	1 meal/month		PCBs
Hybrid Bass	1 meal/week		1 meal/month	PCBs
Spotted Sucker			No Restrictions	
Black Crappie	No Restrictions	No Restrictions		
Channel Catfish		1 meal/week	1 meal/month	PCBs

Lake Harding (Bartletts Ferry) *Chattahoochee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		1 meal/week	1 meal/week	PCBs, Mercury
Channel Catfish	1 meal/week	1 meal/week	1 meal/month	PCBs
Crappie	No Restrictions	No Restrictions		
Hybrid Bass	1 meal/week		1 meal/month	PCBs

Lake Hartwell: Tugaloo Arm *Savannah River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		1 meal/week	1 meal/month	Mercury
Black Crappie	No Restrictions	No Restrictions		
Hybrid/Striped Bass	No Restrictions	1 meal/month	Do Not Eat	PCBs
Channel Catfish	No Restrictions	No Restrictions	1 meal/month	PCBs
Carp			1 meal/week	Mercury

Lake Hartwell: Main Body, Georgia/South Carolina Listing *Savannah River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		1 meal/month	1 meal/month	PCBs
Hybrid/Striped Bass	Do Not Eat	Do Not Eat	Do Not Eat	PCBs
Channel Catfish	1 meal/month	1 meal/month	1 meal/month	PCBs
Information on Main Body ((M) Downlake of Andersonville Island) provided courtesy of the South Carolina DHEC (Ph.: 1-888-849-7241) to ensure consistency of guidance.				

High Falls Lake *Ocmulgee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions	1 meal/week	PCBs
Channel Catfish	No Restrictions	No Restrictions	1 meal/week	PCBs
Redear Sunfish	No Restrictions			
Hybrid Bass	No Restrictions	No Restrictions	No Restrictions	
Black Crappie	No Restrictions	No Restrictions		

Jackson Lake *Ocmulgee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions	1 meal/week	Mercury
Channel Catfish	No Restrictions	No Restrictions	1 meal/week	PCBs
Black Crappie	No Restrictions			
Redear Sunfish	No Restrictions			

Lake Juliette *Ocmulgee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass	No Restrictions*	No Restrictions	No Restrictions	
Redear Sunfish	No Restrictions			
Bullhead species		No Restrictions		
* * Lake Juliette has no minimum size on Largemouth Bass				

Lake Sydney Lanier *Chattahoochee River Basin*
(Chattahoochee and Chestatee Arms and Main Body all Assessed and Found to have comparable residue levels of mercury)

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Striped Bass		No Restrictions	1 meal/week	Mercury
Spotted Bass *		1 meal/week *	1 meal/week	Mercury
Largemouth Bass *		1 meal/week *	1 meal/week	Mercury
White Catfish		No Restrictions		
Channel Catfish		No Restrictions	1 meal/week	Mercury
Carp			1 meal/week	Mercury
Bluegill Sunfish	No Restrictions			
Black Crappie	No Restrictions			
* Only Largemouth, Spotted and Shoal Bass 14 inches and longer may be legally retained.				

Lake Nottely *Tennessee River Basin*

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		1 meal/week	1 meal/week	Mercury
Striped Bass			1 meal/week	Mercury
Channel Catfish		No Restrictions	No Restrictions	
Black Crappie	No Restrictions			

Lake Oconee *Oconee River Basin*

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass *	No Restrictions *	No Restrictions *	1 meal/week	Mercury
Hybrid Bass	No Restrictions	No Restrictions		
Channel Catfish	No Restrictions	No Restrictions	No Restrictions	
White Catfish	No Restrictions			
Black Crappie	No Restrictions			
* Only Largemouth Bass under 11 inches, and 14 inches or longer may be legally retained.				

Lake Oliver *Chattahoochee River Basin*

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		1 meal/week	1 meal/week	PCBs, Mercury
Channel Catfish	No Restrictions	No Restrictions	1 meal/week	PCBs
Striped Bass	No Restrictions			
Bluegill Sunfish	No Restrictions			
Redear Sunfish	No Restrictions			

Lake Rabun *Savannah River Basin*

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		No Restrictions	1 meal/week	Mercury
White Catfish	No Restrictions	No Restrictions	1 meal/week	Mercury
Bluegill Sunfish	No Restrictions			

Lake Richard B. Russell *Savannah River Basin*

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		1 meal/week	1 meal/week	Mercury
Black Crappie	No Restrictions	No Restrictions		
Sunfish	No Restrictions			
Bluegill Sunfish	No Restrictions			
White Perch	No Restrictions			
Channel Catfish	No Restrictions	No Restrictions		
Bullhead	No Restrictions			

Lake Seminole *Chattahoochee/Flint River Basin (Apalachicola)*

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		No Restrictions	1 meal/week	Mercury
Channel Catfish		No Restrictions	No Restrictions	
Bullhead	No Restrictions	1 meal/week		Mercury
Spotted Sucker	No Restrictions	No Restrictions		

Lake Sinclair *Oconee River Basin*

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		No Restrictions	No Restrictions	
Hybrid Bass	No Restrictions		No Restrictions	
Catfish	No Restrictions	No Restrictions	No Restrictions	
Black Crappie	No Restrictions			

Lake Tobesofkee *Ocmulgee River Basin*

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		No Restrictions	1 meal/week	Mercury
Channel Catfish	No Restrictions	No Restrictions	No Restrictions	

Lake Tugalo *Savannah River Basin*

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		1 meal/month	1 meal/month	Mercury
White Catfish		No Restrictions		
Bluegill Sunfish	No Restrictions			

Lake Varner (Cornish Creek Reservoir, Newton County) *Ocmulgee River Basin*

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		No Restrictions		
Channel Catfish			No Restrictions	

Lake Walter F. George (Eufaula) *Chattahoochee River Basin*

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass *		*	No Restrictions	
Hybrid Bass		No Restrictions	No Restrictions	
Channel Catfish		No Restrictions	No Restrictions	
Black Crappie	No Restrictions			
Spotted Sucker		No Restrictions	No Restrictions	

* Only Largemouth Bass 14 inches and longer may be legally retained.

West Point Lake *Chattahoochee River Basin*

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		*	1 meal/week	PCBs, Mercury
Hybrid Bass	No Restrictions	1 meal/week	1 meal/week	PCBs
Channel Catfish		1 meal/week	1 meal/week	PCBs
Carp			1 meal/week	PCBs
Black Crappie	No Restrictions			
* Only Largemouth Bass 16 inches and longer may be legally retained.				

Lake Worth (Lake Chehaw; Flint River Reservoir) *Flint River Basin*

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		No Restrictions	1 meal/week	Mercury
Channel Catfish		No Restrictions	1 meal/week	Mercury
Flathead Catfish		No Restrictions	No Restrictions	
Spotted Sucker		No Restrictions	No Restrictions	

GEORGIA PUBLIC LAKES AND PONDS LESS THAN 500 ACRES

These guidelines are based on a range in fish meal size from 4 to 8 ounces (1/4 to 1/2 pound). Where the guidelines recommend only 1 meal per week or month, you may prefer to have two smaller meals over that period.

Lake Acworth *Coosa River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions	1 meal/week	Mercury
Bluegill Sunfish	No Restrictions			

City of Adairsville Pond *Coosa River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Carp		No Restrictions		

Albany By-Pass Pond *Flint River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		1 meal/week	1 meal/week	DDE/DDD
Brown Bullhead		1 meal/week		DDE/DDD

Allen Creek Wildlife Management Area, Ponds A and B *Oconee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions		
Bluegill Sunfish	No Restrictions			

Lake Bennett (Marben PFA, Charlie Elliot Wildlife Center) *Oconee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass *		1 meal/week*	1 meal/week	Mercury
*Minimum size is 14 inches unless posted otherwise.				

Big Lazer PFA (Gum Creek Impoundment) *Flint River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass *		No Restrictions *	1 meal/week	Mercury
Channel Catfish			No Restrictions	
*Minimum size is 14 inches unless posted otherwise.				

Bowles C. Ford Lake, City of Savannah *Savannah River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions	No Restrictions	
White Catfish	No Restrictions	No Restrictions		

Brasstown Valley Kids Fishing Pond *Tennessee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Bluegill Sunfish	No Restrictions			

Bush Field Airport, Augusta: Unnamed Pond *Savannah River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass	No Restrictions	1 meal/week		Mercury
Bluegill Sunfish	No Restrictions			

Clayton County Water Authority: Blalock Reservoir *Ocmulgee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions		
Black Crappie	No Restrictions			

Clayton County Water Authority: J.W. Smith Reservoir *Flint River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions		
Redear Sunfish	No Restrictions			

Clayton County Water Authority: Shamrock Reservoir *Ocmulgee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions		
Bluegill Sunfish	No Restrictions			

Dodge County PFA (Steve Bell Lake) *Ocmulgee River Basin*

Species	Less than 12"	12 - 16"	Over 16"	Chemical
Largemouth Bass *		No Restrictions *	No Restrictions	
Channel Catfish		No Restrictions	No Restrictions	
* Minimum size is 14 inches unless posted otherwise.				

Evans County PFA *Ogeechee Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass *		No Restrictions *	1 meal/week	Mercury
Channel Catfish			No Restrictions	
* Minimum size is 14 inches unless posted otherwise.				

Fort Yargo State Park Lake (Marburg Cr. Watershed Proj.) *Oconee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions	No Restrictions	
Carp	No Restrictions			

Ken Gardens Lake (Albany, Georgia) *Flint River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions		
Channel Catfish	No Restrictions			

Little Ocmulgee State Park Lake (Gum Creek Swamp) *Ocmulgee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass			1 meal/month	Mercury
Brown Bullhead		1 meal/week		Mercury

Lake Mayer (City of Savannah) *Ogeechee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions		
Redear Sunfish	No Restrictions			
Speckled Bullhead		No Restrictions	No Restrictions	

McDuffie PFA (East Watershed Ponds) *Savannah River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass *		No Restrictions *		
Channel Catfish		No Restrictions		
* Minimum size is 14 inches unless posted otherwise.				

McDuffie PFA (West Watershed Ponds) *Savannah River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass *		1 meal/week *	1 meal/week	Mercury
Channel Catfish		No Restrictions	No Restrictions	
* Minimum size is 14 inches unless posted otherwise.				

Nancy Town Lake (Habersham County) *Savannah River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Bluegill Sunfish	No Restrictions			
Largemouth Bass		No Restrictions		

Lake Olmstead (Richmond County) *Savannah River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions		
Spotted Sucker		No Restrictions		

Paradise PFA (Horseshoe 4) *Suwannee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Channel Catfish			No Restrictions	

Paradise PFA (Lake Patrick)) *Suwannee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass *		No Restrictions *	No Restrictions	
Brown Bullhead		No Restrictions	No Restrictions	
* Minimum size is 14 inches unless posted otherwise.				

Payton Park Pond, Valdosta *Suwannee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions		
Bluegill Sunfish	No Restrictions			

Reed Bingham State Park Lake *Suwannee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		1 meal/month	1 meal/month	Mercury
White Catfish			1 meal/month	Mercury

Lake Rutledge (Hard Labor Creek State Park) *Oconee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions		
Channel Catfish	No Restrictions	No Restrictions		

Lake Seed *Savannah River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Bluegill Sunfish	No Restrictions			

Shepherd Lake (Marben PFA, Charlie Elliot Wildlife Center) *Oconee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass *		No Restrictions *		
* Minimum size is 14 inches unless posted otherwise.				

Stone Mountain Lake *Ocmulgee River Basin*

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass			1 meal/week	Mercury
Catfish	No Restrictions	No Restrictions		

Treutlen County PFA (Sand Hill Lake) *Altamaha River Basin*

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		1 meal/month	1 meal/month	Mercury
Lake Chubsucker	1 meal/week	1 meal/month		Mercury

Tribble Mill Lake, Gwinnett County *Ocmulgee River Basin*

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass	No Restrictions	1 meal/week		Mercury
Black Crappie	No Restrictions			
Bluegill Sunfish	No Restrictions			

Yonah Lake *Savannah River Basin*

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		1 meal/week		Mercury
Catfish *		1 meal/week		Mercury
* Catfish were separate composites of Flat Bullhead, Channel and White Catfish				

GEORGIA FRESHWATER RIVERS AND CREEKS

Please note that the consumption guidelines for Georgia rivers are presented in a different format from the lake charts. Due to the flow of rivers, the site tested is important to the consumption guidelines. Consumption guidelines may vary from one stretch of river to another. The fish tested was the common creel size for the location and species. Freshwater rivers and creeks are tabulated first, followed by listings for Georgia tidal estuarine systems.

These guidelines are based on a range in fish meal size from 4 to 8 ounces (1/4 to 1/2 pound). Where the guidelines recommend only 1 meal per week or month, you may prefer to have two smaller meals over that period.

Alapaha River (Tifton to Stockton) ***Suwannee River Basin***

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S.Hwys. 82 to 84	1 meal/month	Mercury
Spotted Sucker	See Above	1 meal/week	Mercury
Redbreast Sunfish	See Above	No Restrictions	

Alapaha River (Near State Line) ***Suwannee River Basin***

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Near Statenville	1 meal/month	Mercury
Bullhead	See Above	1 meal/month	Mercury

Alapahoochee River (Near State Line) ***Suwannee River Basin***

Species	Site Tested	Recommendation	Chemical
Bullhead	Echols County	1 meal/week	Mercury

Alcovy River ***Ocmulgee River Basin***

Species	Site Tested	Recommendation	Chemical
Spotted Sucker	Arrowhatchee Farms	No Restrictions	
Chain Pickerel	See Above	No Restrictions	

Allatoona Creek, Cobb County ***Coosa River Basin***

Species	Site Tested	Recommendation	Chemical
Spotted Bass	Ga. Hwy. 176	1 meal/week	Mercury
Alabama Hog Sucker	See Above	1 meal/week	Mercury

Altamaha River, Near Baxley and Near Jesup, Ga. *Altamaha River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy 1	1 meal/week	Mercury
Channel Catfish	See Above	1 meal/week	Mercury
Flathead Catfish	See Above	1 meal/week	Mercury
Largemouth Bass	U.S. Hwys 25/84	1 meal/week	Mercury
Channel Catfish	See Above	No Restrictions	
Flathead Catfish	See Above	1 meal/week	Mercury

Apalachee River *Oconee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Apalachee Beach	1 meal/week	Mercury
Channel Catfish	See Above	No Restrictions	

Beaver Creek (Tributary to Patsiliga Creek) *Flint River Basin*

Species	Site Tested	Recommendation	Chemical
Yellow Bullhead	Taylor County	1 meal/month	Mercury

Boen Creek *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Bluehead Chub	Rabun County	No Restrictions	

Brasstown Creek *Tennessee River Basin*

Species	Site Tested	Recommendation	Chemical
Northern Hog Sucker	Towns County	No Restrictions	

Brier Creek (Burke County) *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Ga. Hwy. 56	1 meal/month	Mercury
Spotted Sucker	See Above	1 meal/week	Mercury

Broad River *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Channel Catfish	Ga. Hwy 17	No Restrictions	
Flathead Catfish	See Above	No Restrictions	

Buffalo Creek *Tallapoosa River Basin*

Species	Site Tested	Recommendation	Chemical
Bluegill Sunfish	Carroll County	No Restrictions	

Butternut Creek *Tennessee River Basin*

Species	Site Tested	Recommendation	Chemical
Hog Sucker	Union County	No Restrictions	

Cane Creek (Wimpy's Air Field) *Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Lumpkin County	No Restrictions	

Canoochee River (Hwy 192 to Lotts Cr.) *Ogeechee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy. 280	1 meal/month	Mercury
Channel Catfish	See Above	1 meal/week	Mercury
Redbreast Sunfish	See Above	1 meal/week	Mercury

Canoochee River (Lotts Cr. To Ogeechee River) *Ogeechee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Below Canoochee Creek (Taylor Creek)	1 meal/month	Mercury
Channel Catfish	See Above	1 meal/month	Mercury

Casey Canal (Tributary to Hayners Cr. / Vernon River) *Ogeechee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Eisenhower Dr.	No Restrictions	
Bluegill Sunfish	See Above	No Restrictions	
Striped Mullet	See Above	1 meal/week	Dieldrin

Chattahoochee River (Near Helen, and Above Lake Lanier) *Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Redeye Bass	Ga. Hwy 75, Helen	1 meal/week	Mercury
Snail Bullhead	See Above	1 meal/week	Mercury
Golden Redhorse	See Above	1 meal/week	Mercury
Largemouth Bass	Belton Bridge Road	1 meal/month	Mercury
Channel Catfish	See Above	No Restrictions	

Chattahoochee River (Buford Dam to Morgan Falls Dam *Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Multiple, Dam to Dam	1 meal/week	Mercury
Carp	See Above	No Restrictions	
Brown Trout	See Above	No Restrictions	
Rainbow Trout	See Above	No Restrictions	

Chattahoochee River (Morgan Falls Dam to Peachtree Creek) *Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Below Morgan Falls	No Restrictions	
Carp	See Above	1 meal/month	PCBs
Brown Trout	See Above	No Restrictions	
Jumprock Sucker	See Above	No Restrictions	

Chattahoochee River (Peachtree Creek to Franklin, Ga.) *Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Multiple Sites	1 meal/week	Mercury
Spotted Bass	See Above	No Restrictions	
Carp	See Above	No Restrictions	
Channel Catfish	See Above	No Restrictions	
Striped Bass	See Above	1 meal/month	PCBs
White Sucker	See Above	No Restrictions	

Chattahoochee River (West Point Dam to Interstate 85) *Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Below Dam	No Restrictions	
Spotted Bass	See Above	1 meal/week	Mercury
Flat Bullhead Catfish	See Above	No Restrictions	

Chattahoochee River (Oliver Dam to Oswichee Creek, Chattahoochee County) *Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Below Eagle Phoenix Dam	No Restrictions	
Channel Catfish	See Above	1 meal/week	PCBs

Chattahoochee River *Chattahoochee River Basin*
(Chattahoochee County to Stewart County; Oswichee Creek to Omaha, Ga.)

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Oswichee Creek	No Restrictions	
Spotted Sucker	See Above	No Restrictions	
Crappie	See Above	No Restrictions	
Channel Catfish	See Above	No Restrictions	

Chattahoochee River (Early County) *Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Hybrid Bass	Downstream of Plant Farley	No Restrictions	

Chattanooga Creek *Tennessee River Basin*

Species	Site Tested	Recommendation	Chemical
Bluegill Sunfish	Ga. Hwy 193	No Restrictions	
Northern Hog Sucker	See Above	No Restrictions	

Chattooga River (Northeast Georgia, Rabun County) *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Northern Hog Sucker	Hwy. 24	1 meal/week	Mercury
Silver Redhorse	Above Lake Tugalo	1 meal/week	Mercury

Chattooga River (Northwest Georgia) *Coosa River Basin*

Species	Site Tested	Recommendation	Chemical
Bluegill Sunfish	Chattoogaville	No Restrictions	
Black Crappie	See Above	No Restrictions	

Chickamauga Creek (East and South) *Tennessee River Basin*

Species	Site Tested	Recommendation	Chemical
Rock Bass	Ga. Hwy 2	No Restrictions	
Redbreast Sunfish	See Above	No Restrictions	

Chickamauga Creek (West) *Tennessee River Basin*

Species	Site Tested	Recommendation	Chemical
Spotted Bass	Ga. Hwy 2	1 meal/week	Mercury
Redbreast Sunfish	See Above	No Restrictions	

Chickasawhatchee Creek, WMA near Elmodel, Ga. *Flint River Basin*

Species	Site Tested	Recommendation	Chemical
Spotted Sucker	Wildlife Mgm't Area	No Restrictions	

Coleman River, Near Mouth, Rabun County *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Rainbow Trout	Near Tate City Rd.	No Restrictions	

Conasauga River: Near State Line; and Below Dalton *Coosa River Basin*

Species	Site Tested	Recommendation	Chemical
Rainbow Trout	Upstream Rough Cr.	No Restrictions	
White Bass	Old Tilton Bridge	1 meal/month	PCBs
Smallmouth Buffalo	See Above	1 meal/month	PCBs, Mercury

Coosa River (River Mile Zero to Hwy 100) *Coosa River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	River Mile 2, Rome	1 meal/month	PCBs
Spotted Bass	See Above	1 meal/week	PCBs, Mercury
Striped Bass	See Above	1 meal/month	PCBs
Blue Catfish	See Above	1 meal/month	PCBs
Smallmouth Buffalo	See Above	Do Not Eat	PCBs

Coosa River (Hwy 100 to Stateline) *Coosa River Basin*

Species	Site Tested	Recommendation	Chemical
Smallmouth Buffalo	Below Hwy 100 and at Brushy Branch	1 meal/month	PCBs
Largemouth Bass	See Above	1 meal/week	PCBs
Striped Bass	See Above	1 meal/month	PCBs
Spotted Bass	See Above	No Restrictions	
Channel Catfish	See Above	1 meal/month	PCBs
Black Crappie	See Above	1 meal/week	PCBs

Daniels Creek (Dade County) *Tennessee River Basin*

Species	Site Tested	Recommendation	Chemical
Bluegill Sunfish	Cloudland Canyon State Park	No Restrictions	

Dukes Creek (Near Helen) *Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Rainbow Trout	Near Ga.Hwy. 75	No Restrictions	

Etowah River (Dawson County) *Coosa River Basin*

Species	Site Tested	Recommendation	Chemical
Blacktail Redhorse	Kelly Bridge Road	1 meal/week	Mercury

Etowah River (Above Lake Allatoona, Cherokee County) *Coosa River Basin*

Species	Site Tested	Recommendation	Chemical
Spotted Bass	York Street	1 meal/week	Mercury
Golden Redhorse	See Above	No Restrictions	

Etowah River (Below Lake Allatoona, Bartow/Floyd Co.s) *Coosa River Basin*

Species	Site Tested	Recommendation	Chemical
Channel Catfish	U.S. Hwy. 411	No Restrictions	
Largemouth Bass	See Above	1 meal/week	Mercury
Striped Bass	See Above	No Restrictions	
Spotted Bass	See Above	1 meal/week	PCBs,Mercury
Bluegill Sunfish	See Above	No Restrictions	
Smallmouth Buffalo	See Above	1 meal/month	PCBs, Mercury

Flint River (Spalding/Fayette Counties) *Flint River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Ga. Hwy. 92	1 meal/week	Mercury
Spotted Sucker	See Above	No Restrictions	

Flint River (Meriwether/Pike/Upson Counties) *Flint River Basin*

Species	Site Tested	Recommendation	Chemical
Shoal Bass	Ga. Hwy. 18	1 meal/week	Mercury
Channel Catfish	See Above	No Restrictions	
Flathead Catfish	See Above	No Restriction	

Flint River (Taylor County) *Flint River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy. 80	1 meal/week	Mercury
Channel Catfish	See Above	No Restrictions	
Shoal Bass	See Above	No Restrictions	

Flint River (Above Lake Blackshear, Macon/Dooly Co.s) *Flint River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Oglethorpe, Ga. Hwy 49	1 meal/week	Mercury
Channel Catfish	See Above	No Restrictions	

Flint River (Below Lake Blackshear, Worth/Lee Co.s) *Flint River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	No. Albany, Ga. Hwy 32	1 meal/week	Mercury
Channel Catfish	See Above	No Restrictions	

Flint River (Dougherty/Baker/Mitchell Counties) *Flint River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Below Albany & Merck	No Restrictions	
Sucker	See Above	No Restrictions	
Flathead Catfish	See Above	No Restrictions	

Goldmine Branch (Tributary to Warwoman Cr.) *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Brook Trout	Rabun County	No Restrictions	

Gum Creek *Flint River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Crisp County	1 meal/week	Mercury
Carp	See Above	No Restriction	

Ichawaynochaway Creek *Flint River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Cordays Millpond	1 meal/week	Mercury
Spotted Sucker	See Above	No Restriction	

Jacks River (Fannin County) *Coosa River Basin*

Species	Site Tested	Recommendation	Chemical
Brown Trout	Watson Gap	No Restrictions	

Jones Creek (U.S. Forest Service Rd. 28-1) *Coosa River Basin*

Species	Site Tested	Recommendation	Chemical
Brown Trout	Lumpkin County	No Restrictions	

Kinchafoonee Creek (Sumter/Lee Counties) *Flint River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Ga. Hwys 49 to 118	1 meal/week	Mercury
Spotted Sucker	See Above	1 meal/week	Mercury

Little Dry Creek (Floyd County) *Coosa River Basin*

Species	Site Tested	Recommendation	Chemical
Bluegill Sunfish	Near Rome	No Restrictions	

Little River (Above & Below Rocky Cr., Wilkes Co.) *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Above Rocky Creek	1 meal/week	Mercury
Silver Redhorse	See Above	No Restrictions	
Largemouth Bass	Below Rocky Creek	1 meal/week	Mercury
Spotted Sucker	See Above	No Restrictions	

Little River (West of Valdosta, Lowndes County) *Suwannee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Above Ga. Hwy 133	1 meal/week	Mercury
Spotted Sucker	See Above	No Restrictions	

Little Tallapoosa River *Tallapoosa River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy. 27	No Restrictions	
Black Crappie	See Above	No Restrictions	
Brown Bullhead	See Above	No Restrictions	

Little Tennessee River (Rabun County) *Tennessee River Basin*

Species	Site Tested	Recommendation	Chemical
Mixed Bass/Sunfish	Above John Kelly Rd.	No Restrictions	
Mixed Sucker Spp.	See Above	No Restrictions	
Mixed Bass/Sunfish Species: Rock Bass, Redbreast and Green SunfishMixed Sucker Species: Black Redhorse, Striped Jumprock and Northern Hog Sucker			

Middle Oconee River (Above & Below Athens) *Oconee River Basin*

Species	Site Tested	Recommendation	Chemical
Redbreast Sunfish	U.S. Hwy 29, (Above)	No Restrictions	
Spotted Sucker	See Above	No Restrictions	
Silver Redhorse	Below Barber Creek	No Restrictions	

Mill Creek (Whitfield County) *Coosa River Basin*

Species	Site Tested	Recommendation	Chemical
Spotted Sucker	Near Dalton	No Restrictions	
Redbreast Sunfish	See Above	No Restrictions	

Moccasin Creek (Lake Burton Hatchery) *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Rainbow Trout	DNR Hatchery	No Restrictions	

Muckalee Creek (Sumter/Lee Counties) *Flint River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	McLittle Bridge Rd. To Ga. Hwy 118	1 meal/week	Mercury
Spotted Sucker	See Above	No Restrictions	

Mud Creek, Near Powder Springs, Cobb County *Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Alabama Hog Sucker	Ga. Hwy 360	No Restrictions	
Bluegill Sunfish	See Above	No Restrictions	

Nickajack Creek, Cobb County *Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Alabama Hog Sucker	Cooper Lake Road	No Restrictions	
Bluegill Sunfish	See Above	No Restrictions	

Noonday Creek *Coosa River Basin*

Species	Site Tested	Recommendation	Chemical
Alabama Hog Sucker	Cobb County	No Restrictions	
Redbreast Sunfish	See Above	No Restrictions	

North Oconee River (Above and Below Athens, Clarke Co.) *Oconee River Basin*

Species	Site Tested	Recommendation	Chemical
Redbreast Sunfish	Newton Bridge Road	No Restrictions	
Redbreast Sunfish	Whitehall Rd. (Below)	No Restrictions	
Flat Bullhead	See Above	No Restrictions	

Ochlockonee River (Moultrie to Thomasville) *Ochlockonee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Above Thomasville	1 meal/month	Mercury
White Catfish	See Above	1 meal/week	Mercury

Ochlockonee River (Thomasville to State Line) *Ochlockonee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Ga. Hwy. 93	1 meal/month	Mercury
Spotted Sucker	See Above	1 meal/week	Mercury

Ocmulgee River (Butts/Monroe Counties) *Ocmulgee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Below Lloyd Shoals Dam, L. Jackson	No Restrictions	
Brown Bullhead	See Above	No Restrictions	

Ocmulgee River (Bibb County) *Ocmulgee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	6 Mi. Downstream of Tobesofkee Cr.	1 meal/week	Mercury
Flathead Catfish	See Above	1 meal/month	PCBs, Mercury
Channel Catfish	See Above	No Restrictions	

Ocmulgee River (Houston/Twiggs Counties) *Ocmulgee River Basin*

Species	Site Tested	Recommendation	Chemical
Channel Catfish	Ga. Hwy. 96	No Restrictions	
Flathead Catfish	See Above	No Restrictions	

Ocmulgee River (Pulaski County) *Ocmulgee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Hawkinsville	No Restrictions	
Channel Catfish	See Above	No Restrictions	

Ocmulgee River (Wilcox/Telfair Counties) *Ocmulgee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy 280	1 meal/week	Mercury
Flathead Catfish	See Above	1 meal/week	Mercury

Ocmulgee River (Telfair/Wheeler Counties) *Ocmulgee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy 341	1 meal/week	Mercury
Flathead Catfish	See Above	1 meal/week	Mercury

Oconee River (Oconee and Greene Counties) *Oconee River Basin*

Confluence of North and Middle Oconee to Lake Oconee

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Above Barnett Shoals	1 meal/week	Mercury
Silver Redhorse	See Above	1 meal/week	Mercury

Oconee River (Baldwin/Wilkinson Counties) *Oconee River Basin*

Species	Site Tested	Recommendation	Chemical
Flathead Catfish	Milledgeville to Dublin	No Restrictions	
Largemouth Bass	See Above	No Restrictions	
Channel Catfish	See Above	No Restrictions	

Oconee River (Laurens County) *Oconee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	I-16	No Restrictions	
Spotted Sucker	See Above	No Restrictions	
Channel Catfish	See Above	No Restrictions	

Ogeechee River (Washington County; near Davisboro) *Ogeechee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Ga. Hwy 88	1 meal/month	Mercury
Spotted Sucker	See Above	1 meal/week	Mercury

Ogeechee River (Jefferson County; Louisville) *Ogeechee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy 1	1 meal/month	Mercury
Spotted Sucker	See Above	1 meal/week	Mercury
Redbreast Sunfish	See Above	1 meal/week	Mercury

Ogeechee River (Burke County; Midville) *Ogeechee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Ga. Hwy. 56	1 meal/month	Mercury
Redbreast Sunfish	See Above	1 meal/week	Mercury

Ogeechee River (Jenkins County; Millen) *Ogeechee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy 25	1 meal/month	Mercury
Snail Bullhead	See Above	1 meal/week	Mercury
Redbreast Sunfish	See Above	1 meal/week	Mercury

Ogeechee River (Bulloch County; near Statesboro) *Ogeechee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy 301	1 meal/month	Mercury
Channel Catfish	See Above	1 meal/week	Mercury
Redbreast Sunfish	See Above	1 meal/week	Mercury
Spotted Sucker	Ga. Hwy. 24 (so. bridge)	1 meal/week	Mercury

Ogeechee River (Bryan County; near Ellabelle) *Ogeechee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Ga. Hwy 204	1 meal/month	Mercury
Redbreast Sunfish	See Above	1 meal/week	Mercury
Channel Catfish	See Above	1 meal/week	Mercury

Ogeechee River (Near Ft. McAllister) *Ogeechee River Basin*

Species	Site Tested	Recommendation	Chemical
Mullet	Fort McAllister	No Restrictions	

Ohoopee River (Near Oak Park, Ga.) *Altamaha River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	I-16	1 meal/month	Mercury
Redbreast Sunfish	See Above	1 meal/week	Mercury

Ohoopee River (Near Reidsville, Ga., Tattnall Co.) *Altamaha River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Ga. Hwys 280 to 56	1 meal/month	Mercury
Redbreast Sunfish	See Above	1 meal/week	Mercury
Spotted Sucker	See Above	1 meal/week	Mercury

Okefenokee Swamp (Stephen Foster State Park) *Suwannee River Basin*

Species	Site Tested	Recommendation	Chemical
Bowfin	Billy's "Lake"	1 meal/month	Mercury
Flier (sunfish)	See Above	1 meal/week	Mercury

Olley Creek, Near Austell, Cobb County *Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Large Scale Stoneroller	Clay Road	No Restrictions	
Redbreast Sunfish	See Above	No Restrictions	

Oostanaula River (Floyd/Gordon Counties) *Coosa River Basin*

Species	Site Tested	Recommendation	Chemical
Smallmouth Buffalo	Ga. Hwy 156, Calhoun	1 meal/week	PCBs, Mercury
Bluegill Sunfish	See Above	No Restrictions	
Spotted Bass	Ga. Hwy 140	1 meal/week	Mercury
Bluegill Sunfish	See Above	No Restrictions	
Largemouth Bass	See Above	1 meal/week	PCBs
Striped Bass	See Above	1 meal/month	PCBs
Smallmouth Buffalo	See Above	No Restrictions	
Channel Catfish	See Above	1 meal/week	PCBs

Patsiliga Creek (Upstream of Beaver Creek, Taylor Co.) *Flint River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	From McCants Millpond to Ga. Hwy 208	No Restrictions	
Spotted Sucker		No Restrictions	
Chain Pickerel	See Above	1 meal/week	Mercury

Patsiliga Creek (Downstream of Beaver Creek) *Flint River Basin*

Species	Site Tested	Recommendation	Chemical
Bass Spp. *	Taylor County	1 meal/month	Mercury
Sucker Spp. *	See Above	1 meal/week	Mercury
*Bass: Largemouth & Shoal; Suckers: Grayfin Redhorse, Spotted & Greater Jumprock			

Pipe Makers Canal (Near Savannah, Georgia) *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Chatham County	1 meal/week	Mercury

Ponder Branch (Walker County, Villanow) *Coosa River Basin*

Species	Site Tested	Recommendation	Chemical
Redeye Bass	Ga. Hwy 136	No Restrictions	

Proctor Creek, Near Acworth, Cobb County *Coosa River Basin*

Species	Site Tested	Recommendation	Chemical
Green Sunfish	Ga. Hwy 293, Old US 41	No Restrictions	

Satilla River (Near Waycross, Ware/Brantley Co.s) *Satilla River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy 84	1 meal/month	Mercury
Redbreast Sunfish	See Above	1 meal/week	Mercury
Channel Catfish	U.S. Hwy 301	1 meal/week	Mercury

Satilla River (Folkston, Burnt Fort, Charlton/Camden Co.s) *Satilla River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Ga. Hwy. 252	1 meal/month	Mercury
Redbreast Sunfish	See Above	1 meal/month	Mercury

Savannah River (Columbia County) *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Above New Savannah Bluff Lock & Dam	1 meal/week	Mercury
Spotted Sucker	See Above	1 meal/week	Mercury

Savannah River (Richmond/Burke Counties) *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Downstream of New Savannah Bluff Lock & Dam	1 meal/week	Mercury
Sucker	See Above	No Restrictions	
Specific fish consumption guidelines have not been issued for the radionuclides cesium-137 and strontium-90, in the Savannah River (Burke & Screven Counties), adjacent to the Savannah River Site (SRS). The guidelines based on mercury were evaluated and deemed to be protective.			

Savannah River (Screven County) *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy 301	1 meal/week	Mercury
Redear Sunfish	See Above	No Restrictions	
Channel Catfish	See Above	No Restrictions	
Specific fish consumption guidelines have not been issued for the radionuclides cesium-137 and strontium-90, in the Savannah River (Burke & Screven Counties), adjacent to the Savannah River Site (SRS). The guidelines based on mercury were evaluated and deemed to be protective.			

Savannah River (Effingham County) *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Ga. Hwy 119	1 meal/month	Mercury
Channel Catfish	See Above	No Restrictions	

Savannah River (Fort Howard) *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Near Rincon	1 meal/month	Mercury
White Catfish	See Above	1 meal/week	Mercury
Redbreast Sunfish	See Above	No Restrictions	
Bowfin	See Above	1 meal/month	Mercury

Savannah River (Chatham County) *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy. 17	1 meal/week	Mercury
Channel Catfish	See Above	No Restrictions	

Savannah River (Tidal Gate) *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Red Drum	Tidal Gate	No Restrictions	
White Catfish	See Above	1 meal/week	Mercury

Sewell Mill Creek, Cobb County *Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Alabama Hog Sucker	Ga. Hwy 120	No Restrictions	
Bluegill Sunfish	See Above	No Restrictions	

Short Creek (Warren County) *Ogeechee River Basin*

Species	Site Tested	Recommendation	Chemical
Sunfish	Warren County	1 meal/week	Mercury

Slab Camp Creek (Oconee County) *Oconee River Basin*

Species	Site Tested	Recommendation	Chemical
Greater Jumprock	Watson Spring Road	No Restrictions	
Redbreast Sunfish	See Above	No Restrictions	

South River (Henry County) *Ocmulgee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Snapping Shoals	1 meal/week	PCBs
Silver Redhorse	See Above	No Restrictions	
Channel Catfish	Below Snapping Shoals	No Restrictions	

South River (Butts County) *Ocmulgee River Basin*

Species	Site Tested	Recommendation	Chemical
Black Crappie	Ga. Hwy. 36	No Restrictions	
Largemouth Bass	See Above	No Restrictions	
Channel Catfish	See Above	No Restrictions	
Redbreast Sunfish	See Above	No Restrictions	

Spirit Creek *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Above Richmond Factory Pond	No Restrictions	
Spotted Sucker	See Above	No Restrictions	
Redear Sunfish	See Above	No Restrictions	

Spring Creek (Seminole/Decatur/Miller Counties) *Flint River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Ga. Hwy. 84	1 meal/week	Mercury
Spotted Sucker	See Above	No Restrictions	

Stamp Creek (Cherokee County) *Coosa River Basin*

Species	Site Tested	Recommendation	Chemical
Rainbow Trout	Pine Log WMA	No Restrictions	

Stekoa Creek *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Striped Jumprock	Rabun County	No Restrictions	

St. Marys River (Charlton County) *St. Marys River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Near St. George	1 meal/month	Mercury
Redbreast Sunfish	See Above	1 meal/week	Mercury

St. Marys River (Camden County) *St. Marys River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy. 17	1 meal/week	Mercury
Redbreast Sunfish	See Above	No Restrictions	

Suwannee River (Off Ga. Hwy. 177, Clinch/Ware Co.s) *Suwannee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Short Camp Road	1 meal/month	Mercury
Bullhead Catfish	See Above	1 meal/week	Mercury
Chain Pickerel	See Above	1 meal/week	Mercury

Swamp Creek (Whitfield County) *Coosa River Basin*

Species	Site Tested	Recommendation	Chemical
Redeye Bass	Redwine Cove Road	1 meal/week	Mercury

Talking Rock Creek (Downtown Talking Rock, Pickens Co.) *Coosa River Basin*

Species	Site Tested	Recommendation	Chemical
Redeye Bass	Near Fire Department	1 meal/week	Mercury

Tallapoosa River *Tallapoosa River Basin*

Species	Site Tested	Recommendation	Chemical
Blacktail Redhorse	U.S. Hwy. 27	No Restrictions	
Bluegill Sunfish	See Above	No Restrictions	
Blacktail Redhorse	Ga. Hwy. 100	1 meal/week	Mercury

Tallulah River, Towns County *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Rainbow Trout	Charlies Creek Road	No Restrictions	

Tributary to Hudson River (Alto, Ga., Banks County) *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Redeye Bass	Below Alto Prison	1 meal/week	Mercury
Brown Bullhead	See Above	No Restrictions	

Upatoi Creek *Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Grayfin Redhorse	Above Mouth	No Restrictions	

Withlacoochee River (Hahira to State Line, Berrien/Lowndes Counties) *Suwannee River Basin*

Species	Site Tested	Recommendation	Chemical
Redbreast Sunfish	Ga. Hwy 122	1 meal/week	Mercury
Largemouth Bass	Near Clyattville	1 meal/month	Mercury
Redbreast Sunfish	See Above	1 meal/week	Mercury

Yahoola Creek (Consolidated Goldmine) *Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Alabama Hog Sucker	Lumpkin County	No Restrictions	

Yellow River *Ocmulgee River Basin*

Species	Site Tested	Recommendation	Chemical
Flat Bullhead Catfish	Porterdale Dam	No Restrictions	

GEORGIA ESTUARINE SYSTEMS

Estuaries and freshwaters in Georgia are included in the watersheds of 14 different river basins, using the United States Geological Survey Hydrologic Unit Code (HUC), cataloging system. Estuarine systems often communicate with adjoining basins due to natural interconnections and manmade structures and actions such as causeways, tidal gates and dredging. Terry Creek is technically in the Satilla River Basin, but because of tidal dynamics, water exchange occurs between it and the Altamaha River system.

These guidelines are based on a range in fish meal size from 4 to 8 ounces (1/4 to 1/2 pound). Where the guidelines recommend only 1 meal per week or month, you may prefer to have two smaller meals over that period.

Turtle River: Purvis and Gibson Creeks, (St. Simons Estuary) *Satilla River Basin*

Species	Site Tested	Recommendation	Chemical
Blue Crab, Clams, Mussels, Oysters, Shrimp, and other seafood	Purvis & Gibson Creeks	Do Not Eat	PCBs, Mercury

Upper Turtle & Buffalo Rivers (St. Simons Estuary) *Satilla River Basin*

Species	Site Tested	Recommendation	Chemical
Shrimp	Turtle and Buffalo Rivers, Upriver of Georgia Hwy 303	No Restrictions	
Blue Crab		1 meal/week	PCBs, Mercury
Flounder		1 meal/week	PCBs, Mercury
Red Drum		1 meal/week	PCBs, Mercury
Croaker		1 meal/month	PCBs, Mercury
Spotted Seatrout		1 meal/month	PCBs, Mercury
Black Drum		Do Not Eat	PCBs, Mercury
Clams, Mussels, Oysters		Do Not Eat	Shellfish Ban *
* Shellfish Ban per the National Shellfish Sanitation Program			

Middle Turtle River (St. Simons Estuary) *Satilla River Basin*

Species	Site Tested	Recommendation	Chemical
Shrimp	State Hwy 303 to Channel Marker 9	No Restrictions	
Flounder		1 meal/week	PCBs, Mercury
Black Drum		1 meal/month	PCBs, Mercury
Red Drum		1 meal/month	PCBs, Mercury
Spotted Seatrout		1 meal/month	PCBs, Mercury
Croaker		1 meal/month	PCBs, Mercury
Blue Crab		1 meal/month	PCBs, Mercury
Clams, Mussels, Oysters		Do Not Eat	Shellfish Ban *
* Shellfish Ban per the National Shellfish Sanitation Program			

Lower Turtle & South Brunswick Rivers (St. Simons Estuary) *Satilla River Basin*

Species	Site Tested	Recommendation	Chemical
Shrimp	Turtle River (From Channel Marker 9) and South Brunswick River (Downstream to Dubignon and Parsons Creeks)	No Restrictions	
Red Drum		No Restrictions	
Flounder		No Restrictions	
Blue Crab		1 meal/week	PCBs, Mercury
Croaker		1 meal/week	PCBs, Mercury
Black Drum		1 meal/month	PCBs, Mercury
Spotted Seatrout		1 meal/month	PCBs, Mercury
Clams, Mussels, Oysters		Do Not Eat	Shellfish Ban *
* Shellfish Ban per the National Shellfish Sanitation Program			

SPECIAL LISTINGS

Terry Creek (St. Simons Estuary) *Satilla River Basin*

Species	Site Tested	Recommendation	Chemical
Yellowtail (Silver Perch)	South of Torras Causeway to Lanier Basin	1 meal/week	PCBs, Mercury
Spot		No Restrictions	
Mullet		No Restrictions	
Spotted Seatrout		No Restrictions	
Black Drum		No Restrictions	
Red Drum		No Restrictions	
Croaker		No Restrictions	
Shrimp		No Restrictions	
Blue Crab		No Restrictions	
Clams, Mussels, Oysters		Do Not Eat	Shellfish Ban *
* Shellfish Ban per the National Shellfish Sanitation Program			

Terry Creek and Dupree Creek , (St. Simons Estuary) *Satilla River Basin*

Species	Site	Recommendation	Chemical (Cause)
All Seafood: Blue Crab, Clams, Oysters, Mussels, Shrimp, and Fish	All of Terry and Dupree Creeks North of Torras Causeway, to 1/2 mile West of confluence with the Back River	No Fishing or Swimming in these areas is recommended by the CRD, EPD and U.S.EPA	Due to the cleanup of toxaphene contaminated sediments

SPECIAL MERCURY GUIDANCE ON KING MACKEREL

On March 23, 2000, Georgia joined together with North Carolina, South Carolina and Florida in issuing a joint health advisory for the consumption of large king mackerel caught offshore in the South Atlantic Ocean that have been found to have high mercury concentrations. This advisory was issued to provide guidance on the safe consumption of king mackerel to the general public and sensitive populations such as pregnant women, nursing mothers and young children. It does not prevent fishermen from landing fish larger than 39 inches.

Georgia DNR officials began working with the other Southeast States to determine levels of mercury in king mackerel in 1998 after learning that Gulf Coast States initiated a similar program. Each State's findings documented consistent levels of mercury over a range of sizes with high levels found in large king mackerel. This is Georgia's first consumption advisory for ocean waters. The king mackerel is a migratory species with the Atlantic population ranging from South Florida through North Carolina and into the Mid-Atlantic.

King Mackerel: Atlantic Ocean Offshore Georgia Coast *Atlantic Ocean*

Size Range (Fork Length = FL)	Recommendation
24 to Less than 33 inches	No Restrictions
33 to 39 inches (a 33 inch fish weighs approximately 10 pounds)	1 meal per month ** for pregnant women, nursing mothers and children age 12 and younger
	1 meal per week ** for other adults
Over 39 inches(approximately 15 to 17 pounds)	Do Not Eat
King Mackerel are measured in Fork Length (FL), which is from the tip of the snout to the fork of the tail. The minimum legal size in Georgia is 24 inches FL, with a maximum daily creel limit of 3 fish per person. Federally permitted commercial fishermen are limited to 3500 pounds per trip, and a minimum size of 24 inches FL. ** One meal portion in this special guidance is 8 ounces or 1/2 pound.	

King mackerel spawn along the continental shelf of the Atlantic Coast, rapidly growing to approximately 20 inches in length in the first year. Their diet consists almost exclusively of other fish. King mackerel typically have a maximum life span of 15 years, reaching approximately 4 feet in length and 25 to 30 pounds in weight. Most fish landed are considerably smaller. As a fast-growing, long-lived top predator, the king mackerel has a propensity for accumulating high levels of mercury.