THE SUWANNEE RIVER

A Wild and Scenic River Study

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THE DEPARTMENT WORKS TO ASSURE THE WISEST CHOICE IN MANAGING ALL OUR RESOURCES SO EACH WILL MAKE ITS FULL CONTRIBUTION TO A BETTER UNITED STATES NOW AND IN THE FUTURE.

U.S. DEPARTMENT OF THE INTERIOR
Rogers C. B. Morton, Secretary

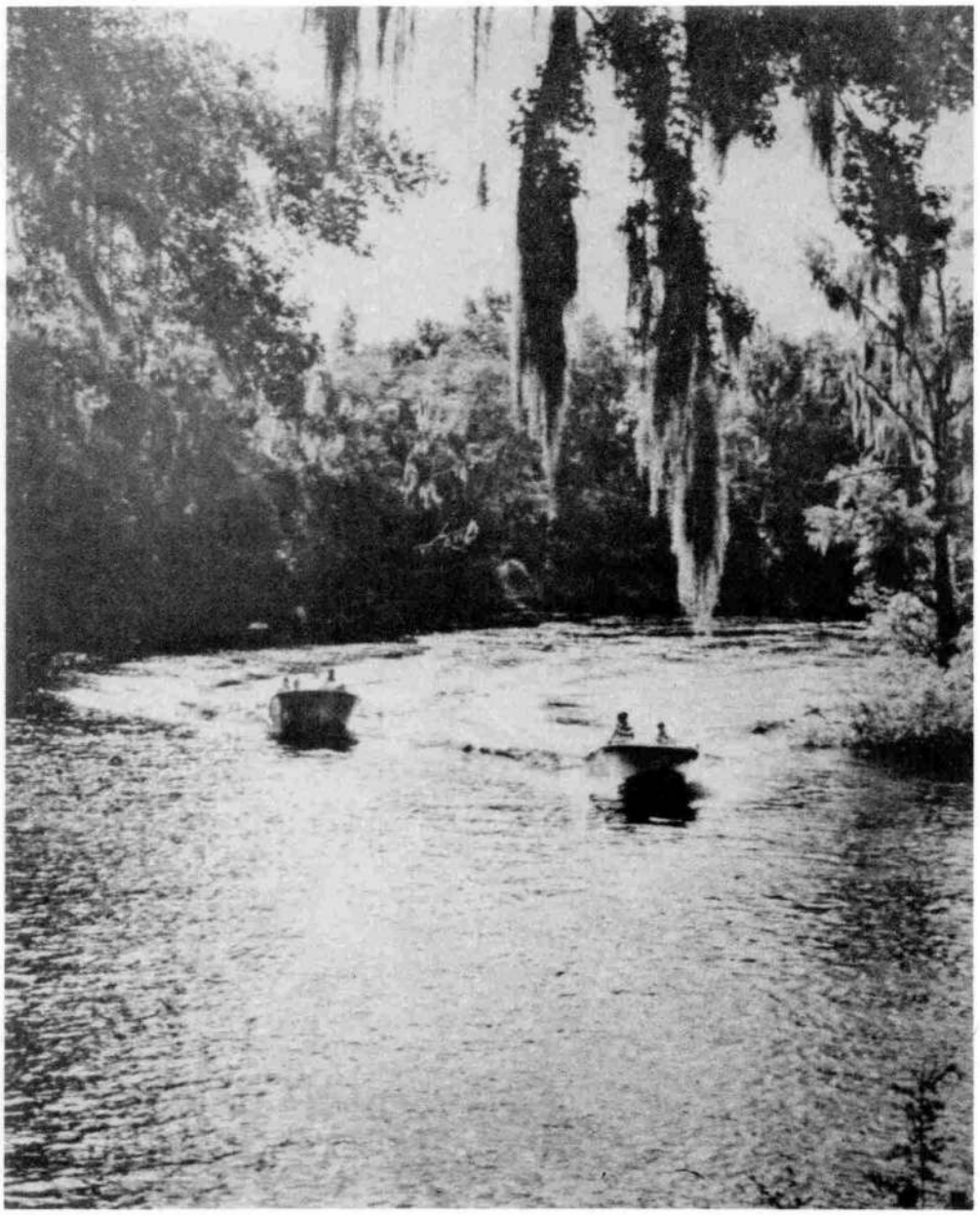
BUREAU OF OUTDOOR RECREATION
James G. Watt, Director

SUWANNEE RIVER

Florida - Georgia

A National Wild and Scenic River Study

December 1973



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FINDINGS AND RECOMMENDATION

Finding

The Suwannee River, together with the Ichetucknee River, the lower 7 miles of the Santa Fe River, and the lower 12 miles of the Withlacoochee River, along with their immediate environments, fully meets the criteria established by the Wild and Scenic Rivers Act and would be worthy of addition to the national wild and scenic rivers system.

The report finds that there are three principal means by which the Suwannee can be protected and made a part of the national wild and scenic rivers system. These are:

1. State Action--The States of Florida and Georgia could provide protection for all or parts of the Suwannee as a State wild and scenic river. Under Section 2(a)(ii) of the Wild and Scenic Rivers Act, national designation could be obtained for the State river if the criteria set forth in the Act and supplemental criteria developed by the Secretary of the Interior are met and the river is administered without cost to the Federal Government.

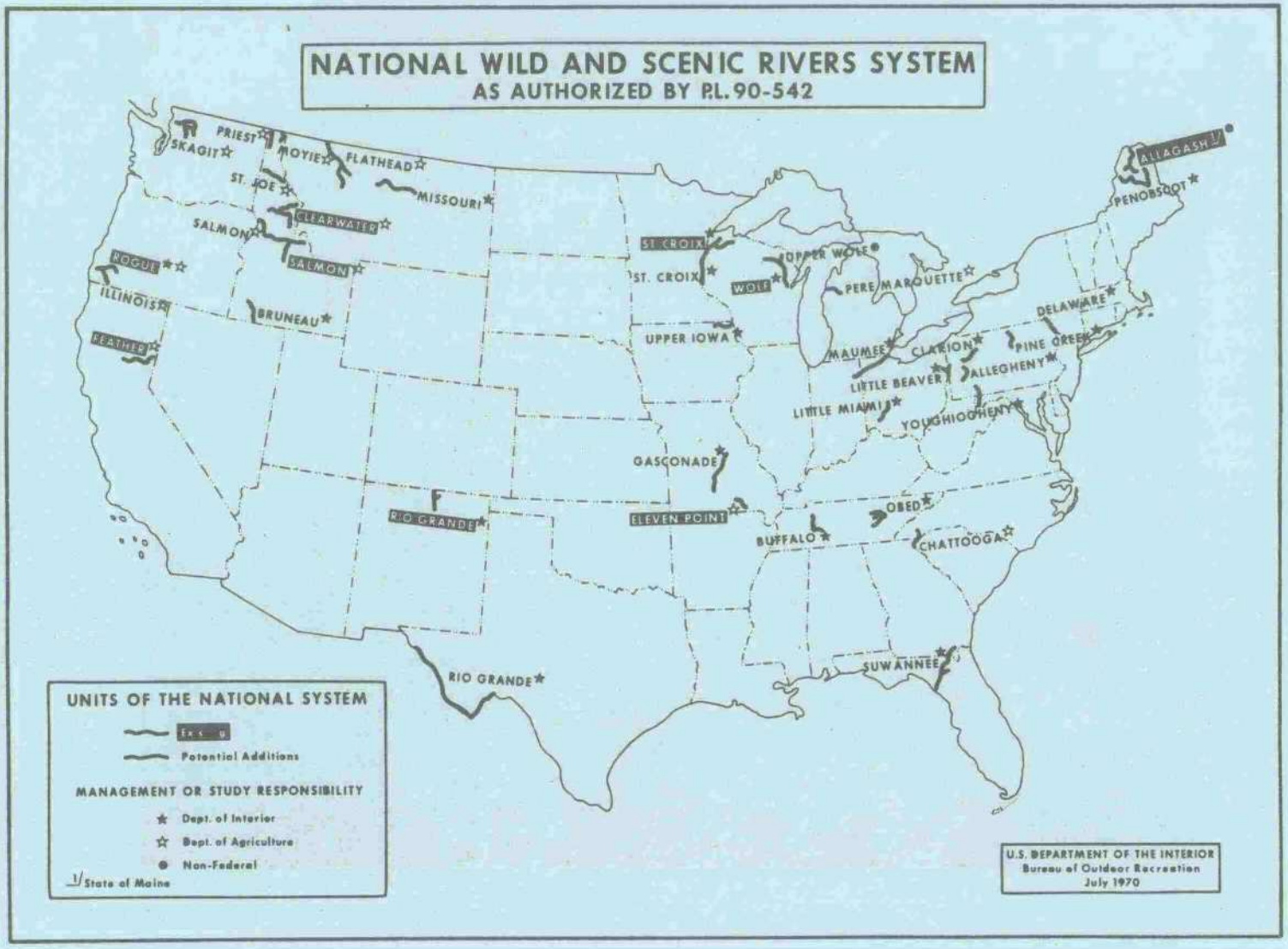
2. Federal-State Action--This would involve the acquisition of necessary land for the Suwannee by the Federal Government. The States would then assume responsibility for the development, operation, and maintenance expenses associated with the river. Designation of the Suwannee as a wild and scenic river would be by an Act of Congress.

3. Federal Action--This approach would involve designation, by Congress, of the Suwannee River as a part of the national wild and scenic rivers system. All costs of acquisition, development, operation and maintenance would be borne by the Federal Government through the agency named by Congress to administer the national river.

Recommendation

The Suwannee River meets the criteria for addition to the national wild and scenic rivers system. It is recommended that the States of Florida and Georgia take the steps necessary to preserve the values associated with the Suwannee River. If the States of Florida and Georgia should present suitable applications to the Secretary of the Interior, the Secretary would consider the addition of the Suwannee River to the national system of wild and scenic rivers in accordance with Section 2(a)(ii) of the Wild and Scenic Rivers Act (Public Law 90-542). Federal grant-in-aid programs, including Land and Water Conservation Fund grants, would be available to assist the States.

SUMMARY

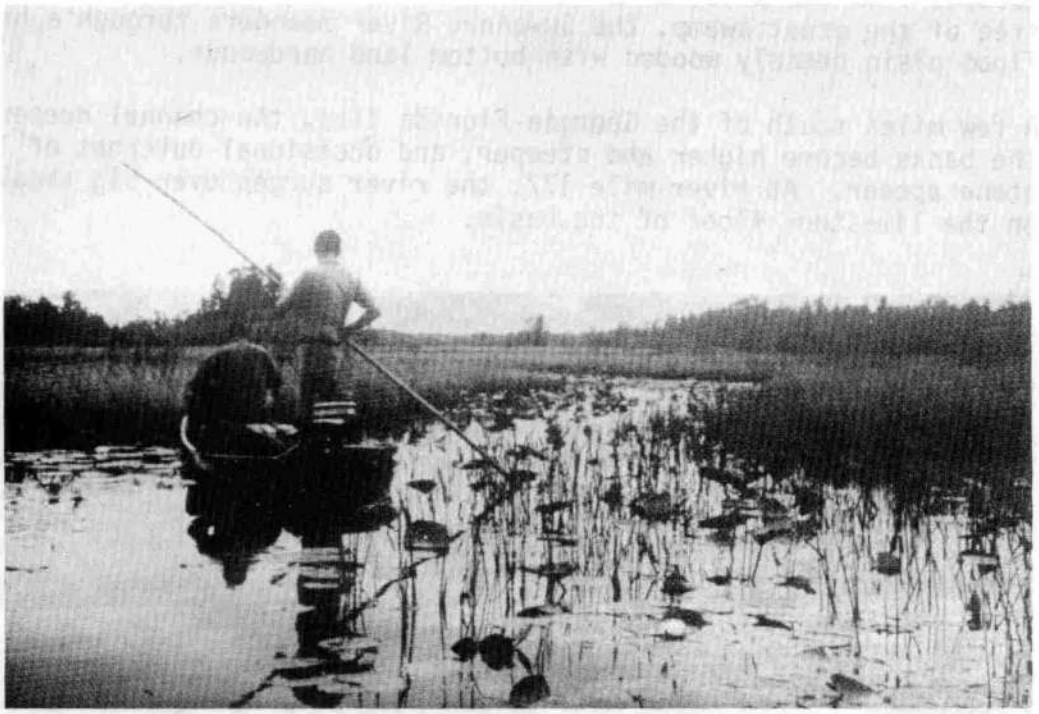

NATIONAL WILD AND SCENIC RIVERS SYSTEM
AS AUTHORIZED BY P.L. 90-542
PRIEST
SKAGIT
MOYIE
FLATHEAD
ST. JOE
MISSOURI
CLEARWATER
SALMON
SALMON
ROGUE
ILLINOIS
BRUNEAU
FEATHER
ST. CROIX
ST. CROIX
WOLF
UPPER WOLF
PERE MARQUETTE
UPPER IOWA
MAUMEE
CLARION
DELAWARE
PINE CREEK
LITTLE BEAVER
ALLEGHENY
LITTLE MIAMI
YOUGHIOGHENY
GASCONADE
ELEVEN POINT
RIO GRANDE
BUFFALO
OBED
CHATTOOGA
SUWANNEE
RIO GRANDE
ALLAGASH 1/
PENOBSCOT
UNITS OF THE NATIONAL SYSTEM
Existing
Potential Additions
MANAGEMENT OR STUDY RESPONSIBILITY
Dept. of Interior
Dept. of Agriculture
Non-Federal
1/ State of Maine
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Outdoor Recreation
July 1970

SUMMARY

Introduction

This report on the wild, scenic and recreational qualities of the Suwannee River, Georgia and Florida, was prepared under the Wild and Scenic Rivers Act (Public Law 90-542; 82 Stat. 906) approved October 2, 1968.

The Suwannee River is one of 27 rivers designated for study in section 5(a) of the Act as a potential unit of the national wild and scenic rivers system. Section 5(b) of the Act directed the Secretary of the Interior and, where national forest lands are involved, the Secretary of Agriculture to study the rivers so designated and to report to the President and the Congress.



The River

Abundantly endowed with natural resources, steeped in history, and located at the threshold of one of the world's greatest tourist meccas, the Suwannee River remains undeveloped and unspoiled by man. This situation cannot persist. The need for living space, recreation opportunity, farm and forest products, and mineral resources is increasing inexorably. Soon the forces which until now have resisted

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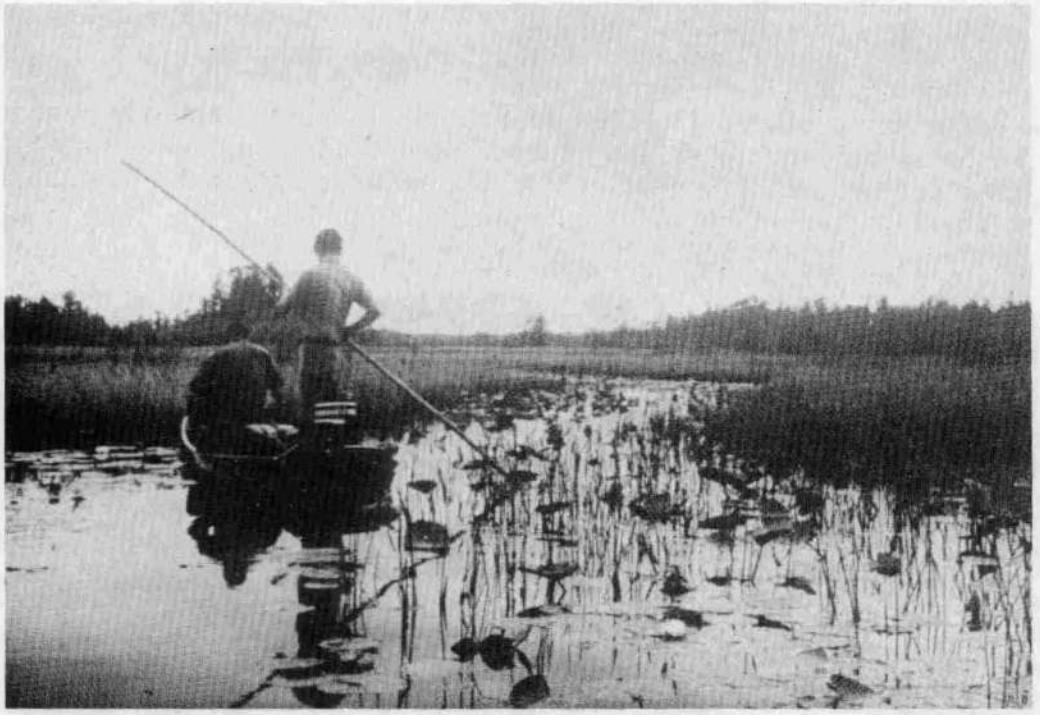

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change will yield, and more intensive and widespread development will prevail. These forces present both problems and opportunities in the conservation and utilization of the wild, scenic and recreational resources of the Suwannee River country.

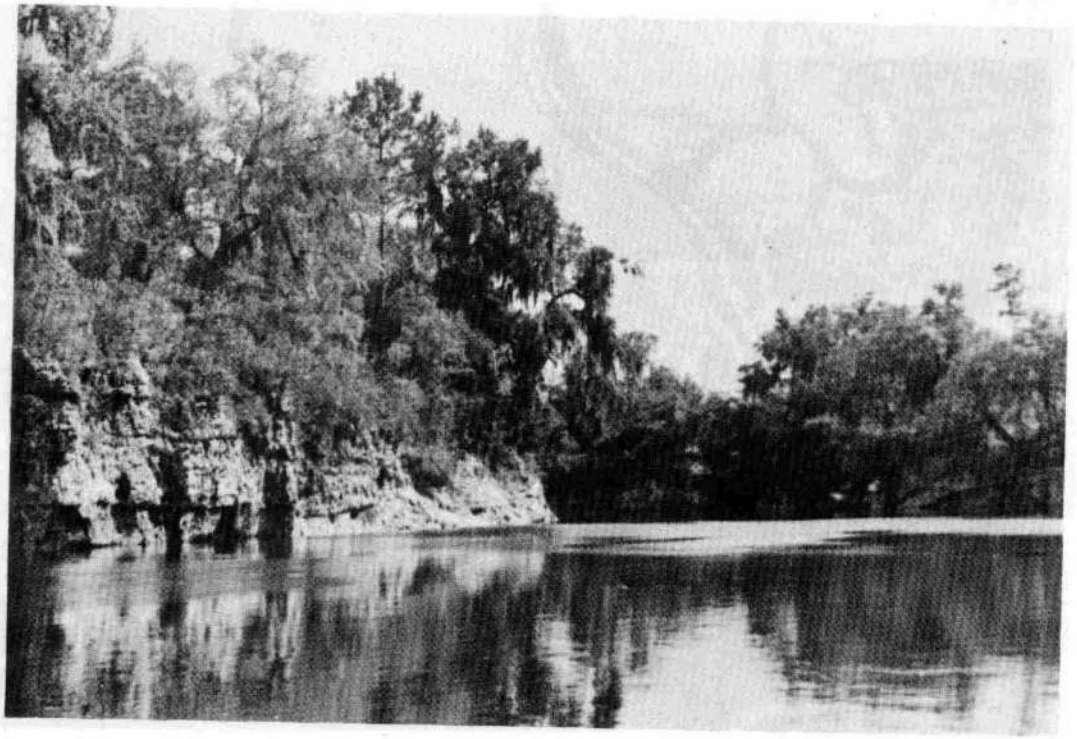
Northern Florida and southern Georgia are rich in wild, scenic, and recreational resources; but, the Suwannee River, heralded in song, in unique. The river is distinctive for many reasons. It is accessible and yet remote; there is mystery about its beginning. As the world rushes by, the river beckons to those seeking to relax.

The Suwannee River first appears as dark water intermingled with marsh vegetation in Sapling Prairie, deep in the great Okefenokee Swamp. Here at its source, 265 miles upstream from the Gulf of Mexico, it begins at a network of slender threads of open water flowing south to Billy's Lake. Then it moves beneath towering cypress and tupelo gum to the southwest edge of the swamp where it escapes from the wilderness into a well defined river channel. Once free of the great swamp, the Suwannee River meanders through a broad flood plain densely wooded with bottom land hardwoods.

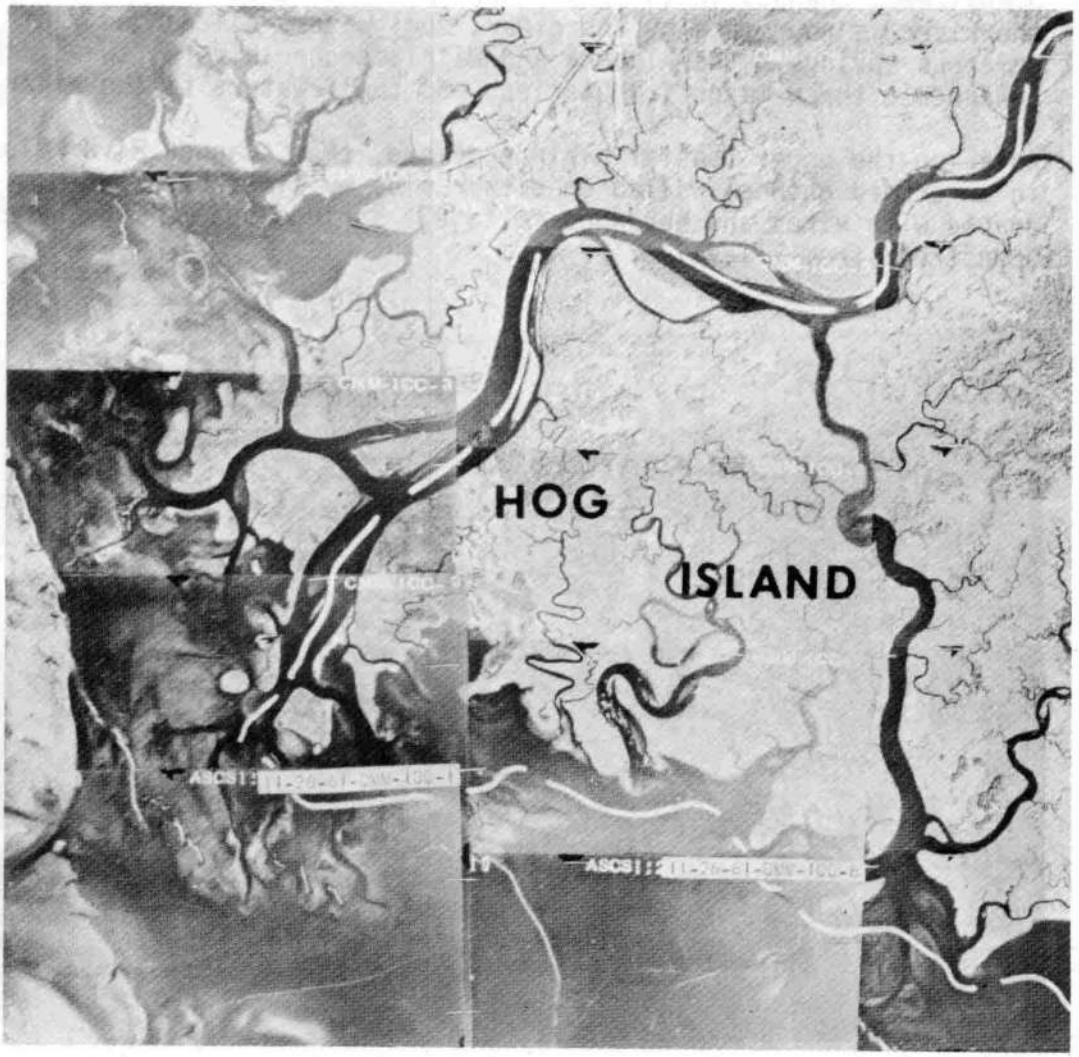
A few miles south of the Georgia-Florida line, the channel deepens, the banks become higher and steeper, and occasional outcrops of limestone appear. At river mile 177, the river surges over big shoals on the limestone floor of the basin.

Downstream, changes in the river are more pronounced. The flow of the river is nourished by the clear, cool waters discharged from numerous springs. The Alapaha and Withlacoochee Rivers, two of the Suwannee's three major tributaries, add their waters to the river.

Entering the upper coastal plain province, the Suwannee River flows in an eroded channel walled on either side by limestone bluffs, draped with vines and hardwood foliage. Springs become more numerous downstream from Ellaville.



Near Branford, the Suwannee River enters the broad, flat lowland of the lower coastal plain province. The channel broadens to form a wide, sluggish body of water--more like an estuary than a young and active coastal stream. The low banks of the river are bordered by frequent marshes and hardwood hammocks. Stately cabbage palms, which occur along the lower reach of the river, add to the natural beauty of the landscape. Below Branford, 66 miles above its rendezvous with the Gulf of Mexico, the Suwannee receives its last major tributary--the Santa Fe River.



Near its journey's end, the Suwannee divides and distributes its waters into the gulf by way of West Pass and East Pass and a myriad of tidal sloughs and runs which irrigate and drain the delta marshes. Offshore from the river are the shallow waters of the Gulf of Mexico.

Classification

A total of 288.4 miles of river are considered in this report. Five classifications for the Suwannee plus one for the Withlacoochee are appropriate: (1) from the river source to river mile 238 (28 miles), wild; (2) from river mile 238 to Little River Springs at river mile 81 (157 miles), scenic; and (3) from river mile 81 to the mouth of the river at the Gulf of Mexico (81 miles), recreational.

The outlying Ichetucknee Springs, Ichetucknee River, and connecting reach of the Santa Fe River downstream to the Suwannee River are suitable for classification as follows: (4) from Ichetucknee headspring to the first powerline crossing over the Ichetucknee River (2.4 miles), wild; and (5) from the said powerline crossing the Ichetucknee River south to the confluence with the Santa Fe River and down the Santa Fe River to the Suwannee River (9 miles), recreational.

The Withlacoochee River segment (6) from State Highway 6 to the confluence with the Suwannee River (12 miles), scenic.

Protection of Natural Resources

To protect the scenic beauty and quality of the environment, the land use in a continuous corridor on each riverbank must be controlled. The degree of land-use control would vary from one river reach to the next, depending on the classification--wild, scenic or recreational--the type of public use best suited for the area, and the extent to which uses are compatible with the basic objectives set forth in the Wild and Scenic Rivers Act. Land-use controls may be exercised through a combination of local or State zoning, scenic easements, and fee title acquisition.

Existing land uses and developments within the scenic riverbank should ordinarily be permitted to remain. Future construction of roads and buildings, cutting or removal of trees and vegetation, dredging, excavation, and placement of fill within the boundaries would be evaluated to make certain that the proposed action caused no direct and adverse effect on public uses and values. Permits authorizing future public and private construction and other new activities would be required.

A key factor in preserving the river is retaining the quality and quantity of the river and spring water. This involves protecting the river's watershed and spring recharge areas to control changes which affect water quality, runoff, and spring flow. The springs are especially important since the high quality and the volume of river water, particularly in times of low rainfall, are largely attributable to the vast spring system. These springs are an unexcelled natural feature and should be preserved as a public resource.

Other resources which need preservation include the outstanding natural areas such as Ichetucknee River, the coastal marshes and portions of the river's flood plain. Foremost of the natural areas is the source of the river, the Okefenokee Swamp, which is now managed as a national wildlife refuge by the Bureau of Sport Fisheries and Wildlife.

State, Local, and Private Recreation Development

Preservation of the basic resource and development for public recreational use would stimulate peripheral private investment. Publicly owned and operated facilities would be augmented with private development of motels, restaurants, fishing camps, vacation cabins, trailer parks, retirement homes, marinas, etc. This would strengthen the local tax base.

Development of public recreational facilities on the Suwannee River could be primarily limited to providing opportunities and suitable spacing for boat launching, parking, sanitation, hiking, nature study, and picnicking. Public investment and management would protect the resource and provide basic recreation opportunities to attract and support high volume recreation use.

Management Alternatives

Alternative 1

No action--This would allow the present trends of land use and development to continue. There would be no Federal cost involved with this alternative. No action would inevitably result in the conversion of much of the natural areas of the river to development for residential and commercial uses, particularly where the riverbanks are high enough.

Alternative 2

Protection of the Suwannee River by State action--The States of Florida and Georgia could provide protection for all or parts of the Suwannee as a State wild and scenic river. Under Section 2(a)(ii) of the Wild and Scenic Rivers Act, national designation could be obtained for the State river if the criteria set forth in the Act and supplemental criteria developed by the Secretary of the Interior are met and the river is administered without cost to the Federal Government.

Alternative 3

Protection of the Suwannee River by Federal Action--Designation of the Suwannee as a component of the national wild and scenic rivers system by congressional action would provide protection and would enable the States and local agencies to assume some responsibility for administration.

The Federal costs (preliminary estimates) for this alternative would be as follows:

	Acres	Cost ($000)
Acquisition		
Fee (total Georgia and Florida)	14,505	$12,783
Development Costs (total)		400
Operation and Maintenance (total/year)		535
Total		$13,718

Alternative 4

Cooperative Federal-State action--Protection of the Suwannee could be assured under this alternative with designation of the Suwannee by congressional action.

The cost for this alternative would be divided between the Federal and State Governments. The Federal Government would be responsible for the acquisition costs and the States of Georgia and Florida would be responsible for all costs of development and operation and maintenance.

The costs to the Federal Government (preliminary estimates) for this alternative would be as follows:

	Acres	Cost ($000)
Acquisition		
Fee (total Georgia and Florida)	14,505	$12,783

Providing Public Use

Public access and development must meet three tests: (1) provide adequate recreation opportunities; (2) appropriately distribute the recreation opportunities along the entire river; and (3) regulate the amount and type of recreation use to perpetuate the quality of both the resource and the recreation experience.

Land Acquisition

The total land area considered during the study as necessary to the protection of the corridor and the development of facilities along the Suwannee River is 20,956 acres, excluding the river surface, the Okefenokee National Wildlife Refuge, and the Withlacoochee segment. Optimum public development and protection of the river and related lands could be accomplished by:

1. Fee title public ownership of 20,956 acres of land within the river boundary. Considering 6,451 acres already in public ownership, 14,505 additional acres are proposed for acquisition. The total area within the scenic corridor is 10,300 acres. Additional land for public access areas and critical natural areas totals 4,205 acres.

2. Control of land use in a corridor varying from 100 feet to 300 feet wide along each side of the river. Where necessary, this could include use of scenic easements to preserve and enhance the environment of the immediate riverbank.

The majority of the land along the Suwannee River is in private ownership. The Federal Government ownership is limited to the Okefenokee National Wildlife Refuge. Georgia owns 3 acres of land consisting of a roadside park at Fargo and leases 80 acres from the Bureau of Sport Fisheries and Wildlife for the Stephen C. Foster State Park.

Florida owns 6,149 acres primarily in the three State parks. Local governments in Florida own 1,456 acres on the river. The largest holdings are: Suwannee County Development Authority, 734 acres near Suwannee Springs; Lafayette County's Greenspan area, 420 acres; and Gilchrist County's Hart Springs recreation area, 276 acres. The remaining land in Florida is in many private ownerships. The largest

acreages of private lands are owned by timber and paper companies such as Georgia-Pacific Corporation, which owns 16 miles of riverbank below U.S. Highway 19 and Owens-Illinois Corporation, which owns over 50 miles of riverbank below the Florida-Georgia line.

Recreation Facilities

There should be no development of extensive recreation and support facilities along the river. Many of the existing areas already have some recreation facilities but they would need expansion and improvement by State and local authorities as the present level of use increases.

Access areas and river rest areas for boaters and hikers are planned at 8- to 10-mile intervals along the river.

The Withlacoochee River Segment

The Withlacoochee River was not named in the Wild and Scenic Rivers Act for study either on its own merit or as part of the directed Suwannee River study. While the Suwannee study was in progress, however, investigation revealed that values of the lower 12 miles of the Withlacoochee, immediately above its confluence with the

Suwannee River, are of such outstanding quality that they are also deserving of preservation.

A classification of scenic is appropriate for the 12-mile Withlacoochee segment. Acquisition required is estimated at 625 acres.

The Withlacoochee River segment is treated separately in Chapter V.

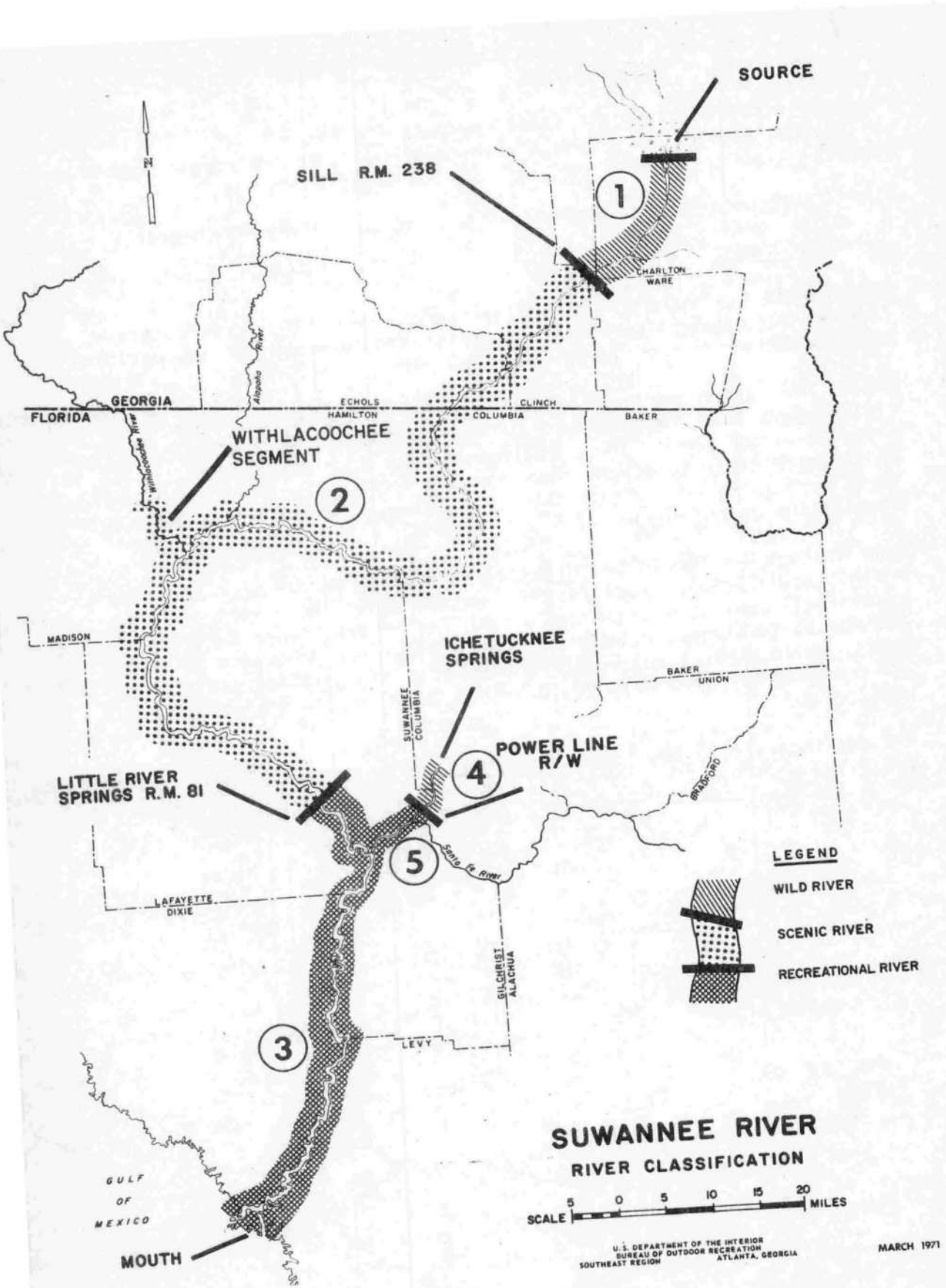
Economic Impact

The overall estimated effect on the economy resulting from designation of the Suwannee as a State administered component of the national wild and scenic rivers system would be highly beneficial.

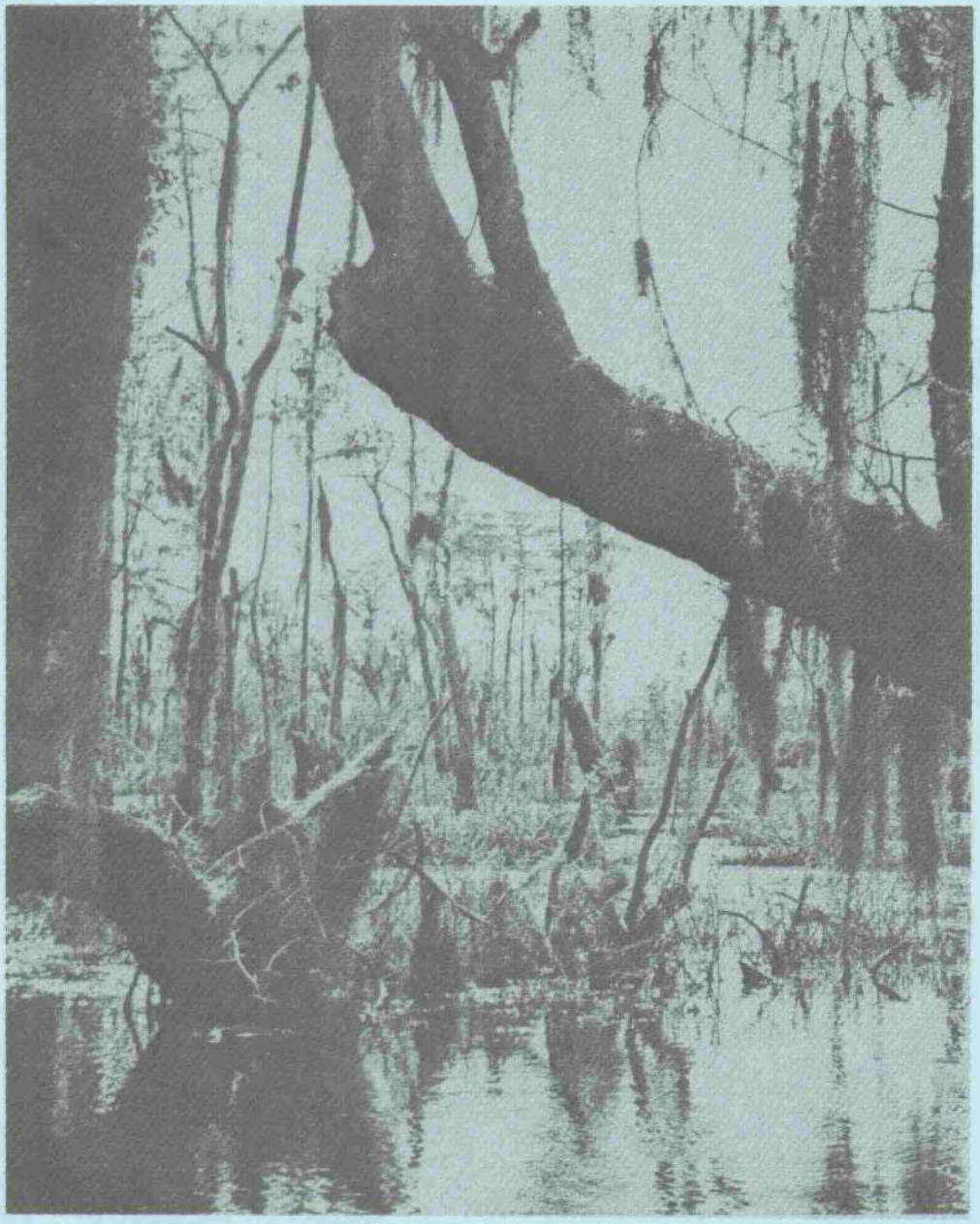
Annual recreation use would increase to an estimated 5 million visitor days from the present 1 million within 10 years after the river is established. The 5 million visitor days annually is the approximate capacity of the resource if a quality recreation experience is to be maintained. Visitation much in excess would result in degradation of the resource.

Some present uses would be curtailed to a minor degree when measured against their total output in the counties along the river. The two most significant uses which would be affected are timber harvesting and phosphate mining. Timber harvesting would be precluded in some areas, while other areas would be harvested on a limited scale. Strip mining for phosphate would be precluded within the corridor boundaries.

The net increase to the local economy is estimated at $55 million annually.


SOURCE
SILL R.M. 238
1
CHARLTON
WARE
GEORGIA
FLORIDA
ECHOLS
HAMILTON
COLUMBIA
CLINCH
BAKER
Alapaha River
Withlacoochee River
WITHLACOOCHEE
SEGMENT
2
MADISON
ICHETUCKNEE
SPRINGS
BAKER
UNION
SUWANNEE
COLUMBIA
POWER LINE
R/W
4
LITTLE RIVER
SPRINGS R.M. 81
BRADFORD
5
Santa Fe River
LAFAYETTE
DIXIE
GILCHRIST
ALACHUA
3
LEVY
GULF
OF
MEXICO
MOUTH
LEGEND
WILD RIVER
SCENIC RIVER
RECREATIONAL RIVER
SUWANNEE RIVER
RIVER CLASSIFICATION
SCALE 5 0 5 10 15 20 MILES
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION
SOUTHEAST REGION
ATLANTA, GEORGIA
MARCH 1971

I. INTRODUCTION



I. INTRODUCTION

The Wild and Scenic Rivers Act, Public Law 90-542, was approved on October 2, 1968. In the Act the Congress declared it

> . . . to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations. The Congress declares that the established national policy of dam and other construction at appropriate sections of the rivers of the United States needs to be complemented by a policy that would preserve other selected rivers or sections thereof in their free flowing condition to protect the water quality of such rivers and to fulfill other vital national conservation purposes.

The Act established a national wild and scenic rivers system by designating eight initial rivers and prescribed methods and standards under which additional rivers may be added to the system from time to time.

The Wild and Scenic Rivers Act also designated 27 rivers for study as potential additions to the system, including the Suwannee River of Georgia and Florida. The Department of the Interior responsibility for studying rivers named in the Act was delegated to the Bureau of Outdoor Recreation.

Subsequent legislation, passed in Congress and germane to protection of outstanding rivers and their immediate environs, included the National Environmental Policy Act of 1969, Public Law 91-190, approved January 1, 1970. On March 5, 1970, Executive Order 11514 was signed by the President, furthering the purpose and policy of the National Environmental Policy Act of 1969 by defining the roles of Federal agencies and the Council on Environmental Quality established by the Act:

> The Federal Government shall provide leadership in protecting and enhancing the quality of the Nation's environment to sustain and enrich human life. Federal agencies shall initiate measures needed to direct their

policies, plans and programs so as to meet national environmental goals. The Council on Environmental Quality, through the chairman, shall advise and assist the President in leading this national effort.

Wild and Scenic River Studies

The Wild and Scenic Rivers Act specifies that a report shall accompany each proposal to add a river to the national wild and scenic rivers system. Reports for rivers recommended for inclusion in the national system by Act of Congress must set forth:

1. The area included within the proposal;

2. The characteristics which make the river a worthy addition to the system;

3. The current status of landownership and use;

4. The reasonably foreseeable potential uses of land and water which would be enhanced, foreclosed, or curtailed if the area were included in the national system;

5. The Federal agency proposed to administer the area;

6. The extent to which administration, including costs, would be shared by State and local agencies; and,

7, The estimated cost to the United States of acquiring necessary lands and interests in lands and of administering the area as a component of the system.

The Act directed the Secretary of the Interior, in close cooperation with the affected States and their political subdivisions, to complete a study within 2 years to determine whether the Suwannee should be included in the national wild and scenic rivers system. The Bureau of Outdoor Recreation was designated as the lead agency for the Suwannee study.

The Southeast Regional Office of the Bureau, in keeping with the provisions of the Act, brought together a joint Federal-State field task force.

The purpose of the task force was to study and prepare the required report for the entire Suwannee River from its source in the Okefenokee Swamp in Georgia to the Gulf of Mexico including the outlying Ichetucknee Springs, Florida. This report is the product of that joint study effort. A list of task force members and participants in the study appears in the Appendix.

In carrying out the study, the task force consulted a large number of governmental agencies at all levels plus representatives of private organizations and individuals. The contributions of the States of Georgia and Florida were indispensable to the study.

Assistance was also provided by the following:

Suwannee River Authority, Florida;

Slash Pine Area Planning and Development Commission, Georgia;

Coastal Plain Area Planning and Development Commission, Georgia;

Suwannee River Citizens Association, Florida;

Florida Federation of Garden Clubs;

Owens-Illinois Corporation; and,

Monsanto Company.

Background

Many studies and reports on the Suwannee River have been completed in the past. In 1879, the Corps of Engineers prepared a report to the 45th Congress on the navigational aspects of the Suwannee River from Ellaville, Florida, to the river mouth. The Rivers and Harbors Act of 1890 authorized a small boat navigation channel from Ellaville to the gulf. Since that date, the Corps has issued periodic navigation reports. More recently, reports have been prepared by Federal, State, and local governmental agencies, reflecting the increasing concern for preservation of the Suwannee and its natural resources. The most recent report on potential land and water resources development for the Suwannee River area was prepared in 1963 by the United States Study Commission, Southeast River Basins.

None of these plans pertaining to the potential development or preservation of the Suwannee River area have succeeded in gaining support by all of the concerned interests; i.e., private landowners, developers, businessmen and local, State, and Federal governmental agencies. Therefore, no comprehensive program for the area has been implemented.

In 1961, a preliminary study of the Suwannee and seven other major Florida rivers were undertaken by the National Park Service. This resulted in a recommendation that the Suwannee River be considered for possible inclusion in the National Park System.

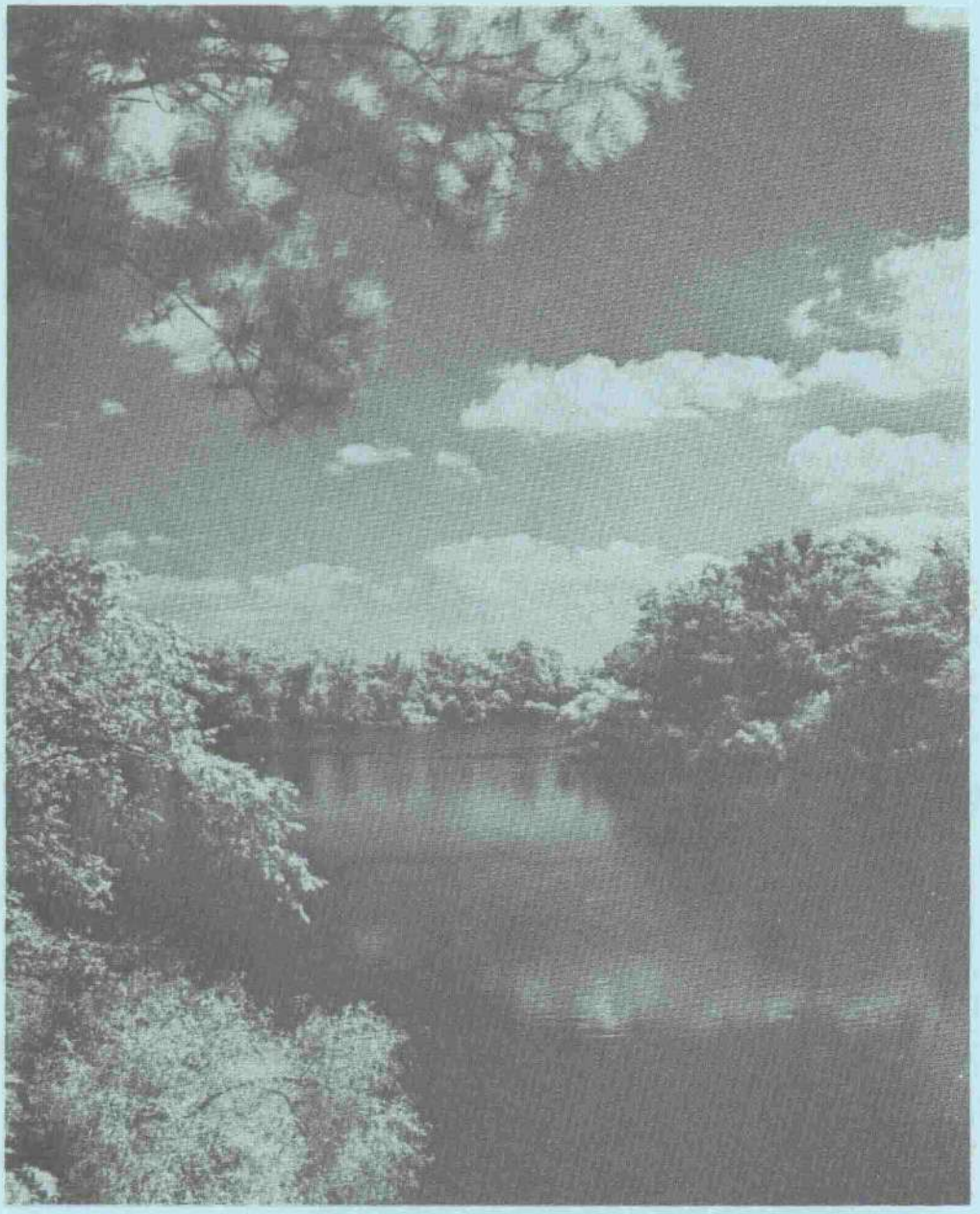
In 1963 and 1964, with assistance from the State of Florida, the National Park Service accumulated additional data concerning the Suwannee River and its natural, historical, and recreational resources. In August 1965, under a contract with the National Park Service, the University of Florida published "Economic Study of a Suwannee National Wild River" which would extend from the Okefenokee National Wildlife Refuge in Georgia to the Gulf of Mexico. This proposal also included the tributary waterway which rises at Ichetucknee Springs, the spring run and downstream portion of the Santa Fe River to the Suwannee River.

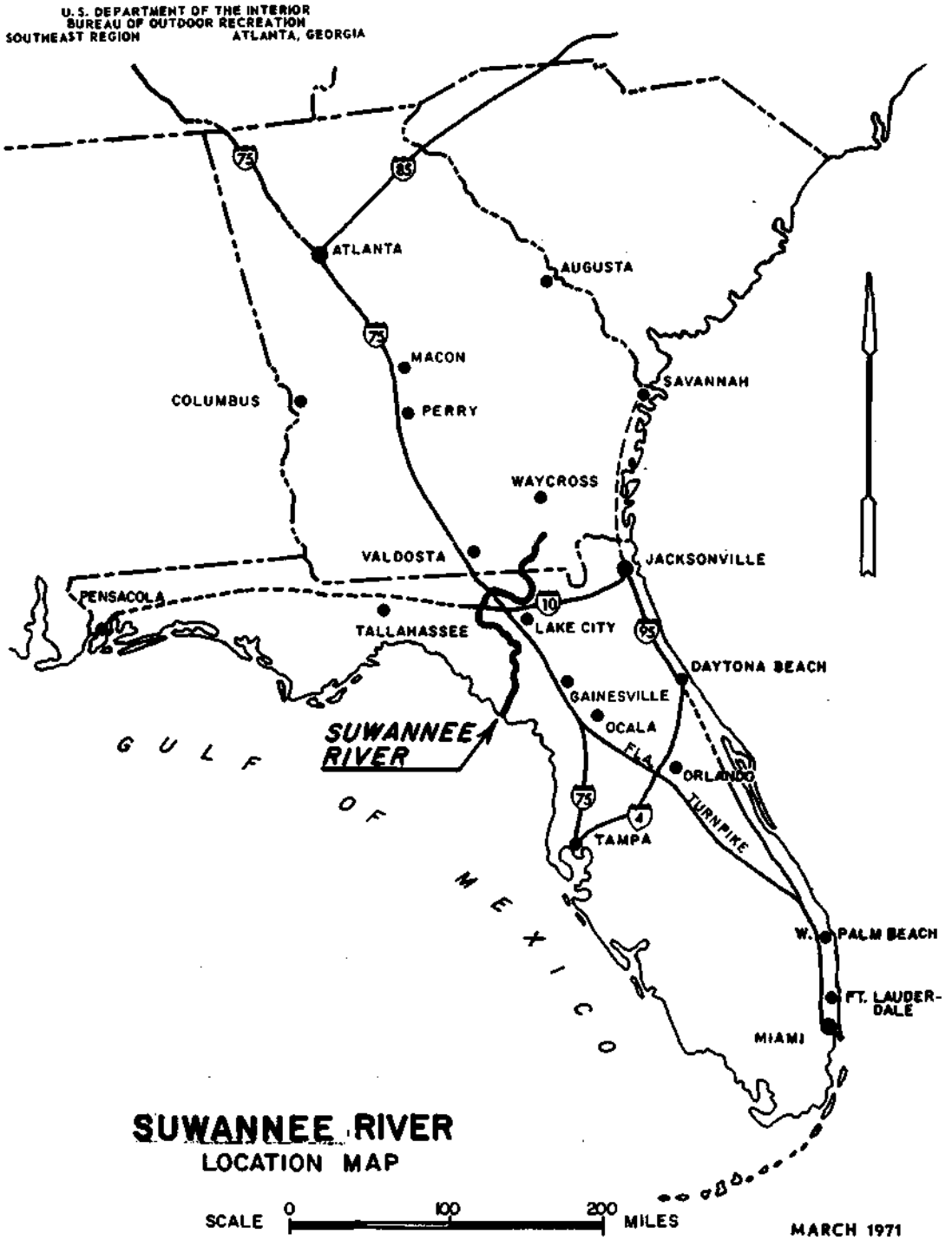
In 1965, the concept of a national system of wild rivers evolved. A publication entitled "Wild Rivers" was printed as a joint report to the American public by the Department of Agriculture and the Department of the Interior, and bills to authorize such a system were introduced into the Congress.

Further field studies by the National Park Service, in cooperation with the State of Florida, were conducted in late 1967 and much local and State interest developed as a result of these river studies. On October 2, 1968, Public Law 90-542 was approved. Section 5(a)(25) designated for potential addition to the national wild and scenic rivers system:

> Suwannee, Georgia and Florida: The entire river from its source in the Okefenokee Swamp in Georgia to the gulf and the outlying Ichetucknee Springs, Florida.

II. THE RIVER SETTING




U.S. DEPARTMENT OF THE INTERIOR
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AUGUSTA
MACON
COLUMBUS
PERRY
SAVANNAH
WAYCROSS
VALDOSTA
JACKSONVILLE
PENSACOLA
TALLAHASSEE
LAKE CITY
DAYTONA BEACH
GAINESVILLE
OCALA
SUWANNEE RIVER
GULF OF MEXICO
ORLANDO
FLA. TURNPIKE
TAMPA
W. PALM BEACH
FT. LAUDER-DALE
MIAMI
SUWANNEE RIVER
LOCATION MAP
SCALE 0 100 200 MILES
MARCH 1971

II. THE RIVER SETTING

Location

The Suwannee River watershed is about equally divided between south-central Georgia and north-central Florida. There are 12 counties with frontage on the Suwannee River--four in Georgia and eight in Florida. In Florida the river is the boundary line between counties, while in Georgia it cuts across county lines. The four counties in Georgia are Charlton, Clinch, Echols, and Ware. The counties in Florida are Columbia, Dixie, Gilchrist, Hamilton, Lafayette, Levy, Madison, and Suwannee. Principal towns of the basin are Valdosta in Georgia and Lake City and Live Oak in Florida.

The Suwannee River is centrally located to a number of rapidly growing urban areas: Atlanta with 1.4 million people to the north; Miami with 1.3 million people to the southeast; and Tampa-St. Petersburg with 1 million people to the south. Close by are Jacksonville with 500,000 people and Gainesville with 100,000 people. (Based on 1970 census figures.)

Interstate Highway 75, running north and south between Atlanta and Miami and Interstate 10, running east and west between Tallahassee and Jacksonville intersect near White Springs.

The Resource

The Suwannee River and its tributaries drain an area of over 10,000 square miles. Starting from boggy channels in the Okefenokee National Wildlife Refuge near Waycross in southeastern Georgia, the river begins its 265-mile course to the Gulf of Mexico.

After leaving the swamp, the river meanders through a wide flood plain. The river then flows between rising limestone banks, and the naturally stained water fades as many clear springs feed into it. Passing densely wooded hammocks, more swampland, and finally through extensive salt marshes, it enters the gulf below the town of Suwannee, Florida.

Low, rolling hills and a compact network of southerly oriented streams typify the northern part of the basin. The Withlacoochee and Alapaha Rivers are the primary drainage of the basin north of the Florida-Georgia line. Their headwaters are at an elevation of 460 feet; they cross the State line at an elevation of 70 feet and join the Suwannee about 15 miles south of the State line at an elevation of 25 feet above mean sea level. The Santa Fe River is the third major tributary of the Suwannee.

The southern part of the basin is generally a low, flat plain.

The small number of tributaries is largely due to well-drained sands and underground solution channels in the underlying limestone. The innumerable lakes, ponds, and sinks throughout the area collect the rain, where it soaks into the ground, before it can erode a channel or move far enough on the surface to establish a stream.

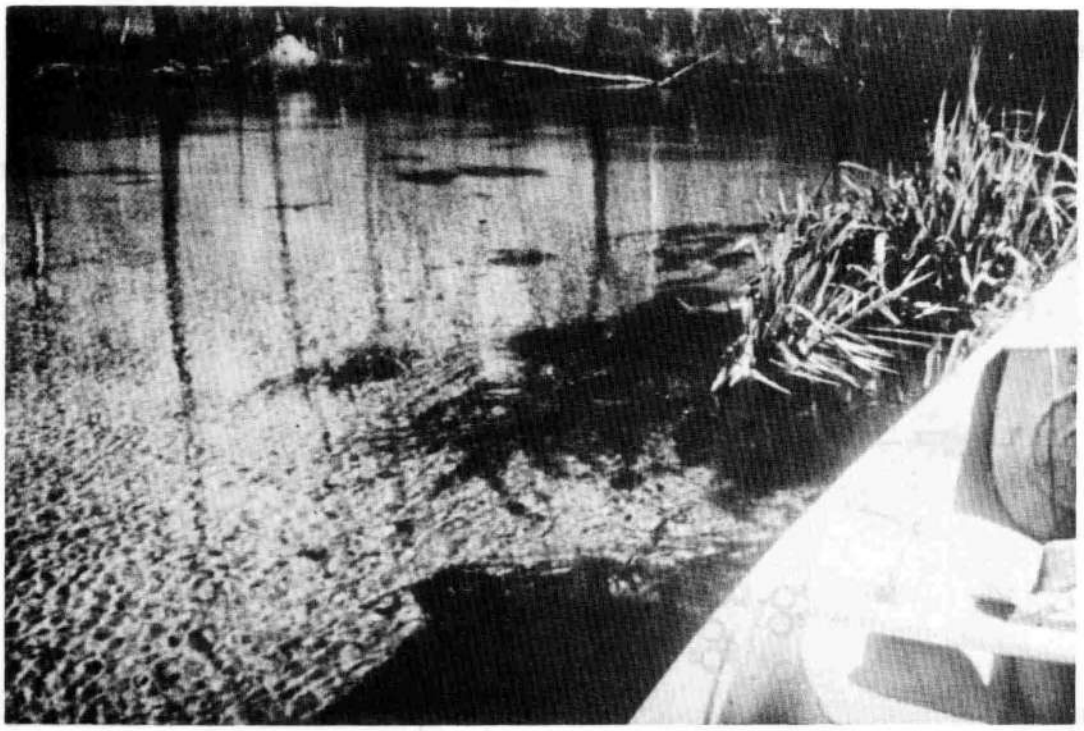
The numerous springs augment the flow of the Suwannee and in periods of drought are the major source of riverflow. In summer, the spring water is clear and cool in contrast to the stained, warmer water of the river.

The Okefenokee Swamp--This is a vast wetland wilderness, the majority of which is drained by the Suwannee. The swamp covers an area of approximately 426,000 acres, of which about 83 percent or 355,265 acres is owned by the Federal Government and operated by the Bureau of Sport Fisheries and Wildlife as the Okefenokee National Wildlife Refuge. For 28.5 miles, the river flows through the swamp. The beginning portion of the river itself is not well defined from the adjacent swampland. The entire area is a great expanse of emergent vegetation and slowly moving water interrupted by numerous islands which rise only a few feet above the swamp water level.

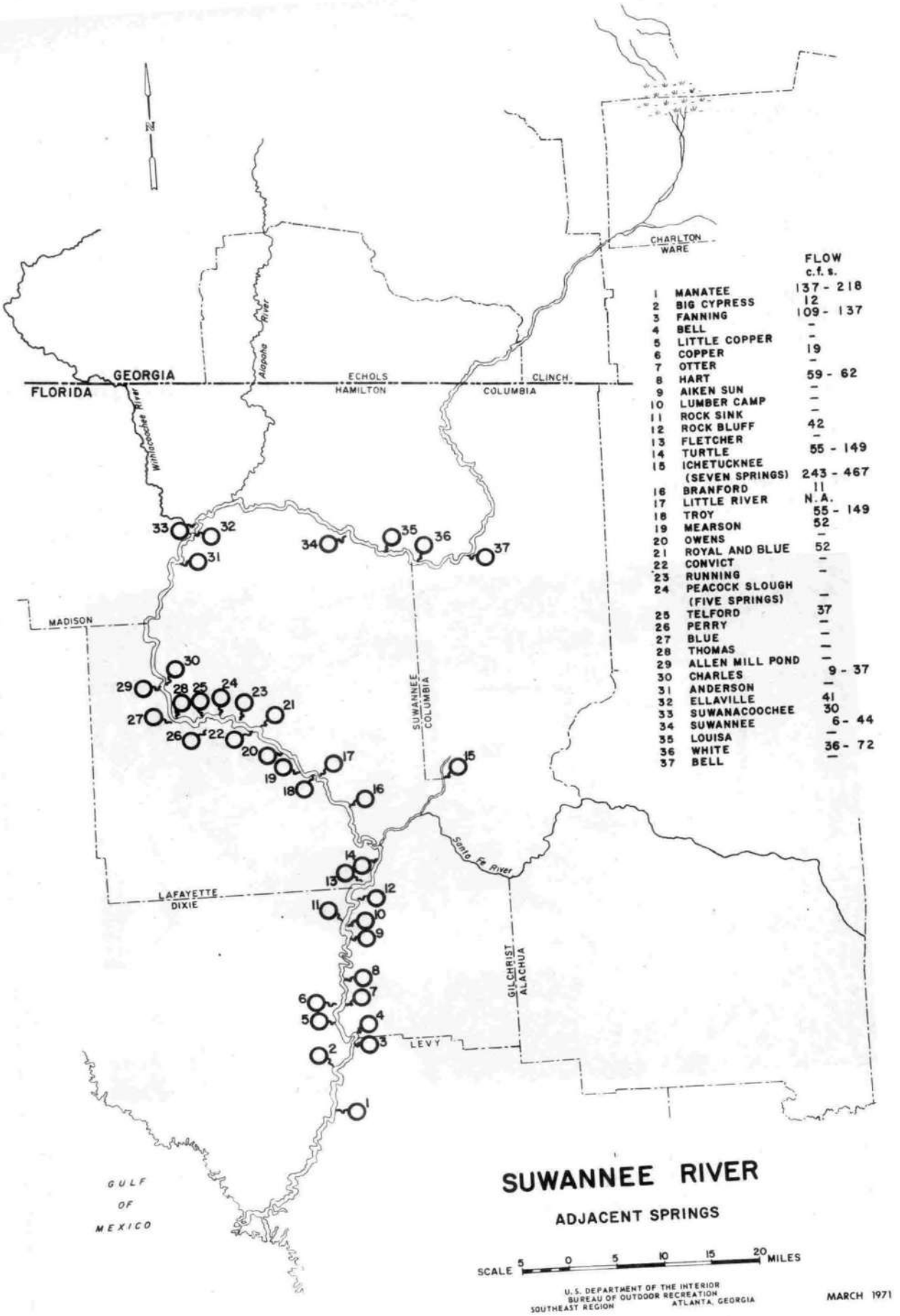
Springs and sinks--The karst phenomenon, which produces scenic rock outcrops, sinks, and a wealth of springs, is one of the most outstanding features of the Suwannee. Springs, at frequent intervals, provide points of interest for floaters and boaters. Some springs are deep and emerge from underwater caves and caverns. Water temperature of the springs and sinks remains the same throughout the year--68° to 72° F.

The principal springs located on the river with their approximate flow are shown on the map on page 8. Most of the springs listed rise close to the river and flow along the surface to the river as a stream or "run." The flow from the springs varies with the rainfall.

In many places, particularly between White Springs and Peacock Slough, Florida, sinkholes are common. Sinkholes are created when surface water percolating down through the limestone and soil so weakens the rock structure that a cave-in results. These surface cave-ins or sinkholes often reveal deep pools of clear, placid water.



In some places, the roof over an underground river has caved in exposing running water boiling up in one location and returning underground a short distance away. This is called a spring syphon, and examples are found at Rock Bluff Spring and at Peacock Springs.



		FLOW c.f.s.
1	MANATEE	137 - 218
2	BIG CYPRESS	12
3	FANNING	109 - 137
4	BELL	–
5	LITTLE COPPER	–
6	COPPER	19
7	OTTER	–
8	HART	59 - 62
9	AIKEN SUN	–
10	LUMBER CAMP	–
11	ROCK SINK	–
12	ROCK BLUFF	42
13	FLETCHER	–
14	TURTLE	55 - 149
15	ICHETUCKNEE (SEVEN SPRINGS)	243 - 467
16	BRANFORD	11
17	LITTLE RIVER	N.A.
18	TROY	55 - 149
19	MEARSON	52
20	OWENS	–
21	ROYAL AND BLUE	52
22	CONVICT	–
23	RUNNING	–
24	PEACOCK SLOUGH (FIVE SPRINGS)	–
25	TELFORD	37
26	PERRY	–
27	BLUE	–
28	THOMAS	–
29	ALLEN MILL POND	–
30	CHARLES	9 - 37
31	ANDERSON	–
32	ELLAVILLE	41
33	SUWANACOOCHEE	30
34	SUWANNEE	6 - 44
35	LOUISA	–
36	WHITE	36 - 72
37	BELL	–

SUWANNEE RIVER

ADJACENT SPRINGS

SCALE 5 0 5 10 15 20 MILES

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION
SOUTHEAST REGION
ATLANTA, GEORGIA

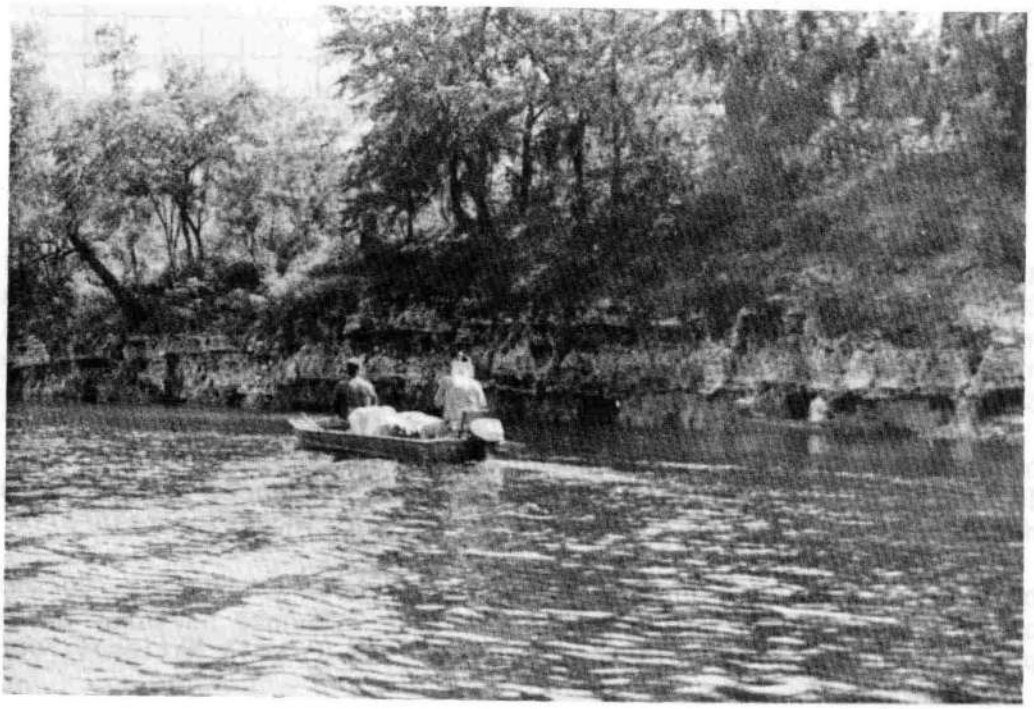
MARCH 1971

Geology--The Suwannee River courses across sediments that were formed during a span of 40 million years. In the past, the upper part of Florida was an estuary and delta, and the lower part was open, shallow ocean.

The upper stretch of the river exposes a scenic and varied group of rocks that are distinctive and unique. These rocks were formed from sediments of Miocene Age deposited in a broad estuary that opened widely to the ocean and which was fed by short, high energy streams rising in the piedmont. ediments range from thin-bedded, fine-grained dolostone that alternate with phosphorite (an ore of phosphorus) and quartz sand. Some of these sediments were deposited as large ripples, the troughs of which are filled by less calcareous, high phosphoritic, nodular, unsorted deposits.

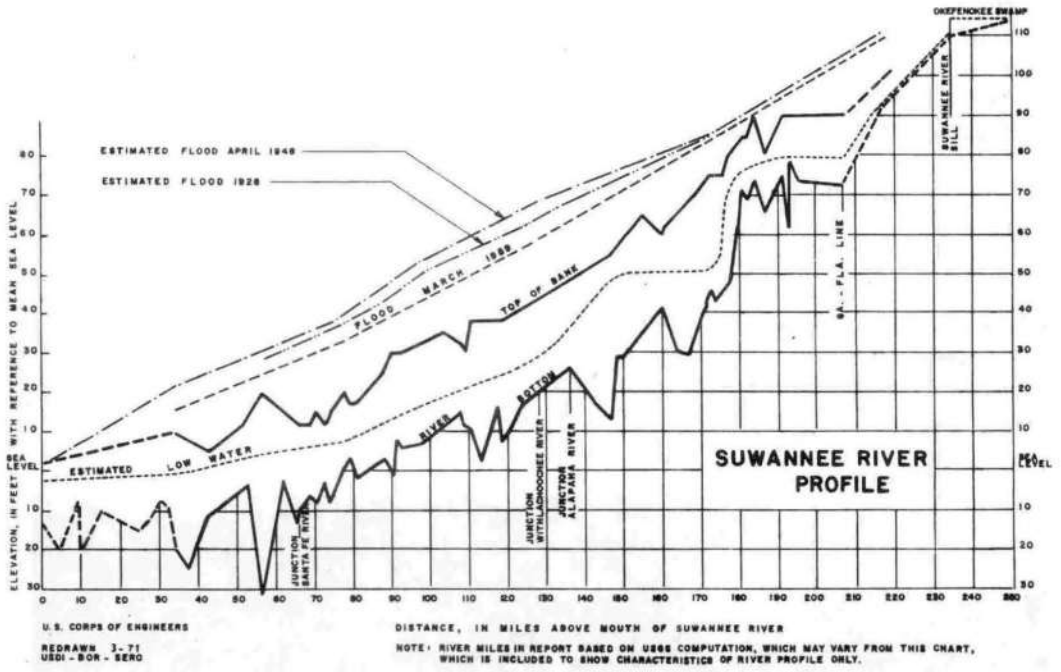
The distribution and kinds of sediment indicate that a large deltaic system of streams emptied into the large estuary. The environment may have been somewhat similar to that of the Bahama Banks.

Below White Springs to the gulf, the river crosses the Ocala uplife and flows in deep trenches cut into limestone and dolostones of Oligocene and Eocene Ages. These sediments were deposited in an open, shallow ocean and, for the most part, are extremely fossiliferous.



There are exceptionally valuable paleontological findings in the Suwannee Basin. Some of the most significant in the Eastern United States are located in the vicinity of Bell, Florida, in Gilchrist County. While the Bell site is several miles from the Suwannee River, minor finds of fossils have been made in and along the Suwannee and Santa Fe Rivers and at Blue Hole in Ichetucknee Springs.

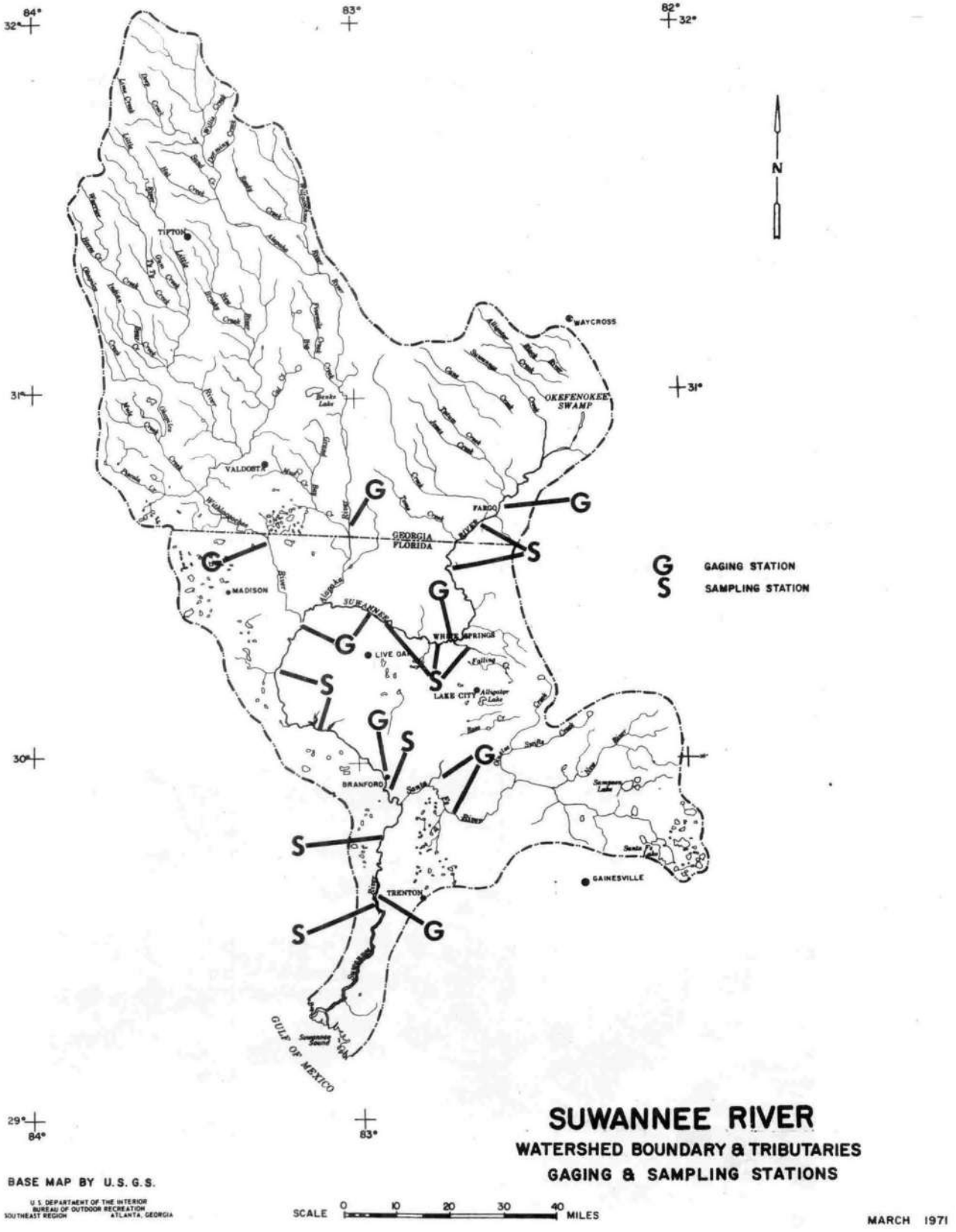
Riverflow--The Suwannee riverbank and flooding profile provide a graphic picture of the topographical and hydrological nature of the river.



The flow of the Suwannee varies considerably. The long-term average streamflow is 10,942 c.f.s., as measured at the gaging station near the town of Suwannee River. Owing to numerous sinks, lakes, and springs, and the lack of tributary streams along much of the river, its flow locally cannot be directly related to its drainage area.

The annual rainfall of 50 to 55 inches is quickly absorbed in the flat terrain and underlying porous rocks as evidenced by the average annual runoff, which is equivalent to only 13 inches of rainfall.

The river is fed by a limited number of tributary streams. Columbia County's Deep Creek, which unites with the Suwannee north of White Springs, Florida, rises in the region of the Osceola National Forest.



SUWANNEE RIVER

WATERSHED BOUNDARY & TRIBUTARIES
GAGING & SAMPLING STATIONS

BASE MAP BY U.S.G.S.

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION
SOUTHEAST REGION ATLANTA, GEORGIA

SCALE 0 10 20 30 40 MILES

MARCH 1971

Swift Creek, entering south of White Springs, originates in the interior of Hamilton County. The Alapaha and the Withlacoochee Rivers drain relatively large areas of south-central Georgia, but because of the porosity of the underlying soils, normally contribute only minor flow at their confluence with the Suwannee. The Santa Fe River and its tributary, the Ichetucknee, are spring-fed streams with some surface drainage from swampy areas. The Santa Fe joins the Suwannee south of Branford and contributes a significant amount of water to the Suwannee River.

The Suwannee riverflow in the 30-year period of record has been as great as 84,000 c.f.s. (gage height of 22.32 feet at U.S. Highway 19) in April 1948 and as low as 3,270 c.f.s. (gage height of 0.57 feet) in February 1957. Upriver at Fargo, the maximum gage height was 19.6 feet, and there was no flow in the river for certain periods in 1931, 1943, and 1954. Zero flows probably occur more often below the sill in the Okefenokee Swamp than at Fargo.

Water quality--Essentially, the Suwannee River is biologically and chemically free of pollutants. Some bacteriological pollution exists in localized areas near towns and in the Okefenokee Swamp. The river enters Florida low in dissolved inorganic matter and with a high concentration of dissolved organic material in an acidic body of water with a low pH varying little from 4.5. Hardness and pH increase progressively downstream due to the flow over limestone. The murkiness decreases; the color becomes lighter, and the clarity increases with the dilution by springs.

The Withlacoochee River enters the Suwannee as a clean stream, chemically and biologically speaking. Continued surveillance of effluent from a papermill polishing pond system in Georgia is essential, though no apparent effect on the Suwannee has been noted.

The Alapaha River is also a clean stream with no perceptible pollutants. Surface runoff from agricultural lands upstream is not adversely affecting the Suwannee at this time.

The Santa Fe River has only minor evidences of chemical pollution and slight degree of bacteriological pollution. The cause of the low concentration of dissolved oxygen in the Santa Fe disclosed in recent samples has not been pinpointed.

At present, the quality of the Suwannee's water is being determined by a detailed cooperative monitoring program conducted bimonthly by the Suwannee River Authority and the U.S. Geological Survey. The current program samples the river water at seven sites in Florida; these are shown on the basin map.

The Swift Creek tributary has been subjected to close scrutiny because it drains the area being strip-mined. (See section on economy.) Early operations of the phosphate plant developed severe pollution problems, many of which are now controlled. Extensive installation of settling and holding ponds, monitors, and other checking devices are employed to maintain safe water discharge. Surface runoff after heavy rains is turbid and contains high concentrations of phosphates and flourides.

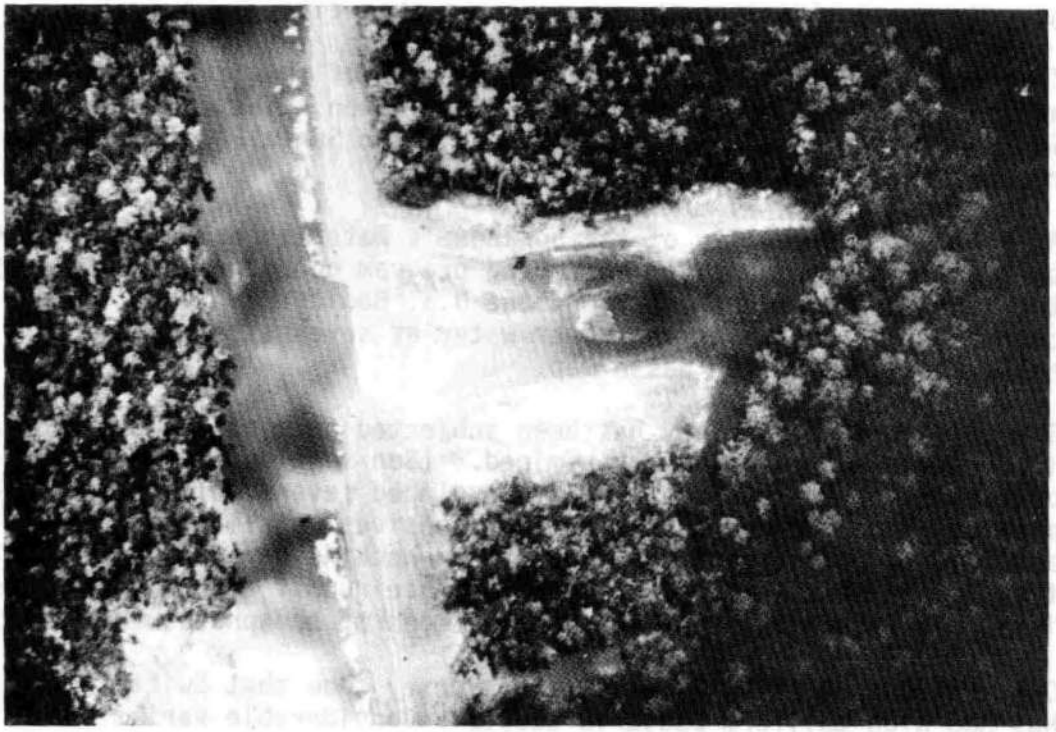
Observations by the U.S. Geological Survey show that Swift Creek has had high coliform bacteria counts. Considerable variation in coliform bacteria counts occurs as shown in the drop from 166,000 colonies per 100 milliliters in December 1969 to a count of 4,800 colonies 2 months later in February 1970.

The Suwannee River is an interstate stream, and water quality standards have been established by Florida and Georgia. The water quality criteria established by the two States are subject to further revision in the future.

Vegetation--The unbroken forested banks of the Suwannee are the major features of its scenic beauty. The river crosses several distinct natural environmental subregions worthy of interpretation. There is great variety in the flora from fresh water marshes at the river source in the Okefenokee to the estuarine salt marshes at the river mouth.

The flood plain forest is dominated by several species of trees. Characteristic species are: bald cypress, water tupelo, water ash,

water locust, water elm, red maple, and river birch. Near the Georgia-Florida State line is an area of Ogeechee-tupelo (Ogeechee-plum). At the mouth of the river, Southern red cedar grows in the brackish water. Except for these noticeable types, the riparian swamp forest is rather uniform all along the river.



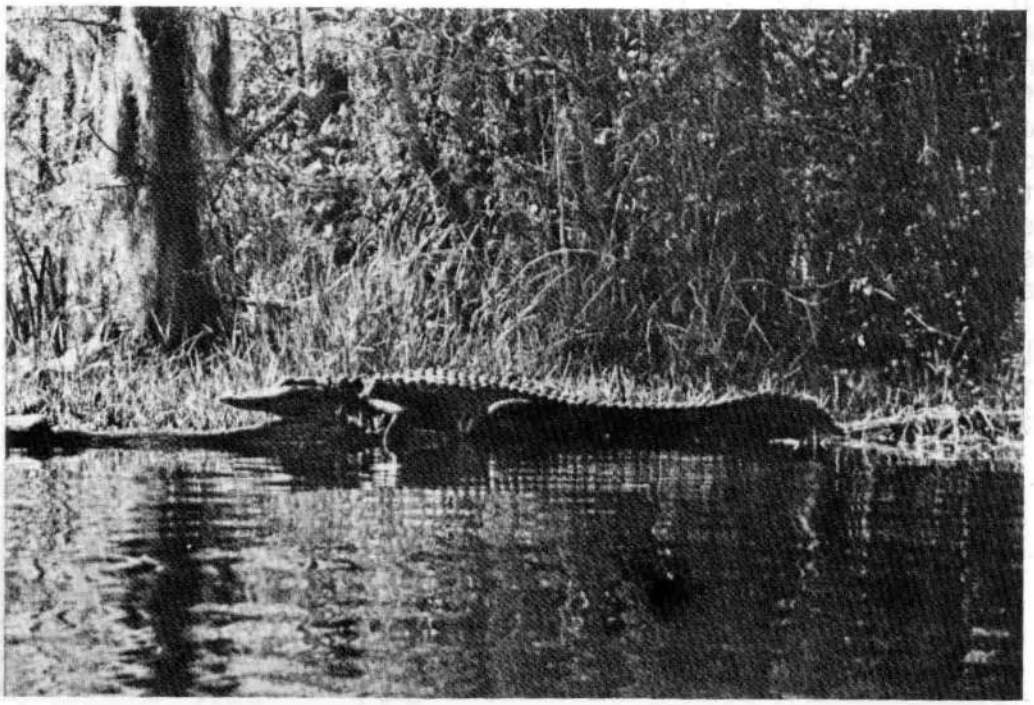
Even though there appears to be no species of plants unique to the river area, the variety, size, and geographic location of several plant communities are noteworthy. A list of flora is presented in the Appendix.

Fish and wildlife--Fifty-four species of fish are known in the Suwannee River and are listed in the Appendix. These can be grouped conveniently into two categories: the game fish such as the bluegill, redbreast sunfish, warmouth, flier, largemouth bass, and channel catfish; and the nongame fish such as the lake chubsucker, spotted sucker, American eel, yellow bullhead, brown bullhead, bowfin, Florida gar, mosquitofish, pirate perch, topminnows, dollar sunfish, bluespotted sunfish, and banded sunfish. The Okefenokee pygmy sunfish is found only in the Suwannee drainage.

The heavily forested area along the Suwannee provides excellent habitat for a number of game animals. White-tailed deer and wild turkey are the principal large upland game species; the black bear and Florida panther are also found in very small number.

Small game animals are plentiful in the Suwannee watershed, the principal species being the bobwhite quail, mourning dove, grey squirrel, and fox squirrel. King, sora, and clapper rails, woodcock, and common snipe are also present in areas providing suitable habitat.

Good waterfowl habitat is abundant in the river delta region at the mouth of the Suwannee. One of the largest rafts of redhead ducks in the Atlantic Flyway frequents this area in winter. Other species represented are lesser scaup, red-breasted merganser, black duck, mallard, gadwall, baldpate, pintail, bufflehead, and American merganser. Wood ducks are abundant throughout the Suwannee drainage.



A number of species found in the Suwannee River Basin are listed in "Rare and Endangered Fish and Wildlife of the United States," published by the Bureau of Sport Fisheries and Wildlife. These are:

Name	Status
Suwannee Bass	Rare
American Alligator	Endangered
Wood Ibis	Peripheral
Southern Bald Eagle	Endangered
American Osprey	Undetermined
Southern Red-cockaded Woodpecker	Rare
Florida Panther	Endangered
Florida Water Rat	Undetermined
Florida Manatee	Endangered

The amphibians, reptiles, birds, and mammals of the Suwannee River Basin are listed in the Appendix. The total number of species known to be present are:

Amphibians	39
Reptiles	73
Birds	232
Mammals	42

The river is an important dividing line with the range of several species following one bank of the Suwannee River while the range of related species occupies the other bank. The extraordinary abruptness with which diverse forms stop at the Suwannee River reflects its history as a seaway separating peninsular Florida from the mainland. Life forms reaching their southerly and easterly distribution along the Suwannee include the red-bellied water snake, canebrake rattlesnake, yellow-bellied turtle, and alligator snapping turtle; the old-field mouse, Carolina short-tailed shrew, and Backman's shrew; the Indigo bunting, wood thrush, wood pewee, orchard oriole, sharp-shinned hawk, and marsh hawk; the brown darter, mud perch, shiners, chubs, and several other fish.

Life forms reaching their northerly and westerly limits of distribution in this area include the short-tailed snake, red-tailed skink; Florida cotton rat; Florida crow; and Florida black bass.

Climate

The climate of the basin is subtropical. It has short, mild winters. Snow is rare. The summers are long and warm. The average annual temperature ranges from 65° F. in the upper part of the basin to 72° F. in the lower part. Average annual precipitation for the 10-year period from 1955 to 1964 was 50 inches for the upper part of the basin and 55 inches for the lower part. Summer thunderstorms and an occasional hurricane produce extreme fluctuations in seasonal and daily rainfall. Winter precipitation is usually a light rain or drizzle that may last for a few hours or a few days.

Water Resource Development

While the purview of this report is to assess the wild, scenic, and recreational characteristics of the Suwannee, the Wild and Scenic Rivers Act requires consideration of existing and potential water resource projects related to the river.

The Federal Power Commission states that there are no hydroelectric powerplants or potential sites within the proposal.

The Corps of Engineers Review Report, "Satilla River, Georgia, St. Marys and Suwannee Rivers, Georgia and Florida, January 1, 1965," identified reservoir sites at Okapilco, Withlacoochee, Shiloh, Alapaha, and White Springs on the basis of geologic feasibility, capacity, effect on downstream stages, and costs. The five reservoirs were not found to be economically feasible to construct under Corps of Engineers criteria existing when the review report was prepared in January 1965.

The Corps report recognized a potential need to reduce flood damage, provide domestic, municipal and industrial water supplies, develop recreation facilities, enhance fish and wildlife, augment low streamflows, and provide for irrigation. The report concluded that the multiple-purpose reservoir system had costs outweighing benefits by 2.5 to 1 while the Branford levee and West Gap Channel costs exceeded benefits by 4 to 1. The geologic analysis, porous limestone foundation conditions, precluded the likelihood that suitable water impoundment facilities could be constructed west of White Springs.

Conceivably, when needs arise and cannot be otherwise met, one or more reservoirs would be built if revised criteria made them feasible. Additional weight is added to this view by the Suwannee Basin Appendix to the 1963 report of the United States Study Commission, Southeast River Basins:

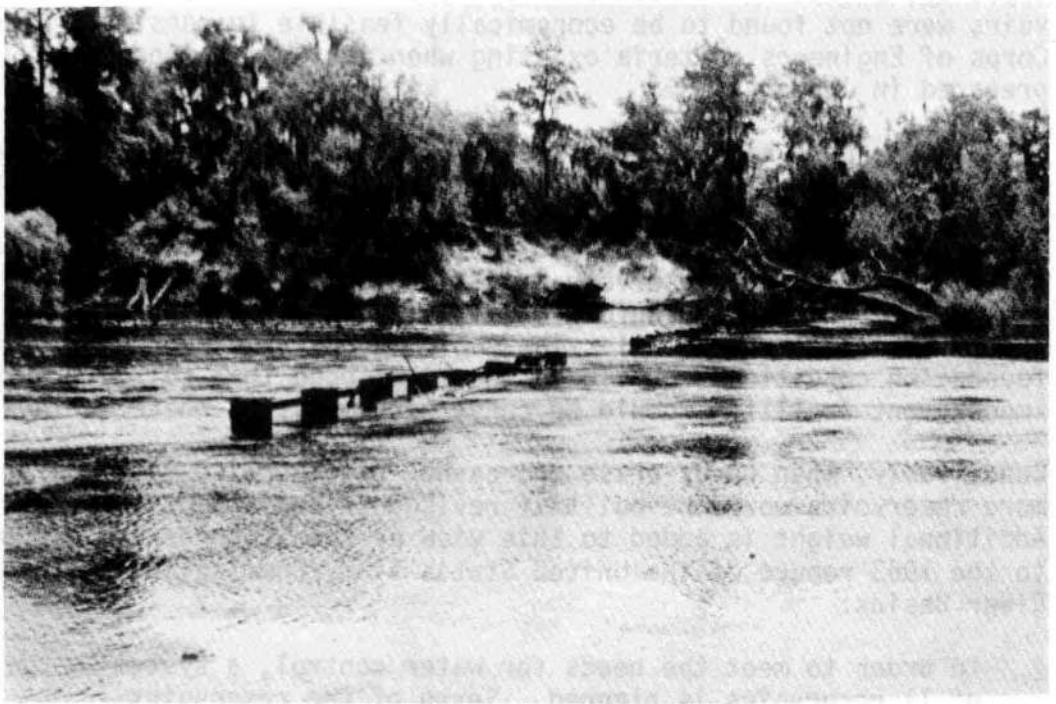
> In order to meet the needs for water control, a system of 11 reservoirs is planned. Seven of the reservoirs--Shiloh, Tifton, Moultrie, Okapilco, Nashville, Ashburn, and

Alapaha--are primarily storage works with one-half million acre-feet of capacity for pollution abatement including low-flow augmentation, fish and wildlife, and other purposes. Two of the reservoirs--Franks Creek and Quitman--provide constant level water surfaces for recreational use. Quitman Reservoir is dependent upon Okapilco Reservoir storage for the water control needed to make it an attractive recreation area and the two are combined into the Quitman Project for analysis purposes. */

None of the reservoirs discussed in the Southeast River Basins reports are located within the study corridor.

A study of the Alapaha River and tributaries in Georgia was authorized by Senate Resolution dated April 2, 1968, and House Resolution dated July 10, 1968. Local interests have expressed a desire to have the Corps of Engineers reevaluate the Alapaha Dam and Reservoir Project located between Tifton and Fitzgerald, Georgia. A study-review investigation has recently been initiated by the Jacksonville District, Corps of Engineers, but the study schedule is indefinite. The project is outside the boundaries of the study corridor.

Augmentation of low flow is not feasible and, for the most part, unnecessary to maintain the special values of the Suwannee River. The fluctuation of streamflow is a factor in the ecology of the river and contributes to maintaining the natural environment.



*/ U.S. Study Commission Report, Southeast River Basins, 88th Congress, Senate Document 51.

Flood control on the Suwannee has been found infeasible, though proposed developments on the river's tributaries could reduce flooding damages. The impact of reservoirs, channelization, and other related activities within the Suwannee River watershed must be evaluated on a case-by-case basis for each considered project.

The Soil Conservation Service, U.S. Department of Agriculture, investigated upstream watersheds of the Suwannee River Basin under their Conservation Needs Inventory Program. Seventy-two watersheds, 34 in Georgia and 38 in Florida, were delineated. The inventory identified 39 watersheds, 28 in Georgia and 11 in Florida, as qualifying for planning under the Watershed Protection and Flood Prevention Act, Public Law 83-566. Although six applications for planning assistance have been submitted, all for Georgia watersheds, none have been approved to date.

These water resource projects individually could affect the Suwannee River and any further planning should be directed toward project designs which enhance the river's values.

A study of the Santa Fe River was authorized by the Rivers and Harbors Act of 1965 to investigate channel improvement needs on the Santa Fe from the Suwannee River upstream for about 20 miles. Work on this study was initiated in 1949 and a preliminary examination report was prepared. No work has been done on the survey report. Presently, this study is not funded or scheduled.

There is an authorized and partly constructed naviagation project, now inactive, on the Suwannee River which calls for a channel about 6 feet deep through Derrick Island Gap; thence, 5 feet deep by 150 feet wide to Branford, and 4 feet deep by 60 feet wide to Ellaville, a total distance of 139 miles. It was authorized by the Rivers and Harbors Acts of 1880 and 1890. In 1962, $65,000 was spent for maintenance dredging in Derrick Island Gap vicinity at the river mouth.

The authorized navigation project on the Suwannee River from the gulf to Ellaville and any further action on the Santa Fe River navigation study need to be reevaluated and modified in light of the wild and scenic river objectives. The portion of the project above river mile 81 would not be compatible with designation of the river as a component of the national wild and scenic rivers system.

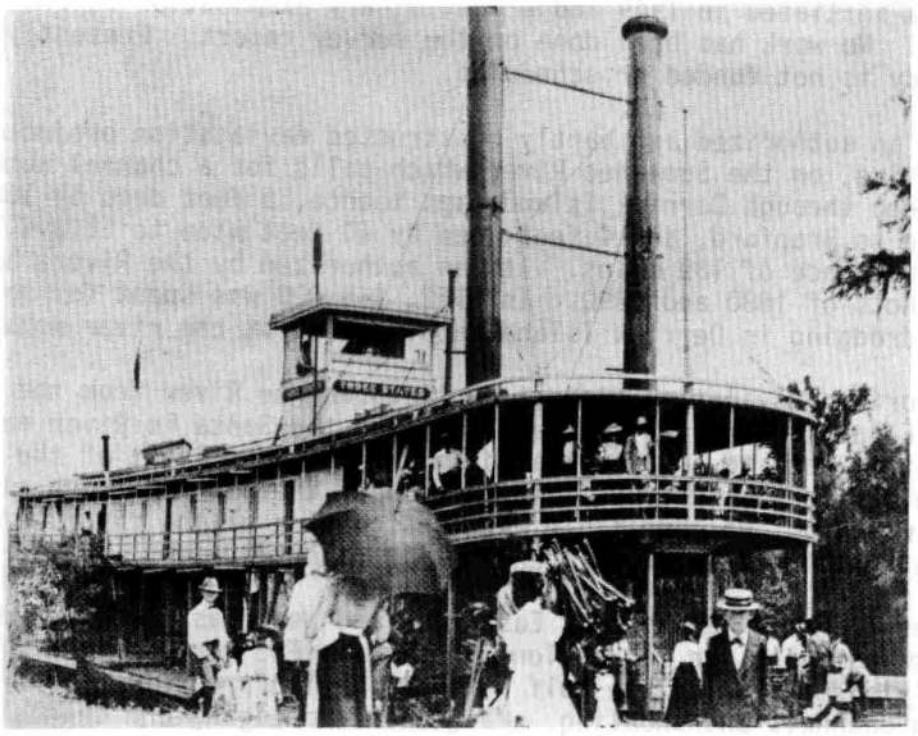
The river from the junction of East Pass and West Pass to river mile 81 is now adequate for recreational boating. The mouth of the river and outlying portion of the gulf have navigation problems caused by shifting channels and shoaling. Maintenance dredging and channel marking may be desirable.

The St. Marks to Tampa Bay Intracoastal Waterway could adversely affect the river values at the mouth of the Suwannee River. Two routes are being considered--one inshore, the other offshore. The inshore route would involve Hog Island--an area which is highly suitable for preservation as an unspoiled estuarine marsh. The impact of the offshore route needs to be evaluated.

Cultural History

The cultural history of the Suwannee River can be divided into four periods--aboriginal, Spanish, pre-Civil War, and contemporary.

The Suwannee basin, particularly in the vicinity of the river, was inhabited by aboriginal man for thousands of years. Because of the probable fishing and hunting culture of these inhabitants, there is little evidence of their occupation of the region. Natural food was abundant, the climate was mild, and there was no necessity to erect permanent shelters, develop technology beyond stone tools, store food, or practice agriculture on a sustained basis. To date, there is no indication that the pre-Columbian inhabitants of the region developed more than a rudimentary culture.



The Spanish entered the region of northwestern Florida in 1528 in their quest for gold. A secondary reason for their presence was to Christianize the Indians. Almost all vestiges of the 30-odd missions constructed to fulfill this latter purpose have disappeared, as has the east-west route linking them. Some sites and route locations near the river, however, have been tentitively identified.

American presence and settlement in Florida were characterized by persistent conflict with the Indians well into the 19th century. Several bloody encounters are documented in record and well marked as to location on the ground. The chief landmark on the Suwannee is an island near Owens Springs--the site of a Seminole war fort.

Civil War action occurred on the Suwannee although, because of a nonstrategic location in the conflict, no engagements decisive to the outcome of the war were waged.

The remainder of the region's history is the contempory settlement and development of an agricultural economy which endures today.

Economy

In 1960, almost three-fourths of the total employment in the 12 counties within the Suwannee River Basin was related to activities other than agriculture.

Wood products have become increasingly important. The principal timber includes slash and longleaf pine, oak, some hickory, sweet gum, and magnolia. Most of this timber is grown in large tracts on land owned or leased by pulp and paper companies. Scattered small- to medium-sized plants locally produce lumber, plywood, and containers.

Grazing of both beef and dairy cattle in the basin is well established In addition, chickens, hogs, and other livestock are produced. Among important crops are: beans, corn, cucumbers, peanuts, potatoes, squash, strawberries, watermelons, and tobacco.

Phosphate is being mined for fertilizer and related products in Hamilton County. Other counties are also considered to contain large reserves of high-grade phosphate rock.

Limestone is mined in Dixie, Gilchrist, Lafayette, Levy, and Suwannee Counties; but demand is limited, and there are no large operations. The rock is low in value and widely available throughout western Florida, making mining unnecessary along the river where it is subject to flooding. Heavy mineral and glass and industrial sands, although present, are not being commercially exploited at this time.

Exploration for petroleum and natural gas continues within the basin even though no producing wells have apparently been found. Although there is a variety of minerals in the Suwannee basin, extensive commercial extraction, other than phosphates, does not appear as a significant trend in the foreseeable future.

Tourism, now beginning to play a more important role in the river economy, is not entirely new. White Springs, originally used by Indians, was a very popular spa soon after the white man moved in. Boating on the river is a popular diversion.

Population

Based on preliminary data provided by the Bureau of the Census, the 1970 population in the 12 counties adjacent to the river was 132,132.

A population loss has taken place in the agricultural sector of the economy. Technology has increased to a considerable degree the efficiency and changed the character of agriculture resulting in less demand for manpower, and significant emigration has occurred as a result. Population increases occurred in several of the towns, such as Lake City and Cross City, Florida.

Major Cities Population (in thousands) (SMSA's)
(Source: Advance Report, General Population Characteristics, 1970 Census of Population)

City	Actual 1960	Preliminary 1970
Atlanta	1,017	1,374
Augusta	217	250
Columbus	218	234
Ft. Lauderdale	334	612
Jacksonville	455	513
Macon	180	201
Miami	935	1,259
Orlando	318	427
Pensacola	203	238
Savannah	188	183
Tampa	772	1,000
West Palm Beach	228	349

Population Data for Suwannee River Study Area Counties

Counties	1950	1960	1970[1/]	Percent Change 1950-1960	Percent Change 1960-1970	Area (Sq. Mi.)
Georgia:						
Charlton	4,821	5,313	5,537	10.2	4.2	796
Clinch	6,004	6,545	6,049	9.0	- 7.6	797
Echols	2,495	1,876	1,834	-24.8	- 2.2	425
Ware	31,108	34,219	32,959	13.0	- 3.7	912
Subtotal	44,428	47,953	46,379	+ 7.9	- 3.2	2,930
Florida:						
Columbia	18,218	20.077	24,968	10.2	24.3	784
Dixie	3,939	4,479	5,341	14.0	19.2	692
Gilchrist	3,498	2,868	3,540	-18.0	23.4	346
Hamilton	8,891	7,705	7,772	-14.2	0.2	514
Lafayette	3,440	2,889	2,830	-16.0	- 2.0	549
Levy	10,641	10,364	12,529	- 2.6	20.8	1,083
Madison	14,197	14,154	13,389	- 0.3	- 5.4	703
Suwannee	16,982	14,961	15,534	-11.9	3.2	686
Subtotal	79,886	77.497	85,753	- 3.0	+10.6	5,357
Grand Total	124,314	125,450	132,132	+ 4.9	+ 5.3	8,287

1/ Preliminary data based on 1970 Census, Bureau of the Census, Department of Commerce.

Source: County and City Data Book, 1967, A Statistical Abstract Supplement USDC, Bureau of the Census.

Landownership

The Federal Government owns over 355,265 acres in the Okefenokee Swamp managed by the Bureau of Sport Fisheries and Wildlife as the Okefenokee National Wildlife Refuge. From its point of origin in Sapling Prairie, the Suwannee River traverses some 28.5 miles of this wildlife refuge to the Clinch-Ware County line. The refuge is the only federally owned land on the entire Suwannee River. Beyond this point, the Suwannee stretches 237 miles to the Gulf of Mexico.

An inventory of the riverbanks, including that portion of the river within the Okefenokee National Wildlife Refuge, the Ichetucknee River, and the lower portion of the Santa Fe River shows:

57.0 miles owned by the Federal Government
18.8 miles owned by the States,
4.5 miles owned by the counties,
179.5 miles owned by timber companies, and
295.2 miles owned by private individuals and corporations.

Of the property fronting the Suwannee River between White Springs and Okefenokee, the majority is leased on a long-term basis to industry for timber management purposes. Most of these leases also include mineral rights.

The number of individual owners of the Suwannee riverbanks vary considerably from county to county. Echols County, Georgia, has eight owners for 22.4 miles of riverbank. Dixie County, Florida, with similar reaches of timber and swamp, also has a small number of owners except near the river mouth and on either side of the U.S. Highway 19 crossing.

Suwannee County, Florida, has the greatest number of miles of riverbank. It has relatively high banks which, for the most part, are suitable for cabin and permanent homes near the river. Consequently, this county has the largest number of riverbank property owners.

Landownership determination is complicated by a variety of land sale practices resulting in unrecorded plats and sales on a contract basis. The number of individual owners cannot, in many cases, be determined without detailed surveys, title searches and onsite interviews.

River Ownership

The States of Florida and Georgia own the riverbed of all streams which have been declared navigable, unless the lands have been conveyed into private ownership. The courts, however, have not adjudicated the navigability of the river for its entirety.

Land Use and Environmental Intrusions

Except for the State parks and State-maintained boat ramps and, to a degree, the county park at Hart Springs, recreational developments along the Suwannee are minimal and poorly maintained.

Riverbank Ownership By County

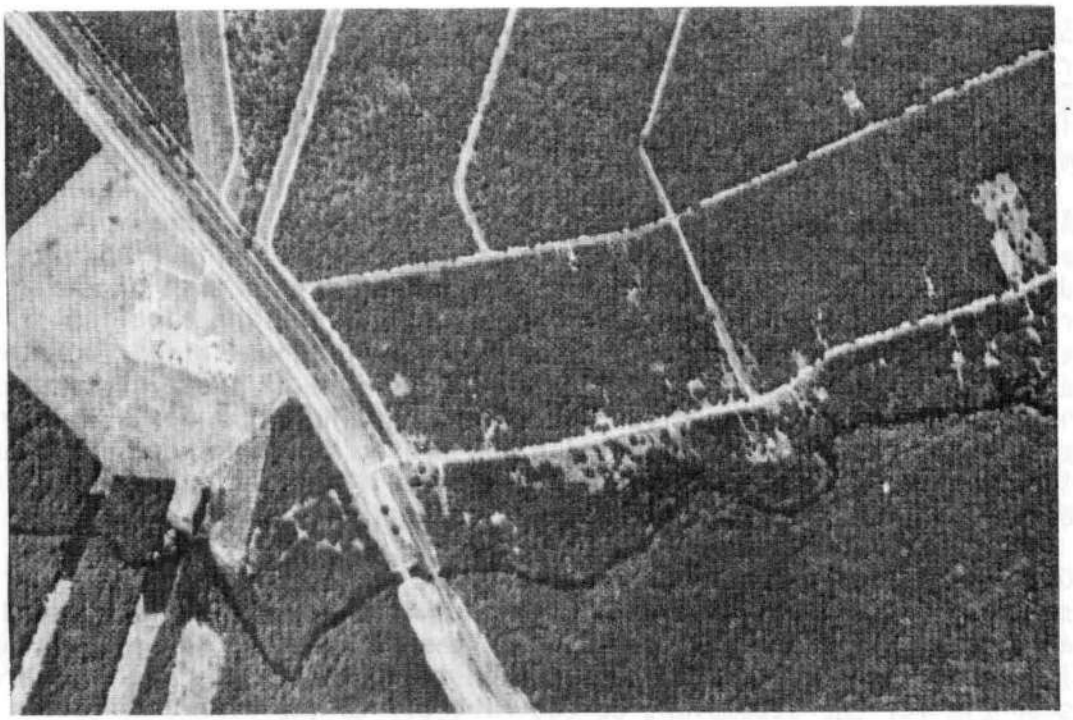
Counties	Federal	State	County	Industry (timber co.)	Individual	Total Miles Both Banks
Suwannee River						
Georgia:						
Charlton	42.6*	0	0	0	0	42.6*
Clinch	0	0	0	26.9	8.4	35.3
Echols	0	0	0	6.8	15.7	22.5
Ware	14.4*	0	0	0	0	14.4*
Florida:						
Columbia	0	0.9	0.1	5.0	35.8	41.8
Dixie	0	0.8	0.2	41.8	17.4	60.2
Gilchrist	0	0	0.6	9.8	22.2	32.6
Hamilton	0	5.2	0.3	23.4	51.4	80.3
Lafayette	0	0.2	1.2	8.2	46.6	56.2
Levy	0	2.6	0.1	23.2	8.0	33.9
Madison	0	0.2	0	7.3	5.3	12.8
Suwannee	0	2.0	2.0	27.0	68.6	99.6
Subtotal	57.0	11.9	4.5	179.4	279.4	532.2
Ichetucknee River						
Florida:						
Columbia	0	3.2	0	0	1.5	4.7
Suwannee	0	3.7	0	0	1.1	4.8
Subtotal	0	6.9	0	0	2.6	9.5
Santa Fe River						
Florida:						
Gilchrist	0	0	0	0.1	6.6	6.7
Suwannee	0	0	0	0	6.6	6.6
Subtotal	0	0	0	0.1	13.2	13.3
Grand Total	57.0	18.8	4.5	179.5	295.2	555.0

*Within the Okefenokee National Wildlife Refuge.

Residences, however, are occasionally well built serving as year-round homes for their owners. Cabins and trailers are located at intervals along the riverway. The majority are situated in the lower half of the river.

Floods are frequent and their waters recede slowly. The river at flood stage is not swift; damage to property is mostly from long immersion. Floods have been a primary deterrent to inappropriate development spoiling much of the river. Land above flood stage, however, is still largely undeveloped. Most existing uses are compatible with the objectives of the Wild and Scenic Rivers Act.

There are 10 established towns and communities along the study corridor. The largest of these are Branford and White Springs, Florida. Other towns are Fargo, Georgia, and Suwannee River, Ellaville, Dowling Park, Luraville, Old Town, Vista, and Suwannee, Florida. All of these communities have populations of less than 1,000 inhabitants. Development in these towns is well concentrated and intrudes on the natural river scene for only short stretches. The most extensive riverbank developments are at Branford and Suwannee River.



A few organization camps have been established along the stretch of the river below White Springs, Florida. Some lands on the riverbank have been platted or sold for residential developments. One of these subdivisions will total more than 600 lots within a short distance of the river. Subdivisions are scattered throughout the riverway; some in each county. One of the more extensive subdivisions is situated on either side of the river north of Suwannee River State Park. Most of these subdivisions contain many unsold lots.

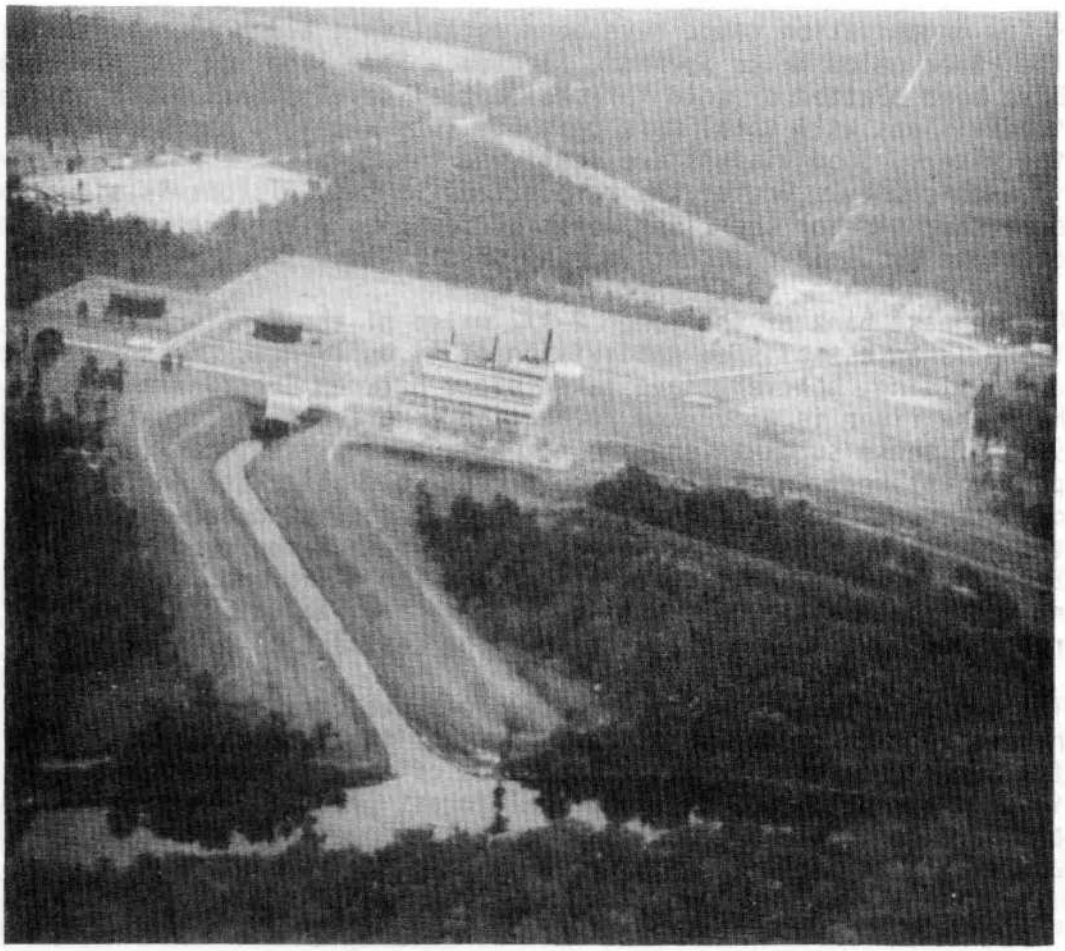
On the east bank of the lower 2-1/2 miles of the Ichetucknee River, there is an established subdivision of 44 buildings. Most subdividing and building, however, have taken place between Branford and the gulf. Here the river is wider and recreation opportunity is greater. Although some of these subdivisions are not active at present, an increase in public interest in the river would certainly stimulate action by developers. Perhaps the most active projects now underway within the river boundaries include a large, private campground near Fanning Springs, a mobile home subdivision near the gulf, and subdivisions near the Interstate 75 crossing. Altogether, about 50 miles of riverbank have been platted or sold for residential development.

The two principal industries of the Suwannee area are timber harvesting and phosphate mining. Most of the lands adjacent to the Suwannee are in forest. Thousands of acres have been planted in pine for pulpwood, the principal forest product. Turpentine, pine, and hardwood sawlogs are also important. However, comparatively little commercial timber lies within the immediate riverbank area.

Sporadic deposits of phosphate underlie the area straddling the river upstream from Suwannee Springs in Hamilton and Columbia Counties, Florida. Mining in this area began in 1965, and there is one phosphate processing plant now in operation and located some miles back from the river.

Although roads and railroads cross the Suwannee at a number of points, none parallel the riverbanks. This condition is probably due to the broad, low flood plain that characterizes most of the river. There are numerous powerline crossings and one pipeline crossing. Old bridge structures mark early crossings at six points--almost all in the upper half of the river. Some of these structures have collapsed into the river and little remains but pilings and twisted steel. An experimental sheet pile dam proved to be unsuccessful, and the remains of this river barrier create an intrusion and a hazard to boaters in the vicinity of Suwannee Springs.

One fossil fuel electric generating plant is located near the river south of Ellaville. An electric power switching station is located above the U.S. Highway 27 crossing of the Ichetucknee River. Neither is within the study corridor, although the water intake and discharge channels for the steamplant do cut directly to the river.



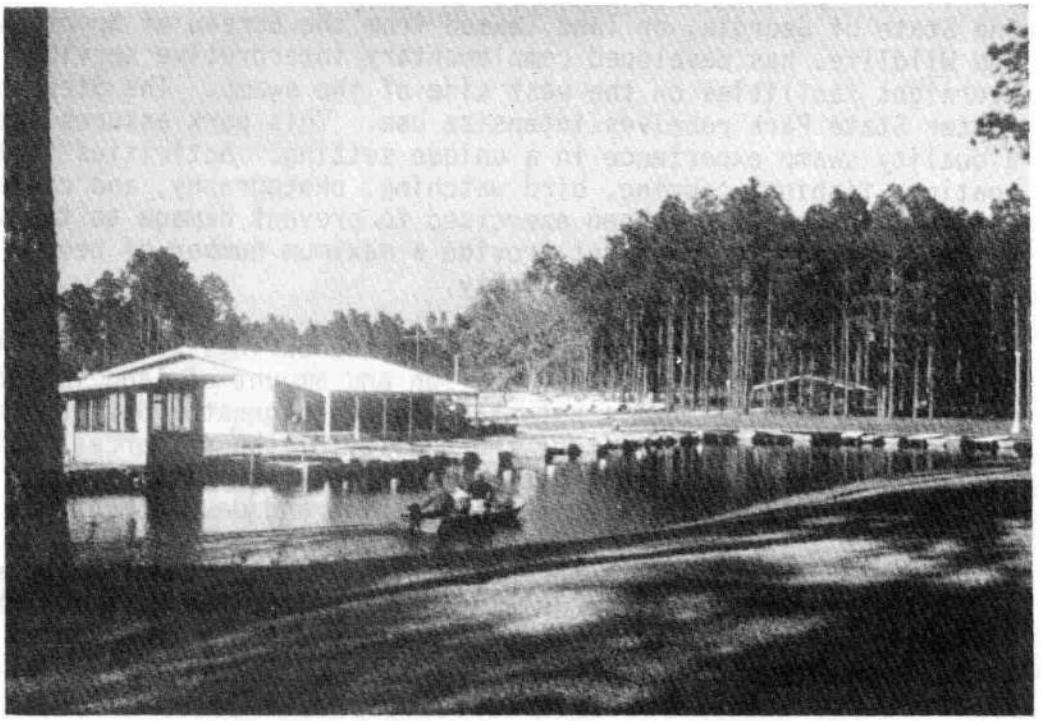
A number of cleared powerline rights-of-way detract from the natural environment; however, these intrusions are localized and can be landscaped. Other intrusions can be eliminated or abated in time. Abandoned bridges, the remains of the unsuccessful dam, blighted cabins, trailers, and other structures can be removed or effectively screened.

Recreation

People, seeking recreation, have visited the Suwannee since well before the start of the 20th century--evidenced by development of White Springs Spa following the Civil War. Excursions by train to Suwannee Junction and transfer by horse drawn carriage to Suwannee Springs or to a river steamer for a trip on the river were popular activities.

Utilization of land and water resources for recreation purposes along the Suwannee River is a potential not now being fully realized. The 1963 Southeast River Basins Study Commission Report on the Suwannee identified recreation and tourism as important elements in the present as well as the future economic life of the Suwannee basin.

The Okefenokee National Wildlife Refuge is managed primarily for the protection and propagation of wildlife. The refuge provides significant recreational opportunity. Trips into the swamp may be made by the public. Camp Cornelia near Folkston, Georgia, on the east side of the swamp, is operated by the Bureau of Sport Fisheries and Wildlife.



It recently has been expanded so that the refuge and swamp story can be more readily presented to the visitor. New facilities such as a boardwalk into a swamp prairie, an observation tower, a nature drive, and a concession operated boat livery service provide increased recreation opportunities.

The State of Georgia, on land leased from the Bureau of Sport Fisheries and Wildlife, has developed complementary interpretive services and overnight facilities on the west side of the swamp. The Stephen C. Foster State Park receives intensive use. This park assures visitors a quality swamp experience in a unique setting. Activities include boating, fishing, camping, bird watching, photography, and canoeing. Careful management has been exercised to prevent damage to the unique wilderness qualities and yet provide a maximum number of people with high quality recreation opportunity.

Florida operates three State parks--Manatee Springs, Suwannee River, and Ichetucknee Springs. The location and amount of land included in these parks give them a potential for much greater development and use consistent with the nature and quality of the resources. Limited State funds, coupled with higher recreation priorities in other parts of the State, have curtailed full expansion and development.

The recently purchased Ichetucknee Springs are outstanding and rank third in spring flow volume in Florida. The springs have a rich, virtually undisturbed natural setting and possess a remarkable archeological history.

A fourth area owned by Florida is the Stephen C. Foster Memorial at White Springs. It is administered by the Stephen C. Foster Memorial Commission. This 243-acre park provides a variety of recreation opportunities. The Memorial Commission has plans to acquire additional land, a spring, and other features which will be incorporated in the park.

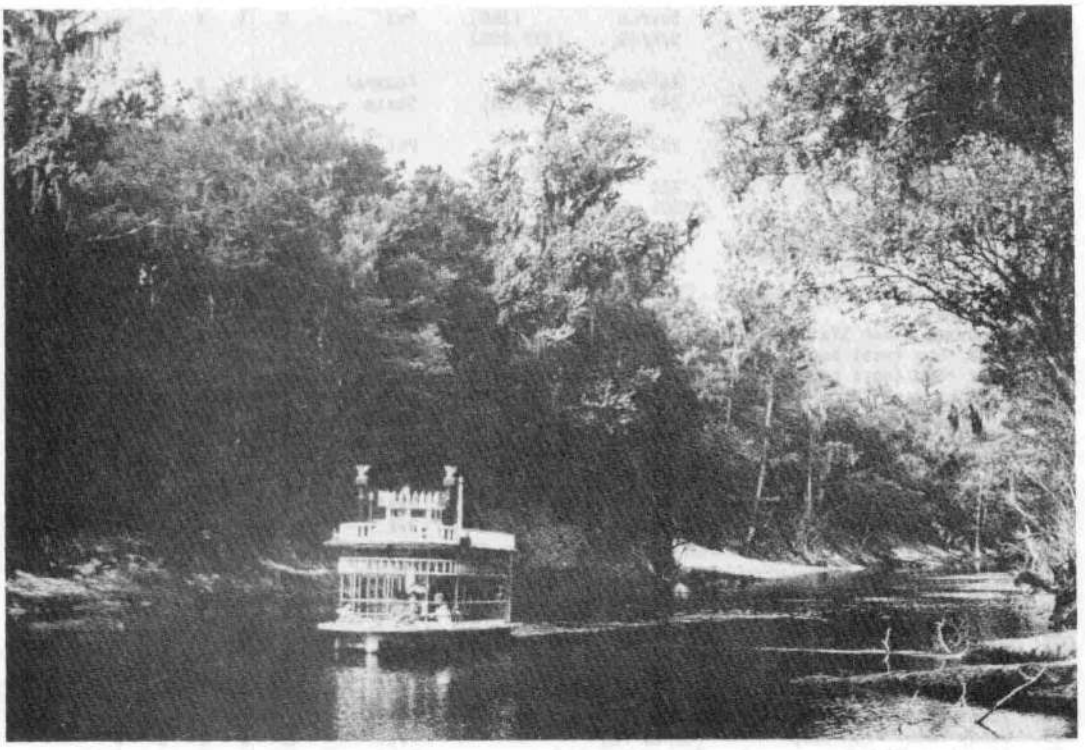
The counties provide limited river recreation opportunities. In a number of instances, landowners have built boat ramps and made them available to the county for operation and maintenance. Boat ramps are important along the Suwannee River. High banks and broad, swampy flood plains coupled with seasonal fluctuations in water levels have limited recreation opportunity. Sanitary facilities, picnic tables, and other standard features are often not available.

The striking exception to limited county development is the 276-acre Hart Springs Park in Gilchrist County, Florida. Swimming, picnicking, camping, and boating facilities are available in addition to other services.

Lafayette County, Florida, has embarked on an aggressive program to develop a 420-acre tract under the U.S. Department of Agriculture Greenspan Program. A boat ramp, campsite, and sanitary facilities have recently been installed. This area, when completed, will provide substantial recreation opportunities. More than a mile of riverbank frontage is included in the tract.

The Suwannee County Development Authority has planned recreational development on 734 acres near Suwannee Springs, including almost 2 miles of river frontage.

The role of private enterprise in meeting needs for recreation on the Suwannee River has been important. In Georgia, the private sector has provided some peripheral development near the wildlife refuge. The popular Okefenokee Swamp Park has been developed on the northern side in the vicinity of Waycross. Lem's Camp, downstream from the refuge, is the only private facility on the river between the refuge and the State line.



In Florida, private recreation enterprise is concentrated below Branford. Usually, facilities are related to serving the fishermen and generally consist of a camp with boat rentals and cabins.

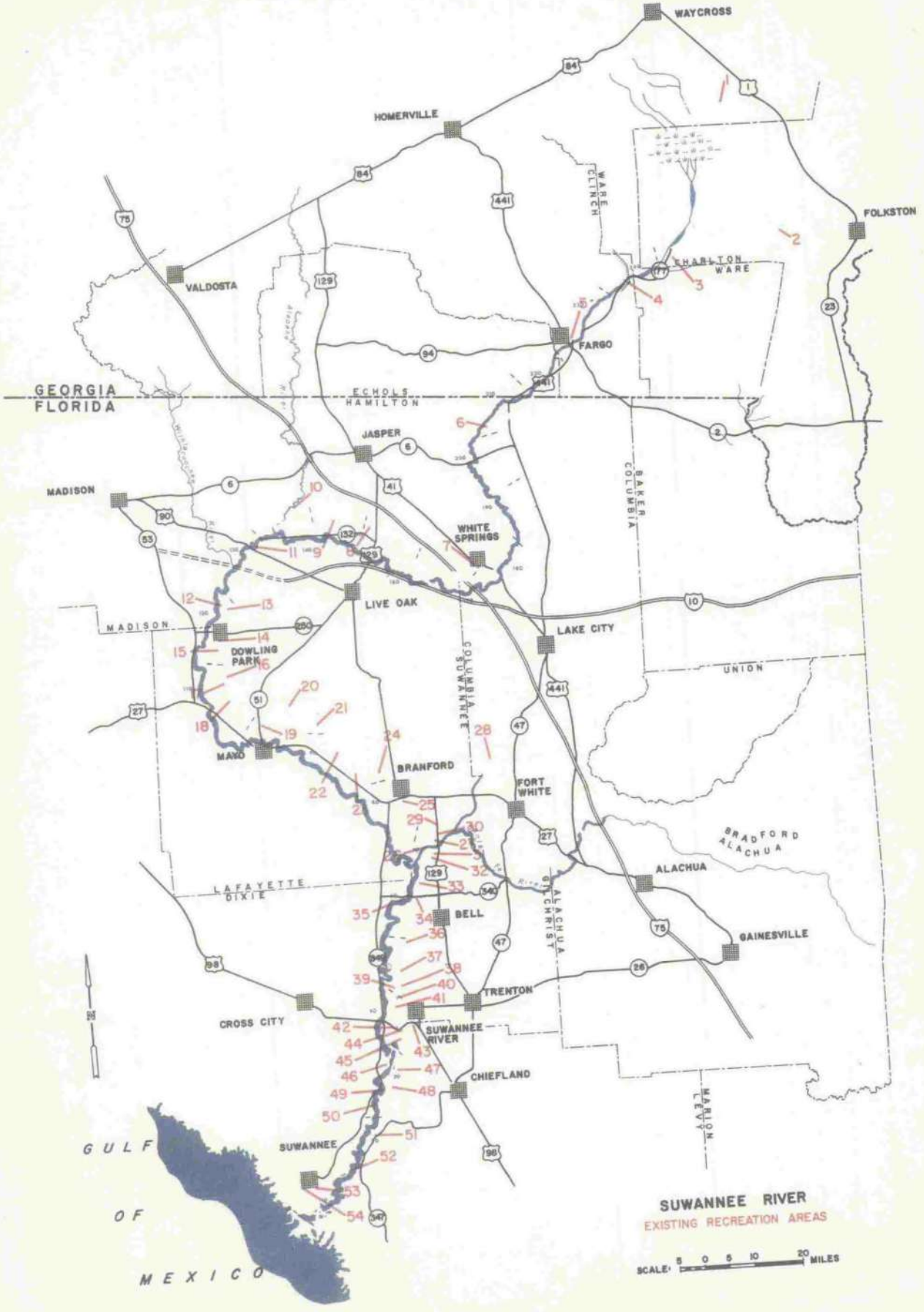
Other recreation opportunities are available on the vast tracts of land owned and operated by the timber industry. Hunting is the primary use, although there is a trend within the industry to provide other types of recreation for the public.

The table and map on the follwoing pages show in greater detail the locations, sizes, levels of management, and principal facilities offered at existing recreation areas along the river. Although 54 acres of various types are listed, some facilities, notably boat ramps, have been omitted.

SUWANNEE
SUWANNEE WILD AND SCENIC RIVER
EXISTING RECREATION AREAS

Name of Area	River Mile	Size In Acres	Level Mgmt.	1 Boat Ramp	2 Boat Rental	3 Picnic	4 Camping	5 Swimming
1. Okefenokee Swamp Park	Source	(200)	Pvt.	X	X	X		
Okefenokee National Wildlife Refuge	Source	(355,265)						
2. Camp Cornelia	Refuge		Federal	X	X	X		
3. Stephen C. Foster State Park	242	**(80)	State	X	X	X	X	
4. Lem Griffith Hunting & Fishing Camp	233		Pvt.	X	X	X	X	
5. Fargo Roadside Park	222	3	State	X		X		
6. Boat ramp	201	3	County	X				
7. Stephen C. Foster Memorial	170	243	State			X		
8. Suwannee County Development Authority	150	734	County	X				
9. Florida Sheriff's Boys Ranch	143	737	Pvt.		X	X		X
10. Alapaha	136	4	County	X				
11. Suwannee River State Park	128	1838	State	X		X	X	
12. Boat ramp (west bank)	118	1	County	X				
13. Boat ramp (east bank)	117	1	County	X				
14. Dowling Park	113	3	County	X		X	X	
15. Greenspan	111	420	County	X				
16. Charles Springs	108	**(10)	County	X		X		X
17. N. Fla. Methodist Camp	107	530	Pvt.					
18. Blue Springs	105	10	Pvt.	X		X	X	
19. Hal Adams Roadside Park	99	4	State	X		X		
20. Peacock Slough	96		Pvt.			X		X
21. Royal Springs	90		Pvt.			X		X
22. Hearson Spring	86	5	County	X				
23. Troy Springs	83		Pvt.	X		X		X
24. Camp O' The Suwannee	81		Pvt.	X		X		X
25. Branford Roadside Area	76	4	County	X	X	X		
26. Boat ramp	67			X				
27. Butlers Point (Santa Fe Junction)	66			X				
28. Ichetucknee Spring State Park	NA	2260	State					X
29. Sandy Point Fish Camp	(Santa Fe)		Pvt.	X	X	X	X	X
30. Stroziers Fish Camp	(Santa Fe)		Pvt.	X	X	X	X	X
31. Boat ramp	65			X				
32. Boat ramp	64			X				
33. Boat ramp	61			X				
34. Boat ramp	57			X				
35. Gornto Springs	55	4	County	X				
36. Boat ramp	49							
37. Hart Springs	43	276	County	X		X		
38. Otter Springs Campground	41	640	Pvt.	X	X	X	X	X
39. Boat ramp	41			X				
40. Boat ramp	39			X				
41. Boat ramp	38			X				
42. Boat ramp	36			X				
43. Suwannee River Roadside	33	6	State			X		
44. Boat ramp	33			X				
45. Ga. Pacific Wilderness Area	32	188	Pvt.				X	
46. Boat ramp	28	1	County	X				
47. Boat ramp	27			X				
48. Manatee Springs State Park	25	1798	State	X		X	X	X
49. Sunnyvale Fish Camp	24		Pvt.	X	X	X	X	
50. Yellow Jacket Fish Camp	22		Pvt.	X	X	X	X	
51. Treasure Camp	17		Pvt.	X	X	X		
52. Boat ramp (Vista)	13			X				
53. Suwannee, Florida	3		Pvt.	X	X	X	X	
54. Boat ramp	3			X				

* East side of Okefenokee Swamp
** Leased from BSF&W
*** Leased


WAYCROSS
HOMERVILLE
VALDOSTA
FOLKSTON
FARGO
WARE
CLINCH
CHARLTON
GEORGIA
FLORIDA
ECHOLS
HAMILTON
JASPER
MADISON
WHITE SPRINGS
BAKER
COLUMBIA
LIVE OAK
LAKE CITY
SUWANNEE
COLUMBIA
UNION
DOWLING PARK
MAYO
BRANFORD
FORT WHITE
BRADFORD
ALACHUA
LAFAYETTE
DIXIE
BELL
ALACHUA
GAINESVILLE
CROSS CITY
TRENTON
SUWANNEE RIVER
CHIEFLAND
MARION
SUWANNEE
GULF
OF
MEXICO
SUWANNEE RIVER
EXISTING RECREATION AREAS
SCALE: 5 0 5 10 20 MILES

Nearby Recreation Opportunities

Other rivers in the Southeast that are being considered in the national wild and scenic rivers system are the Chattooga River in Georgia, North Carolina, and South Carolina and the Obed and Buffalo Rivers in Tennessee. Georgia and Tennessee have enacted State scenic rivers legislation, while the States of Alabama, Florida, and South Carolina have identified rivers which may be included in future State scenic river legislation. In August of 1969, Alabama's legislature passed a resolution designating a portion of the Little River as a State wild and scenic river.

Live Oak, Florida, is used here as a reference point in relating distances between the Suwannee and other nearby recreation opportunities. The beaches of the Atlantic coast are 75 miles to the east. Within 150 miles is the upper gulf coast and further to the west the excellent beaches of the Florida panhandle. Twenty miles east of Live Oak is the Osceola National Forest; the Apalachicola National Forest lies 100 miles to the west; and the Ocala National Forest lies 75 miles to the southeast. Each has a wide choice of recreation areas and significant opportunities for fishing and other outdoor activities.

Significant Features

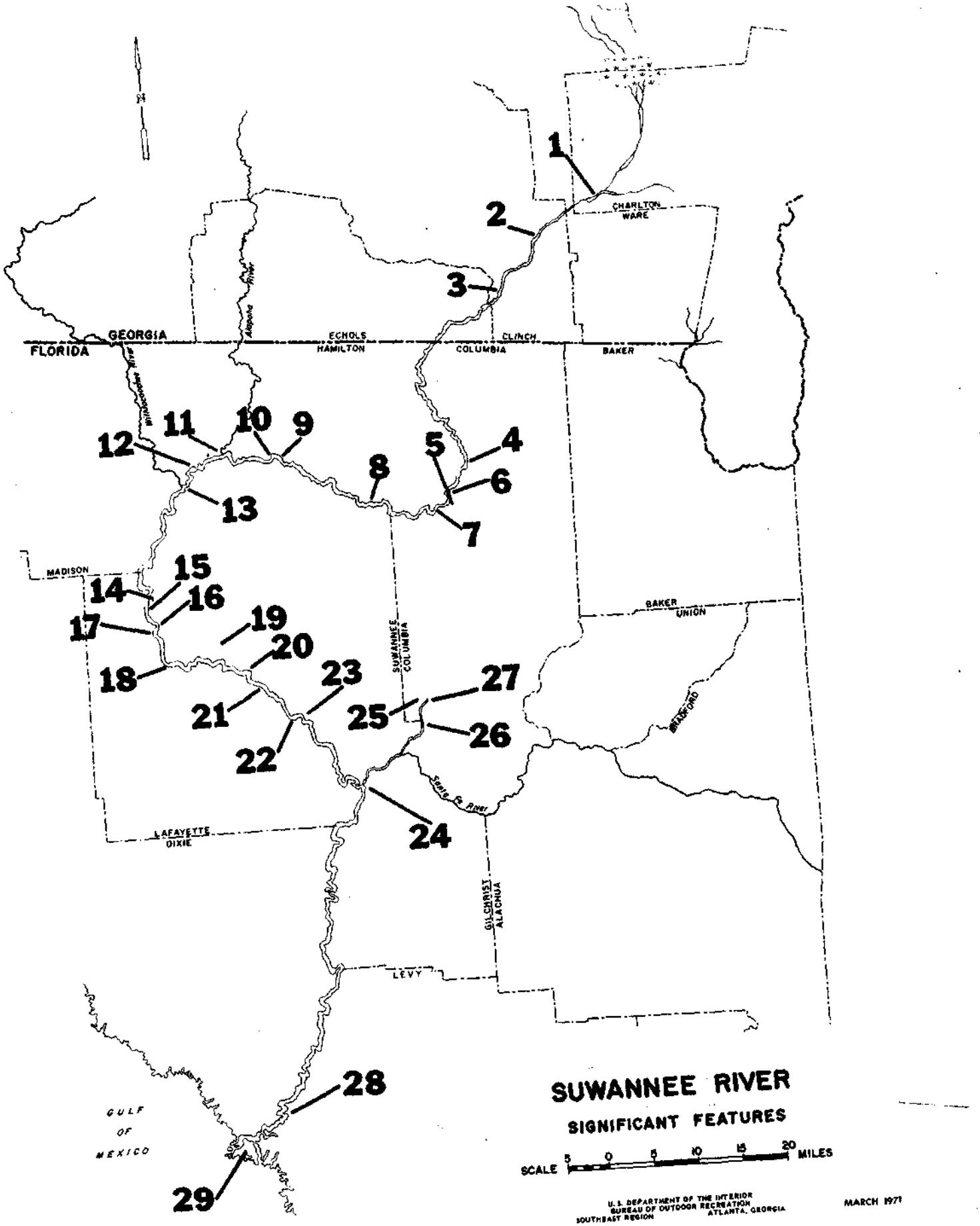
In addition to recreation areas and facilities along the Suwannee River, there is an unusual array of features which interest visitors. These include natural, historical, geological, archeological, and paleontological sites. The following table and map locate and describe 29 of these significant features.

SIGNIFICANT FEATURES

SUWANNEE RIVER, GEORGIA AND FLORIDA

MAP NO.	VALUES 1/ N	H	G	A	P	NAME OF AREA	RIVER MILE	SIZE ACRES	DESCRIPTION AND REMARKS
1	X					Freshwater Marsh	238		Example of Okefenokee Swamp ecology
2	X					North of Fargo	230+		Example of Ogechee Tupelo-Site to be determined by field check
3	X					Palmetto Preserve	219	100+	Example of Hammock Vegetation-- Especially Palmetto (Sabal Minor)
4	X		X			Algal Beach	180	80	Example of ancient seashore phenomenon
5			X			Big Shoals	177	160	Example of limestone erosion and "shoal" features
6	X		X			Agatized Coral	?	?	Placer deposit agatized coral cobbles
7	X		X			Not named	170	-	Example of cypress knees and limestone ledge features
8		X	X			Indian Flint Quarry	?	?	Example of unique outcrop flint rock
9		X				Not named	150	-	Example of early conduit between Pond and Suwannee Springs Spa.
10		X	X			Guinea Creek	145	400	Example of karst features limestone sinks
11			X			Alapaha River	136	100-200	Example of underground river surface return (Alapaha)
12	X					Hardwood Preserve	135	?	Example of mature hardwood timber
13						Ellaville Spring	128	-	Example of large grotto spring
14						Charles Springs	108	20	Example of Spanish mission (ruins at Charles Springs)
15		X				Historic Trail	108?	?	Example of Spanish travel route
16		X				Historic Trail	108?	?	Example of Spanish St. Augustine Trail
17		X				Allens Mills Pond	107	30	Historic mill
18	X					Pine Preserve	?	?	Example of virgin pines stand
19	X					Hardwood Preserve	?	?	Example of mature hardwood timber
20	X		X			Running Springs	94	30	Example of limestone arch created by erosion
21		X				Owens Island	87.4	20	Vestiges of Seminole War Island Fort
22		X				Troy Springs	83.1	120	Vestiges of sunken vessel
23	X		X			Little River Springs	81	30	Example of deep spring with extensive cavern source
24	X					Rivers Confluence	66.3	200	Example of area with variety of values, including hardwoods
25				X	X	Blue Hole (Ichetucknee)	-	20	Fossil area (associated with Ichetucknee Springs)
26		X				Ichetucknee Springs Sunken Vessel	-	20	Vestiges of sunken vessel
27		X				Ichetucknee Springs Spanish mission	-	20	Example of Spanish mission
28	X					Flood Plain Preserve	10		Example of cabbage palm and lower river flood plain
29	X					Hog Island	0	2,980	Example of salt marsh eco system

1/ N - Natural
H - Historical
G - Geological
A - Archeological
P - Paleontological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GEORGIA
FLORIDA
ECHOLS
HAMILTON
CLINCH
COLUMBIA
BAKER
MADISON
BAKER
UNION
BRADFORD
LAFAYETTE
DIXIE
GILCHRIST
ALACHUA
LEVY
SUWANNEE
COLUMBIA
GULF
OF
MEXICO
SUWANNEE RIVER
SIGNIFICANT FEATURES
SCALE 5 0 5 10 15 20 MILES
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION
SOUTHEAST REGION
ATLANTA, GEORGIA
MARCH 1971

III. THE ALTERNATIVES

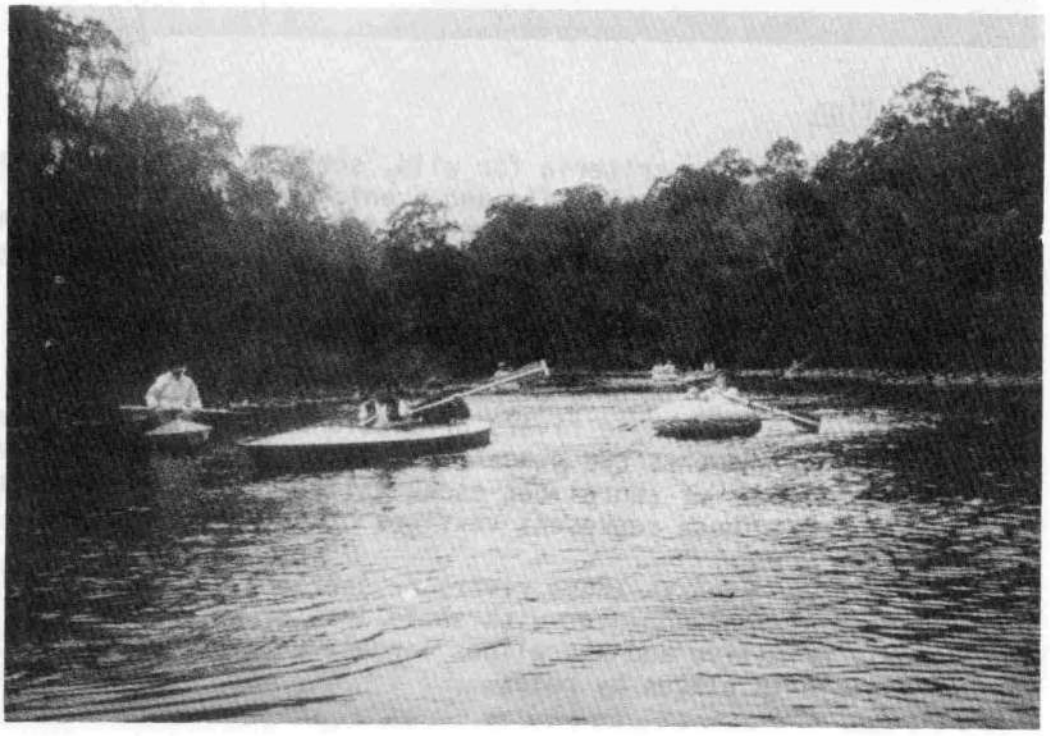
III. ALTERNATIVE COURSES OF ACTION

Appraisal

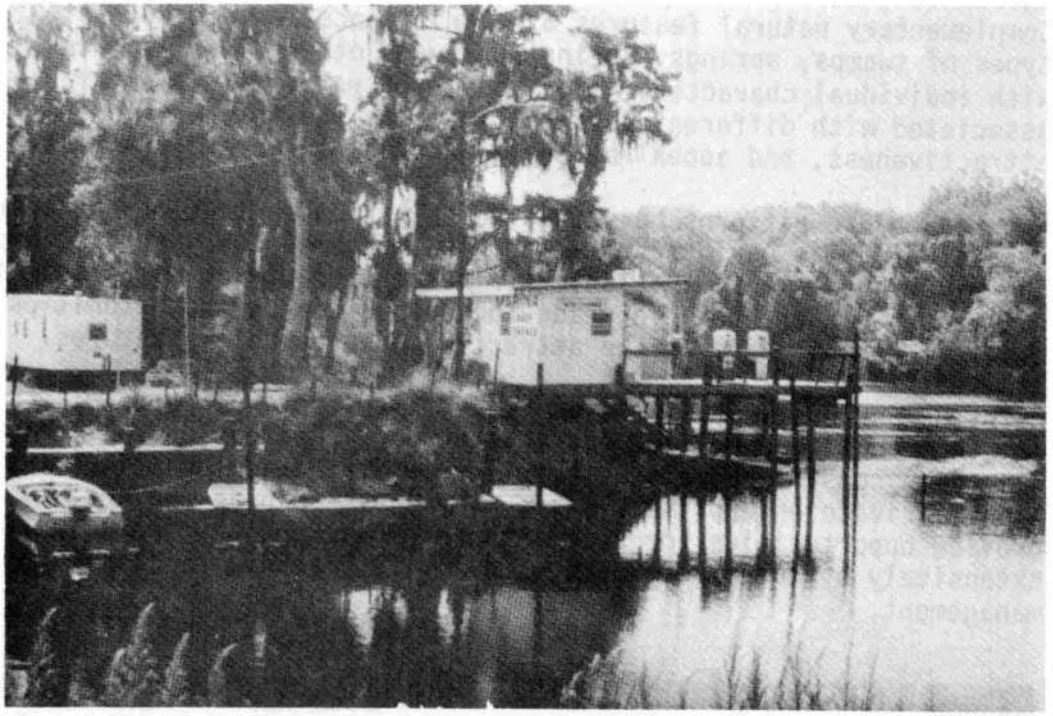
The national importance of the Suwannee River derives from its outstanding scenic beauty and charm as yet unblemished by man. Complementary natural features of significance include several types of swamps, springs, spring runs, and other river features with individual character. The variety of native flora and fauna associated with different physical features add to the value, attractiveness, and appeal of the Suwannee for recreational use.

Recreation use patterns have evolved to take advantage of the characteristics of its various segments. The measures considered to protect the river and make it available for recreation use do not change these patterns. Rather, they increase the recreation use opportunities where possible without harming the attractive environmental features.

Existing use of the Suwannee is relatively light. It presently is accommodating 1 million visitors a year. Recreation facilities have been constructed along the river by State and local agencies and by private enterprise. Also, many areas such as the springs provide opportunities for swimming and picnicking and are used extensively by local residents with little, if any, facilities or management.



The Suwannee River resource offers such badly needed recreation opportunities as floating, primitive camping, picnicking, sightseeing, nature study, fishing, and swimming. These opportunities would be available not only to local residents but will be within easy reach of urban residents.



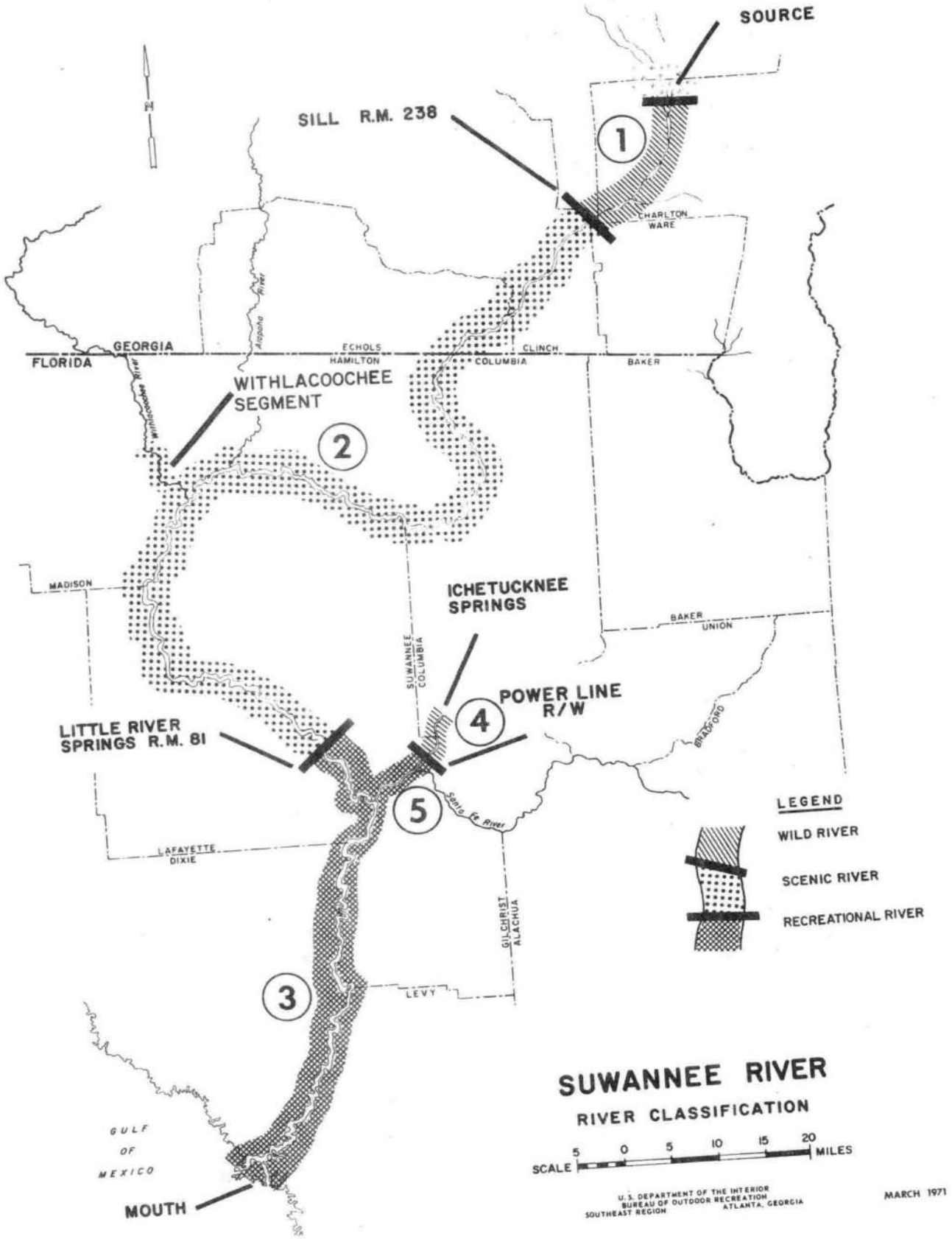
Classification

The Suwannee meets the criteria for wild, scenic, and recreational river areas set forth in the Wild and Scenic Rivers Act and the "Guidelines for Evaluating Wild, Scenic, and Recreational River Areas Proposed for Inclusion in the National Wild and Scenic Rivers System."

The criteria for classifying a river under the provisions of the Act are as follows:

1. Wild river areas--Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

2. Scenic river access--Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped but accessible in places by roads.


SOURCE
SILL R.M. 238
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CHARLTON
WARE
GEORGIA
FLORIDA
ECHOLS
HAMILTON
COLUMBIA
CLINCH
BAKER
Alapaha River
WITHLACOOCHEE
SEGMENT
2
MADISON
ICHETUCKNEE
SPRINGS
BAKER
UNION
SUWANNEE
COLUMBIA
POWER LINE
R/W
4
LITTLE RIVER
SPRINGS R.M. 81
BRADFORD
5
Santa Fe River
LAFAYETTE
DIXIE
GILCHRIST
ALACHUA
3
LEVY
GULF
OF
MEXICO
MOUTH
LEGEND
WILD RIVER
SCENIC RIVER
RECREATIONAL RIVER
SUWANNEE RIVER
RIVER CLASSIFICATION
SCALE
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MILES
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION
SOUTHEAST REGION
ATLANTA, GEORGIA
MARCH 1971

3. Recreational river areas--Those rivers or sections of rivers that are readily accessible by road or railroad that may have some development along their shorelines and that may have undergone some impoundment or diversion in the past.

The Suwannee River, the outlying Ichetucknee Springs and River, and the connecting reach of the Santa Fe River downstream to the Suwannee River meet these classifications as follows:

Section	Classification
1. Source to sill at river mile 238 (28 miles)	Wild
2. River mile 238 to Little River Springs at river mile 81 (157 miles)	Scenic
3. River mile 81 to mouth (81 miles)	Recreational
4. Ichetucknee River from headspring to the powerline crossing north of U.S. Highway 27 bridge (2.4 miles)	Wild
5. Ichetucknee River from the powerline crossing north of U.S. Highway 27 bridge to the confluence with the Santa Fe River and down the Santa Fe River to the Suwannee River (9 miles)	Recreational

(See Chapter V for Withlacoochee River Classification.)

Discussion of Classification

1. Source to the sill at river mile 238 (28 miles)--WILD

The river within the Okefenokee National Wildlife Refuge, under present preservation and protection practices, meets the criteria for a wild river. The only manmade structures are screened, elevated rest platforms used as emergency shelters. The sill forms the boundary between this segment and the downstream scenic segment. This area represents a unique vestige of primitive America. The refuge is inaccessible by road except at the three park areas on the periphery of the Okefenokee Swamp.

Continued maintenance of boat channels by the Bureau of Sport Fisheries and Wildlife in the lower sections of the refuge does not conflict with the wild character of this section of the river.

Water quality in the swamp is excellent.

2. River mile 238 to Little River Springs at river mile 81 (157 miles)--SCENIC

There is considerable variety in the character of this section of the river. The sill is a low earth dike with two small concrete stoplog structures for water release. It is 1 mile upstream from the edge of the swamp. Below the sill to the Florida-Georgia line, the environment of the Okefenokee Swamp is reflected in the broad river flood plain.

From the State line to Ellaville, river mile 128, the river is characterized by high banks, limestone outcroppings, and numerous shoals. Springs become numerous and continue to increase in size and number. Two major tributaries, the Alapaha and Withlacoochee Rivers, join the river between Suwannee Springs and Ellaville.

Below Ellaville, the riverbanks decrease in height and the river broadens, passing over a succession of shoals. The shoal just below Troy Springs limits navigation upstream from this point to smaller boats.

The riverbanks of much of this section are largely primitive and undeveloped. Four small communities--Fargo, White Springs, Ellaville, and Dowling Park--are well spaced and effect the natural appearance of the river to a minor extent and for only short reaches. Areas blighted by industry, objectionable structures and erosion are minimal and can be easily restored. In this section, there are nine highway and seven railroad bridges over the river. There are no parallel roads or railroads. The number of existing river access points is adequate but the quality of facilities is generally poor.

Water pollution is a minor problem at several points in this section of the river. Water quality monitoring records identified localized situations needing correction. To date, the river has been capable of assimilating effluents from existing sources within relatively short distances.

3. River mile 81 to mouth (81 miles)--RECREATIONAL

With few exceptions, the forested riverbanks are low and swampy. Several of the major springs are located along this section of the river. Except for suspended sediment during periods of high water and minor subdivisions, water remains essentially unpolluted.

Recreational classification has been considered for this section because of existing use and the opportunity and need for recreational development. The river is broader and deeper and suitable for large boats, including houseboats. The demand for small boat marina developments will increase as attention is focused on these opportunities.

Development along the riverbank is relatively scattered, and natural riverbank values are largely intact. Several blighted areas and other environmental intrusions are objectionable but can be corrected. Boating service facilities, including gas pumps, are now available at four locations.

There are frequent river access points, mainly unpaved county roads ending at the river's edge. Three highways and two railroads cross this 81-mile section. No roads closely parallel

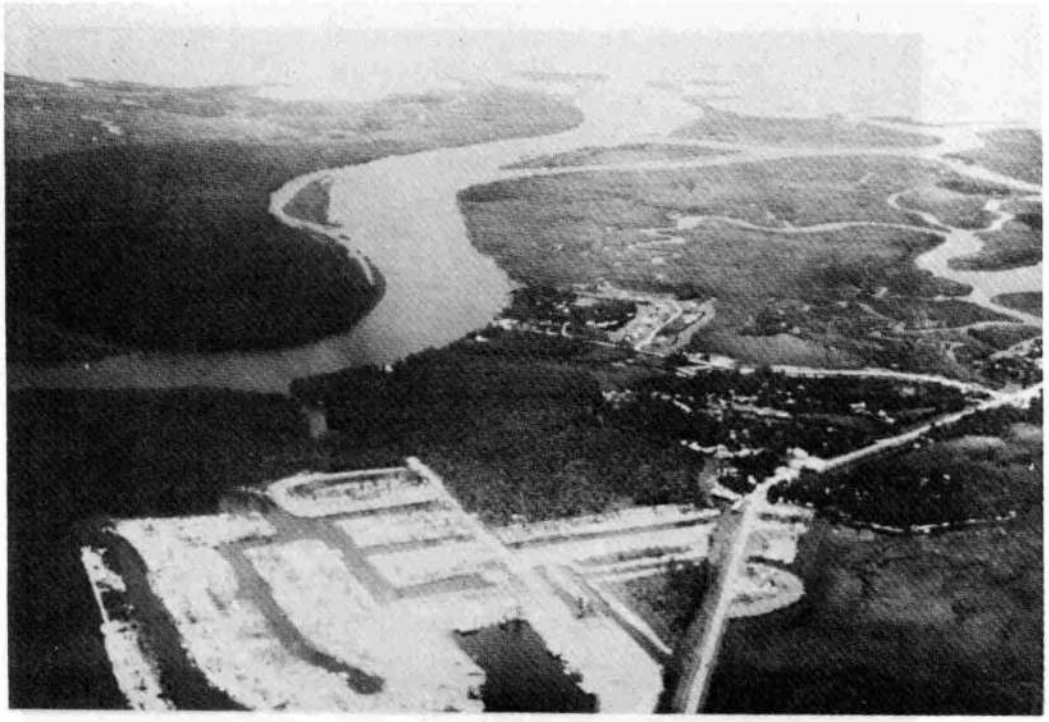
the riverbank. Dredging and filling activities and riverbank subdivisions have created some localized problems. Controls are needed on construction of this type.

4. Ichetucknee River--headspring to powerline (2.4 miles)--WILD

The State-owned upper portion of the Ichetucknee deserves special consideration. The springs feeding the river are outstanding. In concert, they produce from 157 to 302 million gallons of crystal clear water each day at a year-round temperature of 71° F. These undeveloped springs have supported recreation and limited commercial use for many years.

The area surrounding Ichetucknee Springs and this 2.4-mile river segment is in a natural primitive condition. Access to the headspring allows floating through this area to the Santa Fe.

The State of Florida has purchased the entire 2,260 acres of land encompassing the Ichetucknee Springs and spring run north of the U.S. Highway 27 bridge.



5. Ichetucknee River from powerline crossing to confluence with Santa Fe and Santa Fe to Suwannee River (9 miles)--RECREATIONAL

Intruding developments along the Santa Fe and up to the powerlines north of the U.S. Highway 27 bridge over the Ichetucknee reduce the area's classification to recreational. Although the Ichetucknee River is suitable only for small craft, the Santa Fe is sufficient in width and depth for most recreational boats. In addition, extensive opportunities exist for a variety of activities, including swimming, fishing, and tubing. Water quality of the Santa Fe is good with negligible siltation and contamination. The Ichetucknee water is of drinkable quality.

Land Requirements

The importance of the Suwannee derives from its scenic beauty and charm. Complementary natural features of significance include several types of swamps, springs, spring runs, and other river features with individual character. The variety of native flora and fauna associated with different physical features add to the value, attractiveness, and appeal of the Suwannee for recreational use.

Although any acquisition of lands and interests in land could be limited during the initial stages to that necessary to protect the

river corridor itself, it is a fact that many significant features occurring along the river's course to the sea are integral parts of the river resources and are separable only at the risk of sharply increased cost in the years that would follow scenic river designation and possibly destruction as natural features in their original natural setting.

There are several approaches to land acquisition and development and they can be explored when, and if, acquisition is initiated. It is the purpose of this section to present one practical approach to land acquisition that could be applied in the early stages of project implementation and to present some guides to indicate relative costs for an initial period--the first 5 years following designation of the river.

This approach to acquisition is based on the following assumption:

1. Sufficient lands and interests in lands should be acquired to assure the integrity of the river as an operable unit and to protect those features which warrant its inclusion in the national wild and scenic rivers system. Fee acquisition should be confined to the acreage needed to provide public access and services and to protect the river and resource values which might be jeopardized by less than fee control. Allowance is made for protecting the natural environment by scenic and public use easements, zoning, and

other agreements. All riverside lands within a corridor varying from 100 to 300 feet wide on each side of the river could be protected by easements, zoning, or fee acquisition.

2. Cities and villages included within the proposed boundaries should be given the opportunity to adopt valid zoning ordinance to accomplish the purposes of the Wild and Scenic Rivers Act before lands within their jurisdiction are acquired by other means. The administering agency(s) should reserve the right to acquire in fee or by easement any lands which are developed or used in violation of approved zoning regulations.

3. Flood plain, estuary, and other protective zoning by local entities and the States of Georgia and Florida should be encouraged to provide additional control and protection throughout the river area. In addition, zoning could provide a buffer zone beyond national wild and scenic rivers boundaries and thereby increase the overall attractiveness of the river.

Fee Acquisition

The Wild and Scenic Rivers Act stipulated that the lands to be acquired in fee simple in a federally administered component may not exceed an average of 100 acres per mile.

The total of all fee acquisition and easement lands included in the alternatives described in this report is 20,956 acres. If this land is acquired totally in fee simple, the average would be 76.2 acres per mile. Considering the 6,451 acres of land now in public ownership, 10,300 additional acres would be needed for fee acquisition of the river corridor and 4,205 acres for river access sites and natural areas. These figures excluded the 28.5 miles within the Okefenokee National Wildlife Refuge where there is no definable riverbank and most lands are submerged.

During the initial period of land acquisition, only the basic river corridor, the principal natural areas, and the necessary additional river access areas need be acquired in order to accomplish the basic purposes of the Wild and Scenic Rivers Act. Acquisition can be phased over a period of time to provide for future levels of recreation use and future needs for expansion of facilities. However, since land prices have escalated at a rate of 10 percent or more per year, acquisition should be completed as rapidly as funds can be provided following the initial period of project establishment.

Scenic Corridor

The land use on a total of 10,300 acres can be controlled by acquiring fee title, scenic easement, or other agreements from the private landowners.

Acquisition Criteria

Control and protection of lands adjoining the river through scenic easements or other agreements would entail extensive negotiation with individual private landowners.

To assure that interests of landowners and protection of public values are respected will require consideration of the special site characteristics of each tract. The following general criteria should be considered in negotiating easement and other agreements:

1. Landowners would retain access to the river subject to the specific conditions of the easement.

2. Riverbanks to the initial berm and islands would be maintained in a natural condition.

3. No trees or other vegetation would be removed from the slopes of the riverbanks except where necessary for public safety, to provide selective visits, or to reestablish more desirable vegetative cover. Such action would require prior approval and would be in accord with a master plan.

4. Clear cutting would not be permitted closer than 50 feet from the initial bank berm (or 100 feet of the normal water's edge if there is no defined berm). The objective would be to preserve the natural scene as viewed from the river surface.

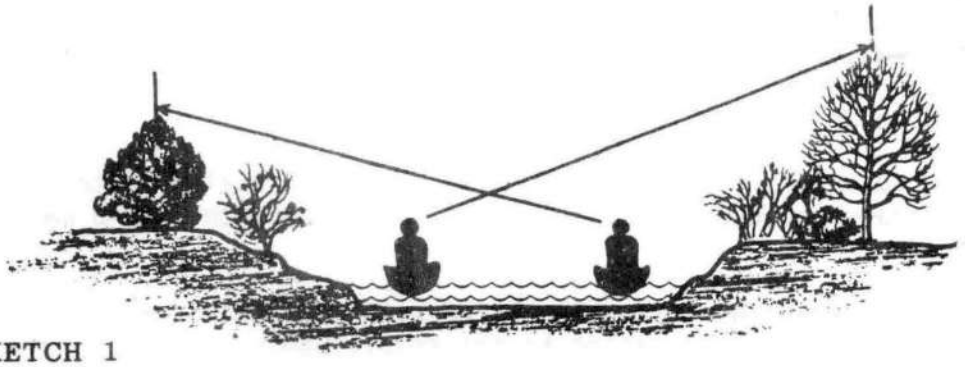
5. The public would not be excluded from any portion of the river surface.

6. Public use of the privately owned riverbank would not be permitted except where authorized by the landowner.

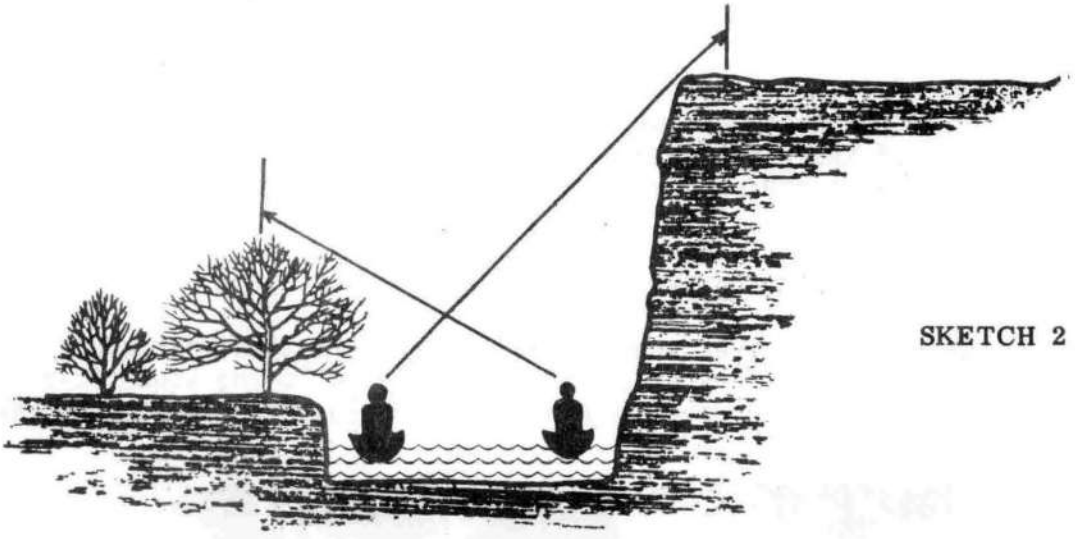
7. If compatible with overall objectives, existing buildings would be allowed to remain subject to adequate maintenance by the owner.

8. No new buildings or other improvements would be allowed within 50 feet of the initial bank berm except for appropriate development such as boat ramps or marinas authorized by permit.

9. Sanitation methods would, as a basic minimum, protect existing water quality. In some cases, existing facilities would need to be improved. All new installations should meet or exceed quality standards in order to maintain a high quality environment that is safe for public use.



SKETCH 1



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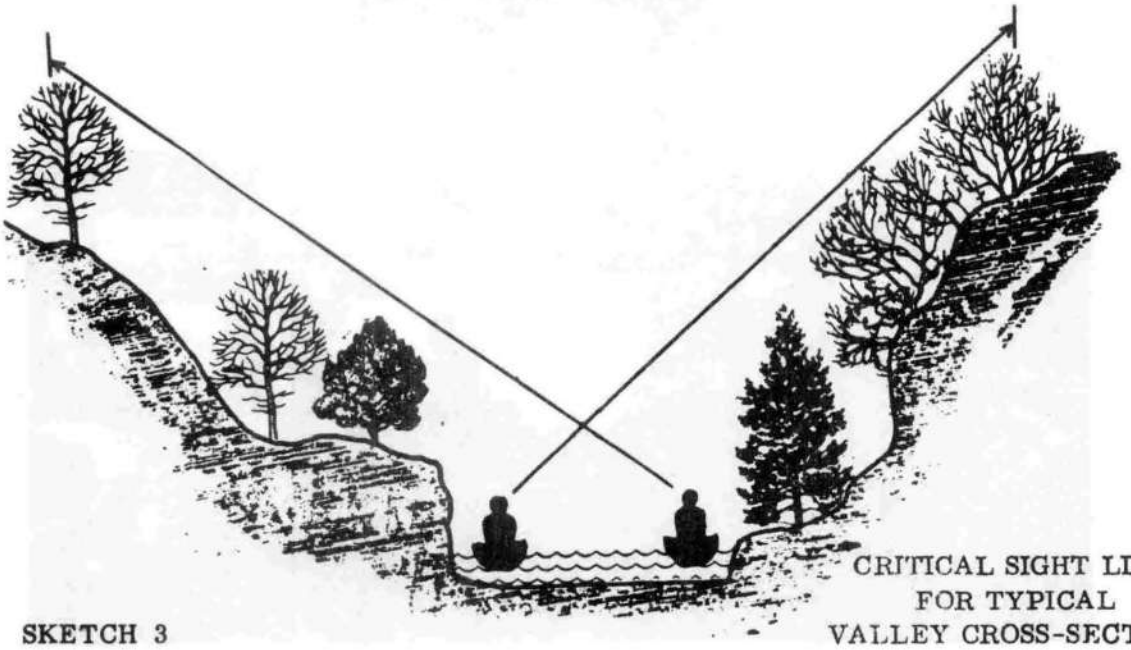


SKETCH 3

CRITICAL SIGHT LINES
FOR TYPICAL
VALLEY CROSS-SECTIONS

10. Existing roads, both public and private, being used for access to private property and river access would generally be allowed to remain. Specific requirements for the protection of the river through restriction of access points would be developed and shown in a master plan.

11. New roads or realignment of existing roads related to the river boundary would be constructed only in accordance with a master plan.

12. Each easement would be negotiated with the individual landowner giving full consideration to the relationship of the individual's property to the river. Use of adjacent property also would be taken into account.

13. Private landowners might, at their option, refuse to give or sell easements on their lands and request fee title acquisition of their property as an alternative. Where appropriate, these sales could provide for leaseback, sell back, and life tenancy provisions.

Easement Alternative

Each of the river segments has characteristics that would require differing degrees of protection. The following acquisition guidelines for each river segment were developed during the course of the

study and are presented for consideration by the Federal, State, or local officials interested in protecting all or part of the river.

1. Wild Section

Source to sill at river mile 238--Adequate protection would be provided by existing Federal ownership and management by the Bureau of Sport Fisheries and Wildlife.

2. Scenic Section

River mile 238 to Florida Highway 6 at river mile 197--No new development or timber harvesting within 200 feet of the riverbank would be permitted. State or local zoning controls are desirable for the remainder of the flood plain to assure that the river environment is protected.

River mile 197 to White Springs at river mile 170--The preservation of this section of the river would be complicated by the potential commercial extraction of underlying deposits of phosphate. The high banks in this river reach greatly reduce the area visible from the river surface. A protective acquisition corridor of 100 feet on each bank restricted against mining and new development would be needed. Timber cutting would be prohibited in the first 50 feet on each bank with selective cutting allowed on the remaining 50-foot strip.

River mile 170 to Ellaville at river mile 127--A 100-foot-wide zone should be acquired on the south bank with restrictions on timber cutting in the first 50 feet. A maximum easement width of 300 feet would be needed on the north bank to provide for public use of a proposed trail with restrictions on cutting of timber, construction of new buildings and other improvements. No timber cutting or new development would be permitted in the first 100 feet back from the north riverbank.

River mile 127 to Little River Springs at river mile 81--A maximum width of 200 feet on both sides of the river should be acquired to protect natural conditions. New building setback of 100 feet would be required from the bank crest with no timber cutting in this zone. Selective development and cutting would be allowed in the remainder of the zone.

3. Recreational Section

River mile 81 to river mouth at river mile 0--A minimum easement width of 100 feet on both sides of the river is recommended to control the quality of development. Easement width should be increased to a maximum of 300 feet in flood plain areas subject

to annual flooding. All dredge and fill operations should conform with the basic objective of protecting special river values. New buildings and other improvements will be set back a minimum of 100 feet from the riverbank except for marinas and similar types of facilities which are included in the master plan. Timber cutting will be prohibited within the first 100 feet.

4. Wild Section

Ichetucknee River from powerline crossing north of U.S. Highway 27 to Ichetucknee Springs--Adequate protection is provided by existing State of Florida ownership and management.

5. Recreational Section

Santa Fe from confluence with Suwannee River to Ichetucknee River and up Ichetucknee River to powerline crossing north of the U.S. Highway 27 bridge--Same acquisition guidelines as river mile 81 to river mouth (no. 3 above) would apply to this segment.

Plan of Acquisition for Development

The physical and natural characteristics of the Suwannee dictate the types and amounts of recreation opportunity that are compatible with the various reaches of the river. In the upper reaches, the river is narrow with many shoals and has limited capacity for public use. Below Branford, the river is broad and deep and has the capacity for a much higher volume of recreation use. The following principals are recommended to guide any development of recreation along the river. The plan of development should be based on the identification of five distinct reaches of river.

1. Wild Section

No development is recommended on the river within the Okefenokee Swamp in order to retain its wild and primitive character.

2. Scenic Section

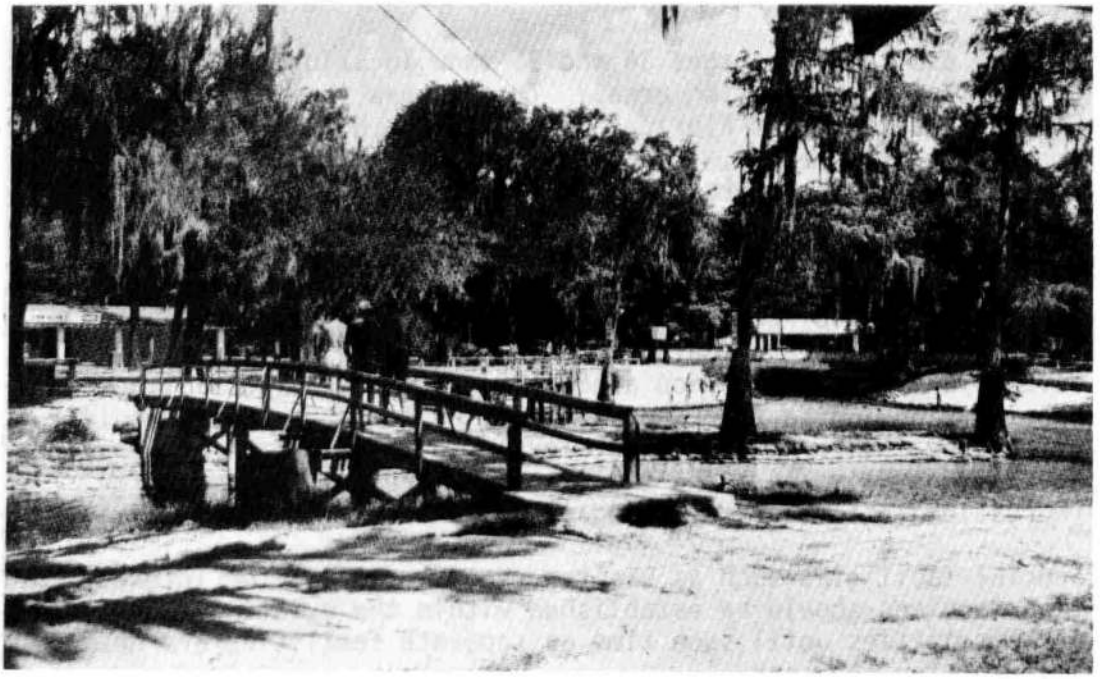
For nearly 40 miles below the swamp, the river flows through a broad flood plain that offers recreation experiences similar to those which can be enjoyed within the swamp. Facility and access development in this reach to complement and reduce the use pressure on the wilderness areas of the swamp is recommended.

Dispersed use would permit retention of a primitive setting for both the river user and visitors to the Okefenokee National Wildlife Refuge.

Along the segment between Highway 6 and Little River Springs totaling 117 river miles, the size of the river gradually increases and becomes entrenched between relatively steep banks. The plan should retain a natural and scenic river environment. Facilities within this reach should have greater capacity and below Ellaville be located closer together.

3. Recreational Section

In the lower 81 miles, the river is broad and deep. The resource use capacity and potential for recreation is by far the greatest in this reach. Many existing public and private developments are located here and this trend should be encouraged.



4. Wild Section

The Ichetucknee River and flood plain from the headsprings to the powerline crossing north of the U.S. Highway 27 bridge is wild and primitive in character and no development other than trails and minimum access should be located immediate to the river. Development of complete facilities might be planned well away from the river on related lands to avoid damage to the natural environment of the springs and spring run.

5. Recreational Section

There are several concentrations of private development and increased recreational use on the Ichetucknee River downstream from the U.S. Highway 27 bridge to the Santa Fe River and the

Santa Fe to the Suwannee. Similar compatible use and development should be encouraged.

During an initial period of 5 or more years following establishment, emphasis should be placed on acquisition of the basic resource. This includes acquisition of the river corridor, essential additional river access points, and those significant natural areas associated with the river that should be protected.

During the initial period, development of facilities should be limited to that needed to provide for adequate public access to the river.

The map and table on pages 34 and 35 show location and distribution of 54 existing recreation areas. These areas include four major State parks, three in Florida and one in Georgia, plus the 55,265-acre Okefenokee refuge. Added to these are several medium-sized public and private parks and numerous minor facilities.

The present rate of development of facilities by State and local agencies will probably be sufficient to sustain visitor use during the initial period of establishing a scenic river. States and local governments could continue to operate, maintain, and develop existing recreation areas. Ongoing Federal assistance programs, including the Land and Water Conservation Fund, would be made available at sufficient levels to assist State and local governments in meeting any significant increases in demand for recreation facilities following establishment of a scenic river.

Special facilities such as visitor centers and visitor information services should be established within the existing major park facilities until such time as separate facilities are deemed desirable or necessary.

Facilities presently located on the river include 30 or more boat ramps of varying quality. These range from concrete ramps constructed behind the riverbank with an erosion resisting channel to the river, to small paved and unpaved ramps. River access points average 3 miles apart, and no two are more than 10 miles apart, up to the Alapaha ramp at river mile 136.

Above the Alapaha River's confluence with the Suwannee, existing boat ramps are farther apart and some local boaters have had to make use of road crossings for launching. During the initial period of establishment, the agency responsible for administering the river should take early action to improve these access areas. Either construction or relocation may be necessary to eliminate damaging effects on the riverbank. The number of access areas should be increased above the Alapaha to provide minimum spacing of 10 miles.

Acquisition of additional lands and development of other facilities could be delayed until after essential corridor and access areas have been acquired. Acquisition action should be in accord with a master plan developed by appropriate agencies. The rate of development would be commensurate with the rate of increase in public use of the river and its facilities. The ultimate development level should not exceed the capacity which the river and its use facilities, springs, etc., can sustain without adverse effects.

Fee and Easement Acquisition

This report considers that the river corridor should be acquired in fee simple except where special considerations make scenic easements more desirable or necessary.

Practical application of control over the river corridor to assure compliance with the terms of an easement by a landowner or his successors and by the user public has often created costly administration problems. Where this method of land control has been used, landowners have tended to become dissatisfied with the restrictions on the use of their property. The cost of easements in the Southeast is estimated to range from 50 to 60 percent of the cost of fee simple over the past 3 years. It is likely that the cost of easements will now run considerably higher on parts of the river especially where the riverbanks are suitable for homesties close to the river.

The high cost of easement acquisition and the long-term cost of administering easements outweigh in many instances the advantages of less than fee ownership, especially for a resource so extensive in length and involving such a large number of property owners as the Suwannee River.

Local and State Zoning

Zoning ordinances can be an effective means of protecting the river in lieu of acquiring easements or purchasing land from individual owners. The Wild and Scenic Rivers Act encourages local governments to actively participate in the wild and scenic rivers program which, at the same time, would reduce the need for fee title and easement acquisition. State zoning actions are not common but, where a resource such as a river extends through a number of local jurisdictions, such action may be appropriate. In at least one instance, the Allagash Wilderness Waterway in Maine, State zoning has been an important element for protecting the special values of a component of the national wild and scenic rivers system.

The objective of zoning along the Suwannee should be twofold:

1. To accomplish basic purposes necessary to the preservation and protection of the river.

2. To increase the zone of protection beyond the boundary of the component, particularly in the flood plains and near developed areas to assure that the quality environment is protected.

The substitution of State and local zoning protection in lieu of scenic easements and the extension of the buffer zone beyond official river boundaries is highly desirable.

Local governments within each of the river segments should be encouraged to prepare zoning plans and execute zoning ordinances to implement a master plan.

Management Alternatives

Several alternatives have been considered for the future of the Suwannee River. Among these are: (1) allow the present trends of land use and development to continue, (2) protect all or part of the river by State action, (3) protect all or part of the river by Federal action, and (4) a combination of Federal-State actions.

Equal consideration of these alternatives assumes that responsible agencies, under the constraints of each alternative, will act favorably to protect, conserve, and enhance the quality of the river resource in the near future.

Alternative 1--Allow the present trends of land use and development to continue.

Present patterns of use and development could enhance and perpetuate the qualities of the Suwannee River, provided unified cooperation, action, and enforcement by the many involved parties could be achieved. Correction of some existing trends toward deterioration would be necessary. Consistent planning and implementation between States and local governments would be essential. A strong incentive for voluntary cooperation by public and private landowners would have to be provided, and zoning and other related local action would be required. The key to the effective protection of resource values would be uniform controls and enforcement.

Private developments for public use have centered around vacation cabins, boating, camping, and fishing. Fish camps at convenient access points and other private recreation developments are, for the most part, small operations. Some past private developments exploiting the springs have contributed to their deterioration.

A few new investments, such as private campgrounds and mobile home parks, indicate future trends. A new State park has been established. State and local parks have increased their capability to serve visitors to the river. Recent State and county park projects are examples of actions that should be expanded if responsibility for acquisition and development is left wholly at local and State levels.

The Suwannee is attractive for seasonal and permanent residential development. Problems associated with such developments in rural areas remain unsolved without uniform and strong local control. Undesirable development trends along the river consist of speculative ventures which produce little in the way of planned community development and resource protection. Existing authority to zone and to establish building codes has not been adequately exercised. Uncontrolled residential, vacation cabin and trail developments pose the greatest imminent threat to the river's scenic beauty and water quality.

Timber production has occasionally resulted in harvesting to the river's edge, but most companies have voluntarily avoided this practice. In general, agricultural practices have been compatible with the natural character of the river; however, this may not persist in the future.

The impact of phosphate mining in the basin on the river has been closely observed. If mining operations encroach on the riverbank or adversely affect water quality, additional local or State controls will be necessary.

Alternative 2--Protection of all or parts of the river outside of the Okefenokee National Wildlife Refuge by State action.

The States of Florida and Georgia could provide protection for all parts of the Suwannee as a State wild and scenic river. Under the Wild and Scenic Rivers Act, national designation could be obtained for a State river if the criteria set forth in the Act and supplemental criteria developed by the Secretary of the Interior are met and the river is administered without cost to the Federal Government.

Georgia has passed legislation for study of the Suwannee for possible inclusion in a State system--Florida has not. Conservation groups in each State are working to develop State river programs. The uncertainty of the States providing an adequate funding level for acquisition, development, and management of streams selected for their systems if or when established is a problem. It is unlikely in any event that either State can move rapidly enough to protect major river resource values without substantial financial help such as that available from the Land and Water Conservation Fund.

Cities and counties in Florida have authority to plan and to adopt zoning ordinances, subdivision regulations and municipal codes and authority to establish planning commissions. This zoning authority allows cities and counties to undertake a complete program of long-range planning and use a wide range of measures to implement plans for land use.

In 1972, the Florida State Legislature passed an Act giving the Florida Cabinet the power to act to provide protection for areas determined to be of "critical State concern." Under the provisions of this 1972 Act when an area is designated by the Cabinet as being of critical State concern, local governments are given 6 months to pass zoning ordinances which meet the guidelines fixed by the State controlling development and use of the designated critical area. Once local governments have complied with the guidelines established for an area of critical State concern and the required ordinances have been passed, the area can then be removed from the State's "critical" designation leaving all subsequent control of the land in the hands of local government.

Several counties bordering the Suwannee River in Florida have passed local ordinances to protect some aspects of the Suwannee resource during the past 2 years. These ordinances were not prepared under the guidelines for areas of critical State concern and lack the force and scope to provide complete protection for the natural values of the river. However, they do represent a significant step forward in local recognition of responsibility to regulate use and development along the river.

In Georgia, the governing body of each county has zoning authority. An amendment to the Georgia Constitution, ratified in 1966, reads in part as follows:

> The governing authority of each county is empowered to enact for unincorporated areas of the county appropriate planning and zoning ordinances for public safety, historic, health, business, residential, and recreational purposes. Such governing authority is hereby authorized to establish planning and zoning commissions separately or in conjunction with any combination of other counties and municipalities of this State and adjoining States. The General Assembly is hereby authorized to provide by law for such joint planning and zoning commissions and provide the powers and duties thereof. Such governing authority is hereby authorized to participate in the costs of such planning commission. (Ga. Code Ann. § 2-8404).

Alternative 3--Protection of all or part of the river by Federal action.

Designation as a component of the national wild and scenic rivers system by congressional action would provide sufficient protection

for the river's preservation and could allow the States and local jurisdictions to assume substantial responsibility for administration.

If a Federal agency administers a river in the national system, State and local agencies may share in management, administration, and related costs.

State, local, and private interests could assume an important role in preserving the Suwannee. Increased involvement by these interests is essential to the future of the river, and their active participation must be encouraged.

If the river is protected by the Federal Government, all land would be acquired through the Department of the Interior. Development costs and annual operation and maintenance costs would be the responsibility of the designated managing agency.

Alternative 4--Cooperative Federal-State action.

Cooperative actions by the States and Federal Governments could be undertaken to provide a suitable level of protection and management for the river. Cooperative agreements and participation in preparing a master plan offer the States a choice of the degree of responsibility and expenditure they wish to undertake. Some assistance through existing Federal grants programs could be utilized to fund planning and development operations if a lack of such funds would prevent them from participating to a desirable level.

This alternative could, for example, provide for acquisition of the river corridor by the Federal Government and all development, operation, maintenance, and replacement by the States of Florida and Georgia.

Preliminary Cost Estimates

Some landowners, particularly in the lower reaches of the river, have shown a willingness to donate lands or interests in land to the State and to private organizations. During the early stages of this study a number of large private landowners expressed some inclination to donate interests in land along the riverbanks. The State of Florida has had some success with obtaining donations of easements along certain of the rivers designated in the State Scenic and Wild Rivers Program. The donation of lands and interests in lands cannot be considered in arriving at estimated costs that would be applicable to a project to protect the Suwannee River, but it could certainly have the effect of reducing the actual cost of land acquisition.

Donated land could also be used by the State in computing its share of matching funds for Federal assistance from the Land and Water

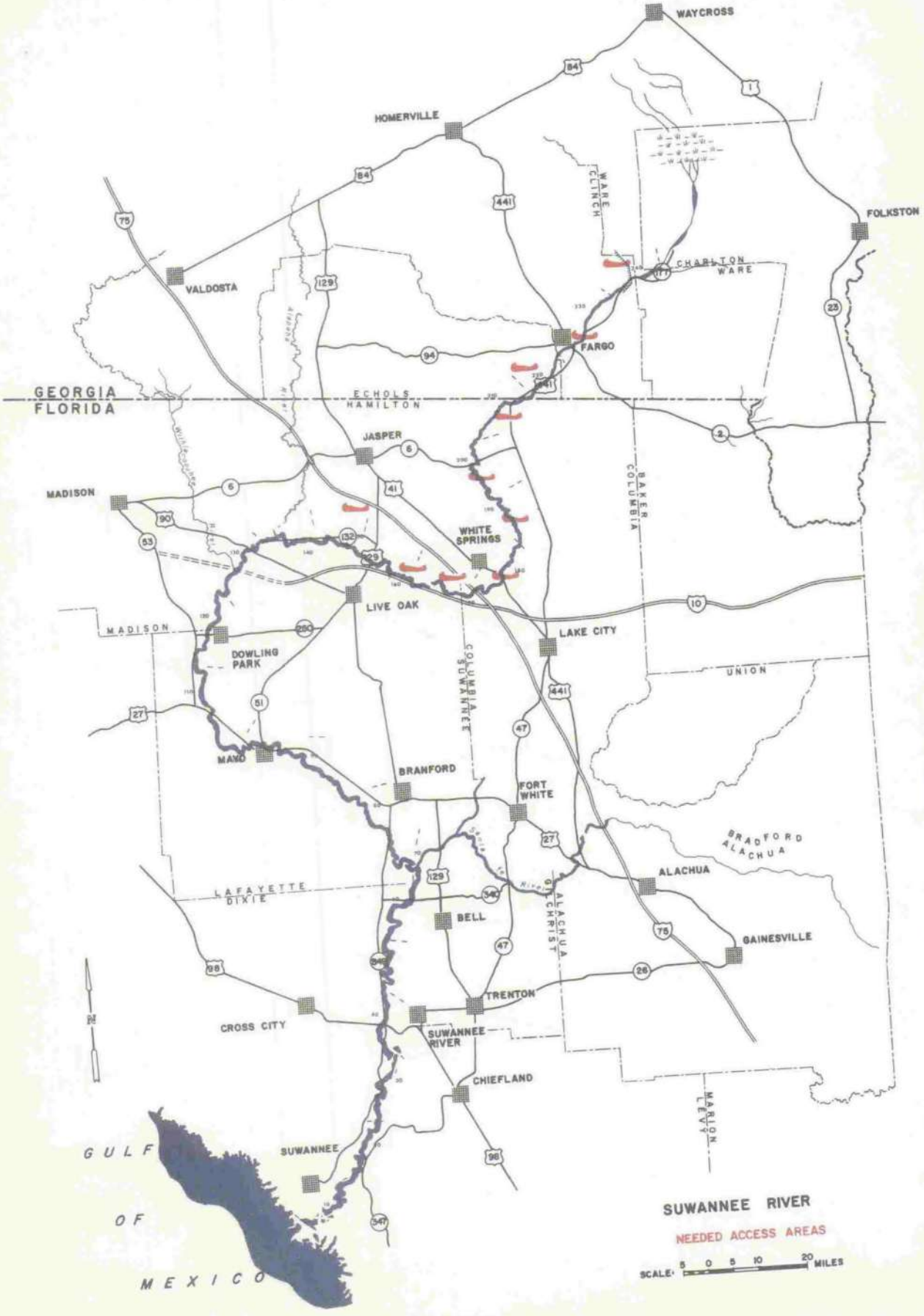
Conservation Fund, thereby reducing the overall cost to the State if it assumed complete responsibility for protecting the river.

Land prices, particularly riverfrontage, in the Suwannee areas of Georgia and Florida are estimated to have escalated at an average rate of 10 percent per year over the past several years. On this basis, the cost estimates included in this report have been adjusted to reflect an average per acre cost increase of 20 percent over available 1971 figures.

Preliminary costs for acquisition, development and operation are set forth in the following tabulation:

Preliminary Cost Estimates

Land Acquisition	Acres	Estimated Cost $(000)
Fee		
River Corridor		
Georgia	1,300	$ 710
Florida	9,000	10,044
Subtotal	10,300	$10,754
Scenic Easement		
River Corridor		
Georgia	1,300	$ 866
Florida	9,000	5,996
Subtotal	10,300	$ 6,861
Existing State and Local, Government Owned Land	6,451	0
Subtotal	6,451	0
Additional (river access and significant natural areas)		
Georgia	410	$ 224
Florida	815	910
Hog Island Natural Area	2,980	895
Subtotal	4,205	$ 2,029
Total Fee	20,956	$12,783
Total Easement	20,956	$ 8,890
Development Costs (boat ramps, parking, sanitary facilities, etc.)		
Georgia	4 sites	$ 145
Florida	7 sites	255
Subtotal		$ 400
Annual Operation and Maintenance		
Georgia		$ 44
Florida		491
Subtotal		$ 535
Grand Total (Development, Operation, and Maintenance)		$ 935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HOMERVILLE
FOLKSTON
VALDOSTA
CHARLTON
WARE
FARGO
GEORGIA
FLORIDA
ECHOLS
HAMILTON
JASPER
MADISON
WHITE SPRINGS
LIVE OAK
LAKE CITY
DOWLING PARK
UNION
MAYO
BRANFORD
FORT WHITE
BRADFORD
ALACHUA
LAFAYETTE
DIXIE
BELL
GAINESVILLE
TRENTON
CROSS CITY
SUWANNEE RIVER
CHIEFLAND
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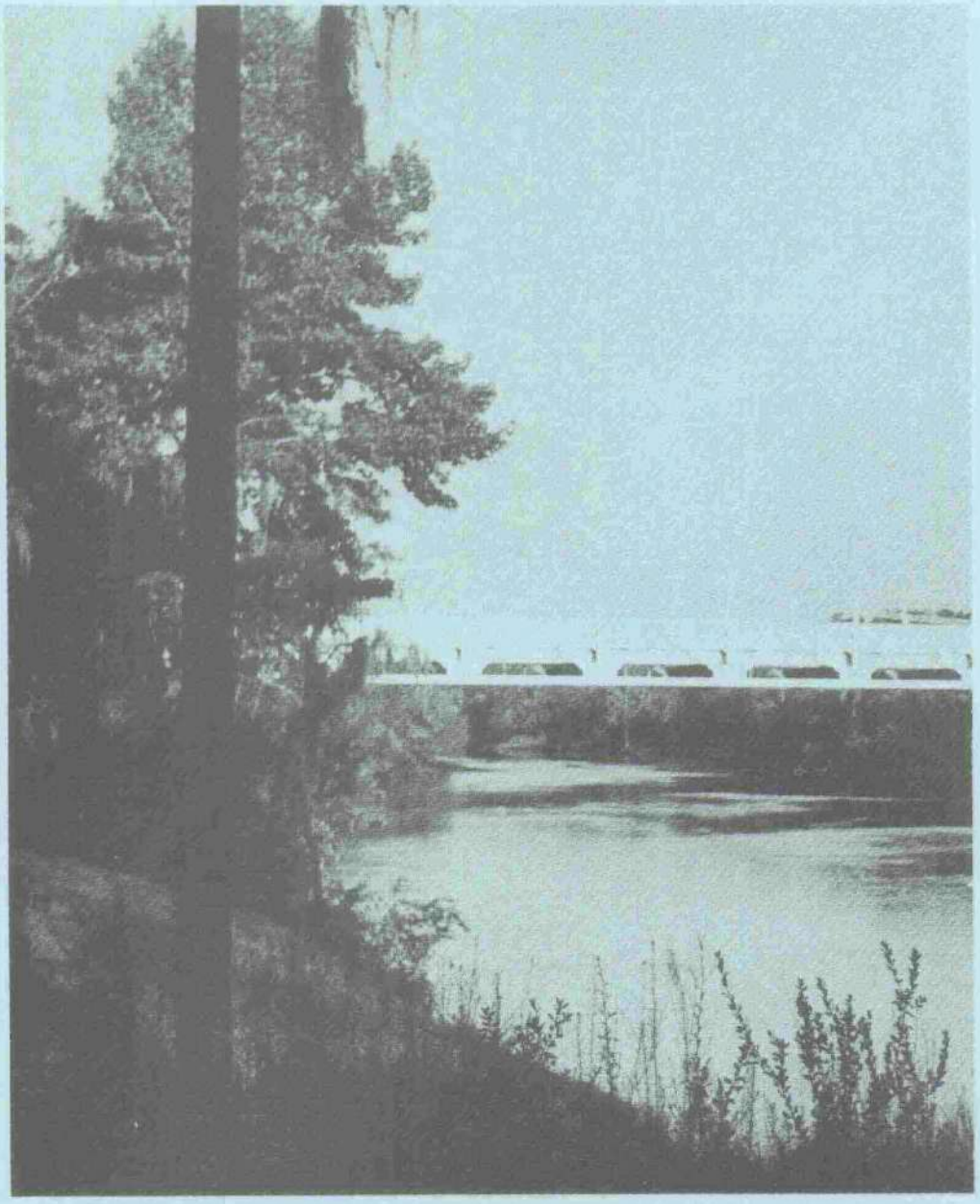
IV. ECONOMIC ANALYSIS



IV. ECONOMIC ANALYSIS

Expected benefits to the economy from recreational development and use of the Suwannee River greatly exceed potential losses or benefits foregone. Preservation of the scenic beauty and providing for quality outdoor recreation use will entail a modest degree of curtailment of other foreseeable uses of the region's land and water resources. Principal uses related to the river that have significant impact on the Suwannee region's economy are recreation, timber production, phosphate mining, and certain real property with residential or commercial potential.

Recreation Development and Use

The Suwannee River resource is underutilized for outdoor recreation. From an annual recreation use in 1969 of 1 million people, use is expected to increase to 5 million annually within 10 years if the river is given national designation. The greater part of that projected use is viewed as recreation use from the national market. The estimated 5 million visitor days annually is based on the optimum level of recreation developments and the approximate capacity of the resource if a quality recreation experience is to be maintained. Visitation much in excess results in degradation of quality.

Visitor expenditures contribute significantly to the river region's economy. This is seen as a direct annual input of about $55 million (1970 dollars) if visitor use increases to the estimated 5 million visitor days by the 10th year following a designation of the river. This, in turn, is expected to generate at least a corresponding expenditure by private enterprise to provide motels, restaurants, and related service facilities adjacent to the component. In addition, operation and maintenance expenditures for the component are expected to contribute about $535,000 annually.

Existing Recreation Use

Existing use of the river for recreational activities is substantially facility dependent. There is considerable local boating, fishing, and use of spring areas along the river. This use of the river occurs because it is easily accessible to local residents, is the major resource in the area, and possibly most important, because of the beauty of the setting and high quality of the water. All river recreation areas with extensive facilities are now being used to capacity during high demand periods.

Although resident use of developed areas--mainly State parks--currently comprises the major part of total visitation, nonresident use of these recreation facilities is significant and derives essentially from two groups: (1) a growing group for whom the area is a destination either for a weekend outing or a more extensive stay; and, (2) those who use the area either for an overnight camping stop or a short stay en route to another primary destination.

The following table summarizes visitor use of existing major recreation areas on and related to the river where actual counts have been made on a regular basis.

Total Attendance at Four State Recreation Areas

Recreation Area	1968 Season	1968 Percent Overnight	1969 Season	1969 Percent Overnight	1968-1969 Percent Increase Total Visitation
Stephen C. Foster Memorial, Fla.	122,810	None	132,634 1/	None	8.0
Suwannee River State Park, Fla.	56,041	14.3	67,730	13.0	20.8
Stephen C. Foster State Park, Ga.	57,849	3/	61,451 2/	3/	
Manatee Springs State Park, Fla.	52,169	53.2	59,409	49.6	13.8
TOTAL	288,869		321,224		11.2

1/ Projected from rate of increase.
2/ Total for 10 months only.
3/ Overnight visitor count not made.

Attendance at these four large developed areas represents only a third of total existing recreation use on and adjacent to the river.

Potential Recreation Use

Despite the high volume of tourist traffic which passes through the Suwannee region, only a very minor fraction takes advantage of available recreation opportunities. The following chart illustrates this fact by relating automobile tourist destinations for Suwannee River

counties to the rest of Florida. Although available information does not include Georgia, the Okefenokee National Wildlife Refuge is a major tourist attraction.

Destination of Incoming Automobile Tourists

Region III Counties[1]	Tourists	Percent of Total
Alachua[2]	100,849	
Columbia	24,212	
Dixie	6,600	
Gilchrist	535	
Hamilton	13,826	
Lafayette	408	
Levy	9,478	
Madison	2,479	
Suwannee	5,462	
Taylor[2]	11,341	
Total--Region III Counties	175,190	1.12
Total--All Florida Counties	15,599,515	100.00

1/ State outdoor recreation planning region.
2/ County not directly related to Suwannee River.

Source: Florida Tourist Study, 1968, Florida Development Commission, 1969, Table 11, Destinations of Incoming Automobile Tourists, page 10.

The major factors which inhibit existing use of both the Suwannee River and its adjacent features and environment are believed to be:

1. With the exception of three major State park recreation areas, a shortage of developed public facilities exists.

2. Inadequate access and restricted public availability to many resource features of the river.

3. Lack of general knowledge of the quality of the resource as contrasted to, for example, ocean beaches.

Actions considered in this report could effectively modify these constraints. A basic step establishing the river as a component of the national wild and scenic rivers system, would focus

widespread public attention on the Suwannee and generate demand for enhanced opportunity. Much of this new demand for services, facilities, and access could and should be met by private investment once essential public facilities are provided.

Present recreation use is largely by residents of the river region. In the future, this type of use will increase as a result of population increases, recreational facility improvement and increased per capita income. However, if the river was established as a component of the national wild and scenic rivers system, resident use as a percent of total use would decline from the present 65 percent to 20 percent based on annual visitation of 5 million.

The rate of growth of visitations would be progressive in the yaars immediately following establishment. There would be only small annual increases in visitation until land acquisition and construction of facilities provided the increased recreation capacity.

Economic Impact From Recreation Use

At present, recreational use of the Suwannee River makes a small but significant contribution to the economy, primarily in the vicinity of the three major public areas on the river and in those river communities which have resort features.

Most recreation use is local and activity periods are brief as compared to tourist-vacation use.

Growth of recreation use is seen as deriving from one primary source--vacationing tourists. Traveling primarily by automobile, they will be mobile. This characteristic is significant since the proposed river area is a long, narrow corridor. Proposed recreation developments, both major and medium-sized public recreation areas, are almost evenly distributed for the length of the river and easily accessible by road.

Because of intangible factors affecting future use, no attempt is made to identify the beneficial economic impact to individual counties along the river or to classified segments of the river. A general indication of total growth of recreation use must suffice.

The following table estimates total visitation growth and the anticipated overall growth in recreation use of the Suwannee in the case of preservation and development at an optimum level.

Year Established	Total Annual Visitation 1/ (000)	Local Visitation (000)	Percent of Total
+1	1,000	650	65
+2	1,200	690	58
+3	1,400	725	52
+4	2,000	760	38
+5	3,000	800	26
+9	4,750	950	20

1/ Includes both resident and tourist.

Average resident daily expenditure per person was estimated at $5, and the daily expenditure per nonresident was estimated at $12.50. One recent study of average daily expenditures, "An Economic Study of National Parks," by Professor Ernest W. Swanson of North Carolina State University (1969) computed daily expenditures as $15.12. A second study was undertaken by the Florida Development Commission in 1969. The following table shows the percentage distribution of the tourist dollar in Florida based upon the latter source:

Items	Percent
Food and drink (restaurants, taverns, etc.)	18.36
Amusements	15.84
Lodging	15.70
Food and drink (in stores)	12.00
Clothing and footwear	11.63
Souvenirs, gifts, etc.	8.23
Gasoline	8.08
Drugs, tobacco, cosmetics	5.10
Services, barbers, doctors, etc.	2.53
Utilities, telephones, etc.	1.75
Other vehicle expenses	0.78
Total	100.00

The Florida Development Commission relates tourist expenditures and length of stay in Florida as follows:

	Year	Winter	Summer
Average expenditure per person per stay	$274.92	$365.40	$193.55
Average expenditure per person per day	$ 17.59	$ 18.65	$ 15.93
Average length of stay per person (days)	$ 15.63	$ 19.11	$ 12.15

The ultimate provision of public and private services in the river region is projected as including a variety comparable to that found elsewhere in southern Georgia and Florida. In other words, services which account for major items of expenditure in the tourist dollar should be the same for the Suwannee as a national wild and scenic river. The Suwannee per-person expenditure will tend, over time, to equal the average per-person expenditure in Florida.

Data are not available to estimate increasing real dollar-per-person expenditure which would result with establishment of the Suwannee River as a component of the national wild and scenic rivers system. In lieu, therefore, the $5 and $12.50 are used for all years through the 10th year of visitation.

Through the multiplier effect, the initial direct dollar input increases each time it is expended but at a diminishing rate up to a point where its effective identity is lost. Since it is not the basic purpose of this study to support alternative actions on economic foundations, an indepth approach in arriving at a suitable multiplier was not made. However, based upon other similar situations, a multiplier of 2.1 has been used. This is based on a rate of withholding of spending where 52 percent of the initial dollar is returned to the economy. This is a reasonable assumption when considering the extent of self-sufficiency of the local economy of the Suwannee region today.

The following table estimates visitor use and expenditures in the Suwannee region from tourist expenditures (in 1970 dollars):

Overall Economic Impact of Tourist Expenditures

Year Established	Total Annual Visitation (000)	Total Expenditures ($000)	Total Impact of Tourist Expenditures ($000) 1/
+1	1,000	7,625	16,012
+2	1,200	9,825	20,632
+3	1,400	12,062	25,330
+4	2,000	19,300	40,530
+5	3,000	31,5000	66,150
+6	3,650	39,325	82,582
+7	4,150	45,027	95,556
+8	4,500	49,162	103,240
+9	4,750	52,250	109,725
+10	5,000	55,000	115,500
Total--10 years	30,650	321,076	675,257

1/ Includes 2.1 multiplier factor.

Expression of these annual increases in income in relation to aggregate income of the river zone counties, in both Florida and Georgia, gives added perspective to their significance. The most recent record, based on 1959 income and obtained through the 1960 census, shows total aggregate county income for the four Georgia and eight Florida counties directly associated with the component to be $133 million. This compares to the estimated $55 million increase in the local economy in the 10th year following establishment of the Suwannee as a wild and scenic river.

Forestry

The greatest concern of the timber companies and of the local people employed in the industry is that inclusion of the Suwannee River in the national system would take some tree farming land out of production. Intensively managed areas, however, are now invariably back from the riverbanks. Thin strips bordering the river are now left uncut, either because the timber is difficult to remove or as a public-spirited gesture by the companies. These narrow strips, by fortunate coincidence, are the lands which have aesthetic value as the river's setting. Recreation uses would not generally conflict with timber harvesting. While there are some relatively small tracts of hardwoods which should be reserved from cutting around the springs, proposed public recreation areas constitute an insignificant part of the total timber stand in the region.

Practical considerations related to timber management techniques make much of the land close to the river unsuitable for pine planting. Establishment of the river would preserve a scenic corridor on both sides of the river which would include this riverbank remnant. Any curtailment of timber production would result in measurable foregone benefits to the Suwannee River area economy from the decreased harvesting of timber within the river scenic corridor. For estimating economic benefits foregone by curtailment, all timber harvesting within a 200-foot width on both sides of the river is used. This discounts the riverbank remnant which probably would not be cut in any event and selective cutting which would be permitted on a permit basis in many areas.

Using a 5 percent interest rate, discounted value of future growth at the current level of management is estimated at $82 per acre with an average annual equivalent value of $4.50. The total capitalized value of timber cutting foregone in the river corridor is, therefore, $712,000.

With timber production managed to its full potential, the average annual equivalent could be as much as $12 per acre with a capitalized value of $240 per acre. With this level of production, the total capitalized value of timber cutting foregone is $1.9 million.

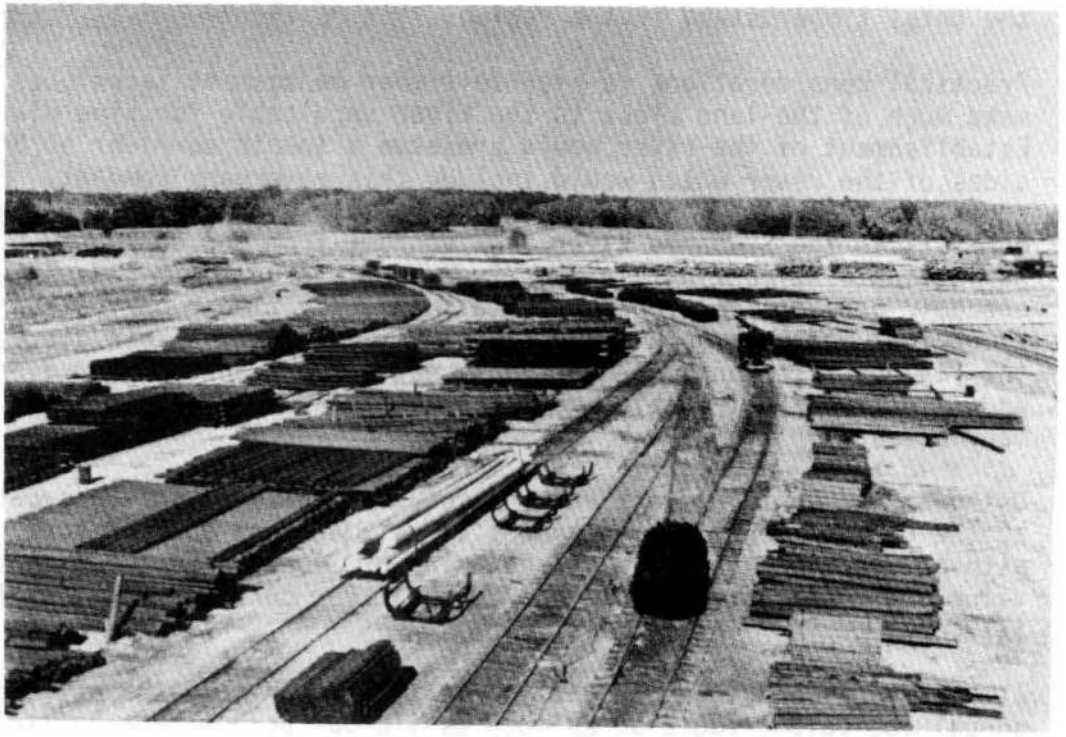
In the following table, values of timber within the corridor are shown. These data were provided by the Southeastern Area, State and Private Forestry, Forest Service, U.S. Department of Agriculture.

Value of Timber Growth Within Proposed Corridor

	$ Per Acre[1/]	Total for 7,910 Acres	$ Per Acre[2/]	Total for 7,910 Acres
Annual Equivalent Value	$4.50	36,000	$12.00	95,000
	--	1,068,000	--	2,850,000

1/ Based on current level of management
2/ Based on full potential of management.

This table assumes that an average 200-foot-wide strip on each side of the river for 160 miles would be utilized primarily for timber production if the Suwannee is not designated.

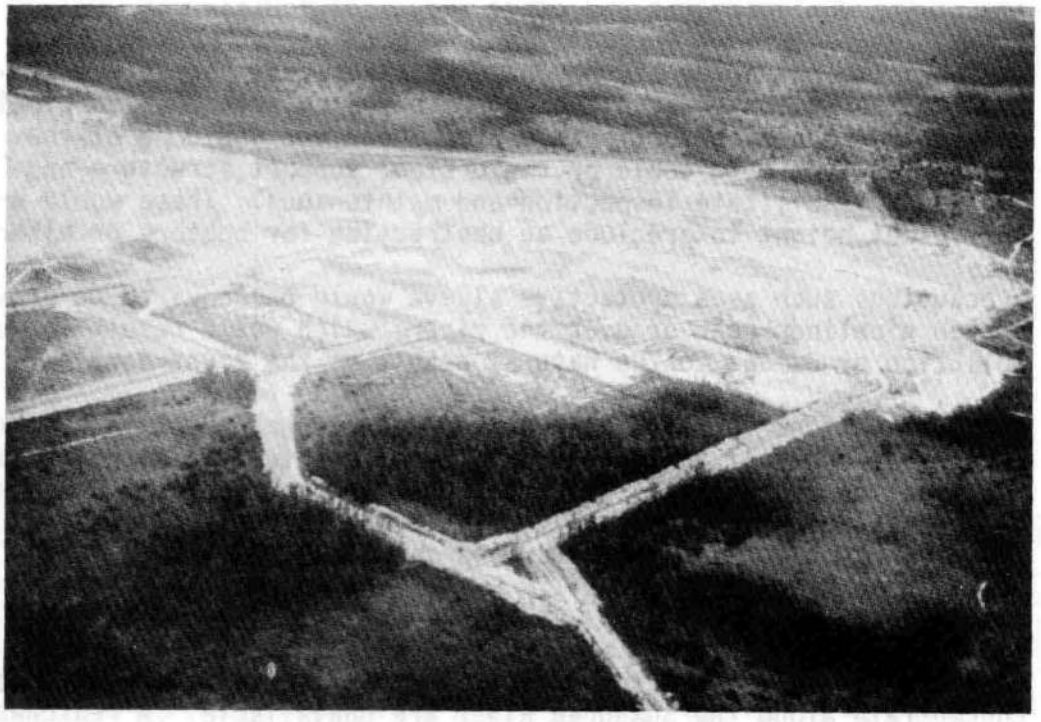


Phosphate Mining

The actual impact on phosphate strip mining from designation of the river involves many considerations. Under current laws, mining operations would have to protect the river corridor even without designation. It would be technically feasible to mine within 50 feet of the river channel edge, without breakthrough problems, depending upon topography.

The river channel is carved out of the upper Ocala limestone strata. The Ocala limestone underlies the late age sediments containing the recoverable phosphate values. Thus, the phosphates on land adjacent to the river channel are on top of the limestone and normally above the river bottom.

All strip mining in the drainage area of the river could be accomplished in a manner which will minimize turbidity and silting in the river. Present water pollution control standards already require this. There seems little doubt that the mining industry can conduct their operations in a manner which will result in no permanent damage to the river. Restrictions and changes in their operation to accomplish this protection will have little, if any, measurable impact in relation to the total mining activity in the region.



In a typical mining operation, an overburden mound results. Bulldozer dressing of the mound facilitates rapid replanting with cover vegetation. A temporary runoff collection ditch between the overburden mound and river is utilized to collect runoff until the bank is stabilized. Reseeding or replanting with seedlings should commence promptly. These procedures would apply should no special or additional guidelines be imposed for river preservation.

Adequate protection of the view from the river should be retained by a 100-foot strip of undisturbed vegetation along the river and bulldozer dressing of spoil in the area visible from the river, plus good practice in erosion control through cover vegetation and pine reseeding.

Additional phosphate processing plant sites have not yet been selected. Because of potential flooding problems and other factors, no sites should be located within one-half mile of the river.

Present technology restricts the length of pipelines to 10 miles carrying the phosphate slurry from the strip-mining site to the processing plant. The pipelines are removed and relocated as mining progresses.

Necessary crossing sites for slurry pipelines, powerlines, and heavy equipment could be chosen and designated to minimize adverse impacts on the aesthetic and other values of the river.

The abrasive character of phosphate matrix slurry necessitates routine inspection and replacement of pipeline sections. A pipeline (16- to 24-inch diameter) bridge over the river would be of the suspension type with cable or rigid steel support structure and walkway to facilitate inspection and maintenance. These would be of sufficient height to preclude an obstruction for boaters or hikers.

Precautions such as a protective sleeve would be required to prevent broken pipelines near or over the river, which would result in water pollution or damage to the natural beauty of the river corridor.

Booster stations (electrically driven centrifugal pumps) are normally located at one-half to two-thirds of a mile intervals along the slurry pipeline, depending upon load requirements and topography. Operation of these stations is reasonably quiet. Location within 100 feet of any river protection zone would be prohibited.

Mining Foregone

Complete data to assess the extent of deposits of recoverable phosphate concentrate along the Suwannee River are unavailable. A reasonable estimate of the occurrence extends the potential orebody location from

near Suwannee Springs to the State line, river mile 150 to river mile 203. Along this 53-mile stretch, approximately 10 percent of the lands bordering the river may be underlain by economically recoverable phosphate deposits. To give a reasonable perspective to this figure, up to 70 percent of lands leased for commercial production contain economically recoverable phosphate--these lands, of course, are selected after extensive exploratory borings.

To assess the extent of mineral extraction potential which would be curtailed by including the river in the national system, a 10 percent incidence of recoverable phosphate concentrate within a 100-foot corridor on each side of the river is used:

$$0.10 \times 53 \left(\frac{200 \times 5280}{43560} \right) = 128.5 \text{ acres}$$

By this computation, approximately 130 acres of surface area with economically recoverable phosphate would be removed from the total acreage of such lands which can be strip-mined. This represents an insignificant percentage of the total land area available for mining. This also discounts the fact that at least a 50-foot-wide corridor on each riverbank would be left unmined to protect the river under any circumstances.

The value of phosphate concentrate is subject to wide market fluctuations. In placing a dollar value on potentials curtailed, 2 tons of concentrate per acre is employed.

Value of Phosphates in River Corridor[1/]

	$6 Per Ton	Total for 130 Acres[2/] ($000)	$ Per Ton	Total for 130 Acres[2/] ($000)
Value at 4,000 Tons Per Acre	$24,000	$3,120	$48,000	$6,420

1/ Expressed in 1970 dollars--values obtained from Monsanto Company.
2/ Includes minerals that could not be removed under any circumstances.

To provide a basis for comparison with values of timber and recreation uses of the lands within the corridor, a time period is required. The dollar value of the curtailed mineral extraction would have been an

input to the economy during this period. Timber and phosphate concentrate extraction are not mutually exclusive uses since phosphate lands can be harvested before mining and reforested when mining is complete. Only an interruption of the harvest cycle would result. This consideration aside, however, an assumed period of 30 years during which concentrate extraction could take place is deemed reasonable.

Value of Phosphate Over Extraction Period*

Total Value 40-Year Period	$3,120,000	$6,240,000
Annual Value	$ 104,000	$ 280,000

*Expressed in 1970 dollars.

Thus, the annual dollar market value of the extracted phosphate concentrate would range from $104,000 to $208,000 over a 30-year period, expressed in 1970 dollars. The resultant input to the local economy cannot be determined, though it would be substantially less.

Real Property

Riverfront property could be subject to certain use restrictions through rights relinquished by scenic easement. The relative value of these lands might remain essentially unchanged or might even increase.

Of greater significance, however, would be the effect on land values caused by designation of the river. Private lands immediately outside the easement corridor and lands contiguous with lands acquired in fee simple for development as major recreation areas would have enhanced value for commercial purposes. Lots along the corridor would have enhancement primarily as residential and recreation-residential tracts. Owners of these lands would be assured that the river would retain all of its beauty and recreation values in perpetuity.

An accurate analysis of the potential enhanced value of private lands immediate to the scenic corridor cannot be derived in view of the variables which influence values of real property. Therefore, to provide a reasonably valid estimate of enhanced land values, for designation, a uniform average enhancement factor of 7 percent has arbitrarily been selected. The area to which this factor is applied is a 300-foot-wide zone contiguous to lands proposed to be acquired both in scenic easement and in fee.

Since only a broad statement is possible to indicate the effect of river establishment on related land values, the enhancement factor and zone (80 acres per mile of river length) have been applied to the entire length of the river. Based on these assumptions, the net increase in land values due to a national river designation at current market levels is estimated to be $365,000. This estimate does not reflect several additional factors which tend to increase land values should purchase of land by the Federal Government be authorized.

Agriculture

At present, there is little use of lands adjacent to the river for agricultural production. Therefore, curtailment of the agricultural production in the Suwannee River area which would result from the river's establishment as a component of the national system would be negligible. Moreover, the vast majority of riverbank lands dedicated for public outdoor recreation purposes would be obtained in scenic easement which allows continuation of existing compatible land uses such as agriculture. Therefore, any losses to the economy would not have significant impact.

Other Uses

Other existing or foreseeable uses of the river and lands considered in the Suwannee study, for other than recreational

purposes, do not have measurable or significant impact on the area economy. In addition, most other commercial activities such as sand and gravel production, commercial fishing, etc., are not completely dependent on the Suwannee. Those that depend on the Suwannee rely on the renewable components of the resource and do not permanently and obviously modify the values and quality of the Suwannee River and its immediate environs.

Analysis of Benefits Foregone and Gained

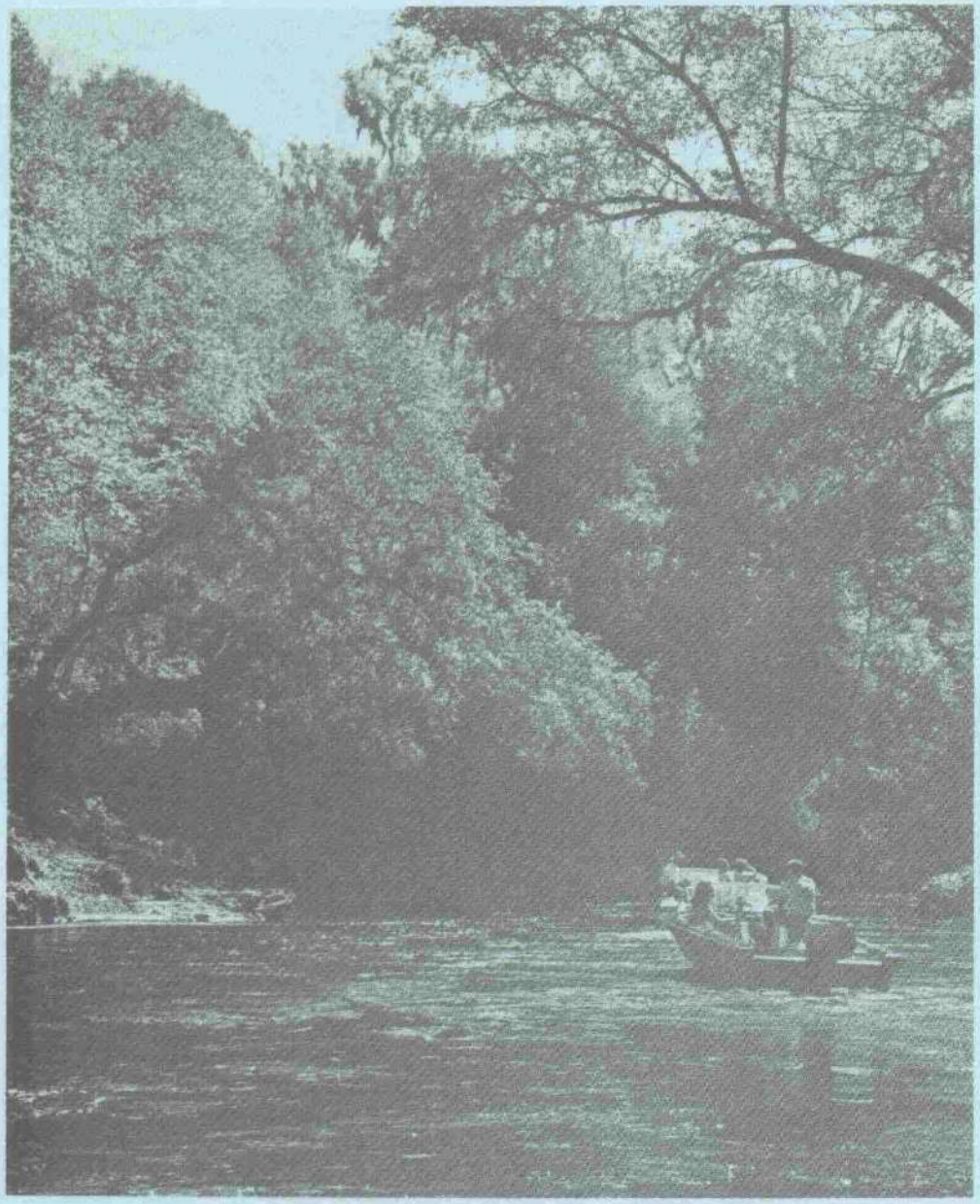
In order to provide a basis for evaluating the benefits foregone by not exploiting the following resources--including forestry, phosphate, agriculture, and other uses--an estimated dollar value has been assigned to the potential yield from these uses. For purposes of comparison over time, a period of 30 years is used (to year 2000) The character of these various uses and the degree to which they deplete their resource base, or whether their resource use is renewable, prohibit any exact evaluation. However, since some expression is necessary, a value is assigned for those economic activities foregone and values assigned to activities created or enhanced. Based on this broad analysis, the net economic benefits resulting from designation of the Suwannee River as a component of the national wild and scenic rivers system are estimated about $55 million annually as shown in the following analysis:

ECONOMIC BENEFITS GAINED AND FOREGONE, SUWANNEE RIVER AREA
(Estimated Market Value; in Thousands of 1970 Dollars)

	Annual	30-Year Period
Benefits Gained		
Recreation[3/]		
Visitor Expenditure @ $12.50	$55,000	$1,650,000
Real Property		
Enhanced Value	365	1/
Total Benefits Gained	$55,365	$1,650,000
Benefits Foregone[4/]		
Timber		
Full Potential	95	2,850
Phosphate		
@ $12 per ton	208	6,240
Agriculture	2/	2/
Other	2/	2/
Less Total Benefits Foregone	$ 303	$ 9,090
Net Benefits Gained	$55,062	$1,640,910

1/ Only initial enhancement is considered. No attempt has been made to project future increases in land value, based on enhancement by river designation.
2/ No measurable or significant benefits foregone.
3/ Nonresident visitation only. Local visitation @ up to $5 per day expenditures could add about $5 million annually to this recreation benefit.
4/ Greatest yield (full potential--highest current market value) used.

V. THE WITHLACOOCHEE RIVER



V. THE WITHLACOOCHEE RIVER SEGMENT

Introduction

The study team for the Suwannee wild and scenic river study concluded that the lower Withlacoochee River possesses outstanding qualities worthy of preservation. Inclusion of this reach would enhance and contribute to any plan for the preservation of the Suwannee River. Because the Withlacoochee River was not mentioned in the Wild and Scenic Rivers Act, the considerations and recommendations for the designation of the Withlacoochee segment are treated separately from the Suwannee River in this chapter. This separate treatment does not indicate that a lesser significance has been attached to this addition to the study area.

General Description

The Withlacoochee River rises near Tifton, Georgia, and flows southeasterly for 108 miles. It joins the Suwannee in the Suwannee River State Park at river mile 128 near Ellaville, Florida. The lower 24 miles of the river are in Florida.

The lower 12-mile reach, downstream from the State Highway 6 crossing to the confluence with the Suwannee, is the segment of the Withlacoochee River considered most suitable for consideration with the Suwannee. This part of the Withlacoochee possesses excellent scenic and recreational qualities. It is a swift stream having an average gradient of 2.3 feet per mile. Several shoal areas appear during low water. The width of the stream averages 175 feet until it widens as it approaches the Suwannee.

Several springs feed the Withlacoochee in the 12-mile reach. The largest of these are Blue Springs, immediately south of Highway 6, and Morgans Spring, about 7 miles downstream.

As the Withlacoochee flows south from Highway 6, it passes between prominent limestone banks. Lands back from the river are used for timber production, agriculture and grazing.

Water quality of the Withlacoochee is good, although some pollution has occurred north of the Highway 6 bridge. Recent investigation indicates efforts to correct these problems have been successful. Florida rates water quality of the Withlacoochee as Class III for recreation and propagation and management of fish and wildlife. This classification requires maintenance of standards acceptable for body contact recreation activities.

Recreation Use and Potential

Existing recreation use of the river is light. Although the Withlacoochee is highly regarded for canoeing, it is not widely known; and most canoeing use is by residents of the area.

Florida and Georgia jointly have evaluated the Withlacoochee for inclusion in the system of canoe trails; and over 50 miles of the river, including the lower 12 miles, have State canoe trail designation.

Although it is completely undeveloped, Blue Springs is used heavily for swimming by local residents. It is one of the better springs for swimming in the Suwannee River Basin. Morgans Spring has poor road access and receives light use, mostly from canoeists floating the river.

The recreation potential offered by the lower reach of the Withlacoochee is excellent. The swiftness of the river and its forested flood plain provide a quality environmental setting that can easily be experienced on a 1-day float trip. The outstanding scenic river corridor has potential for a variety of recreational activities, including nature study, photography, swimming, floating, hiking, picnicking, and primitive camping.

The Withlacoochee Plan

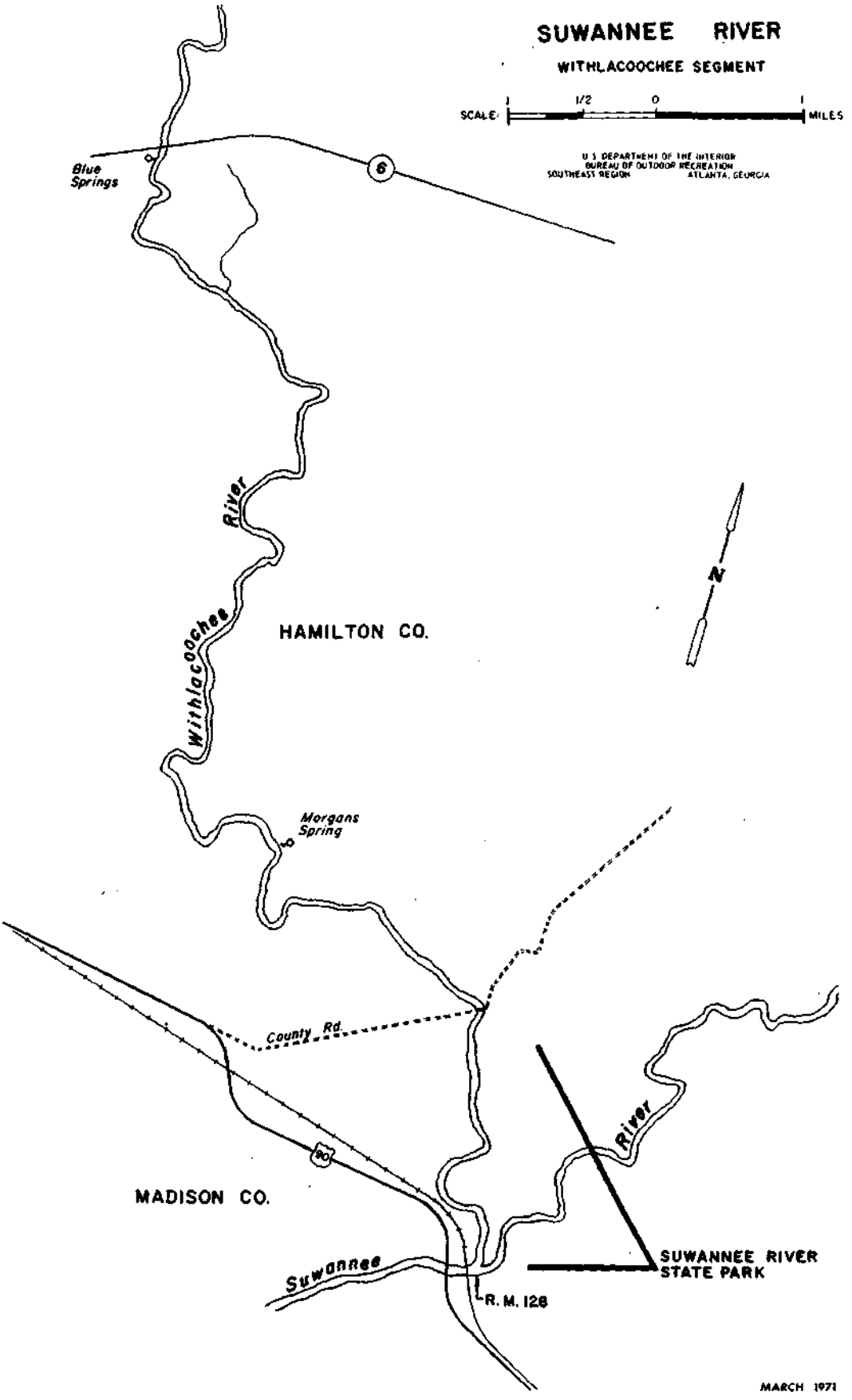
Inclusion of the lower reach of the Withlacoochee River as part of a Suwannee River plan would provide important additional recreational opportunities by adding a 12-mile river segment with unspoiled scenic river values. This addition would augment the total miles of scenic classification to 169 miles.

Classification

The lower 12 miles of the Withlacoochee meet the criteria stated in the Wild and Scenic Rivers Act for scenic classification. The shoreline and flood plain are primitive, undeveloped, and free of impoundments. Road access to the area is limited to Highway 6 and a county road crossing 2 miles above the junction with the Suwannee. Several cottages are located near the riverbank adjacent to the county road bridge.

Land Requirements

A 200-foot-wide scenic easement could be obtained on each side of the river to protect the corridor. This area would total 440 acres. In addition, Blue Springs and Morgans Spring could be acquired in fee--160 acres at Blue Springs and 25 acres at Morgans Spring. An additional 20-acre site for development of a primitive camp for floaters and hikers would be needed to control that type of use along the river.


SUWANNEE RIVER
WITHLACOOCHEE SEGMENT
SCALE 1 1/2 0 1 MILES
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION
SOUTHEAST REGION ATLANTA, GEORGIA
Blue Springs
6
Withlacoochee River
HAMILTON CO.
N
Morgans Spring
County Rd.
90
MADISON CO.
Suwannee River
SUWANNEE RIVER STATE PARK
R. M. 128
MARCH 1971

Recreation Development

The scenic easement acquisition would protect the natural beauty and recreation opportunities of the lower Withlacoochee allowing for its development and use as a float stream. The easements would include provisions permitting establishment of a hiking trail along the bank for the entire river reach below Highway 6.

Access areas with boat ramps and parking areas could be provided at the Highway 6 bridge and at the Suwannee River State Park. These access areas would provide put-in and takeout points for river floating and canoeing. A shuttle transportation service for floaters between the upper and lower access points could be operated by private business.

Acquisition of Blue Springs would permit recreation development which would include facilities for primitive camping, swimming, picnicking, boat rental, and visitor information in addition to sanitary facilities, a boat ramp, and parking area. Blue Springs would serve as the northern terminus for a hiking trail along the river.

At Morgans Spring, acquisition of 25 acres in fee would permit the establishment of primitive camping, picnicking, and sanitary facilities. No public access by road need be provided, and use of this area would be by hikers and boaters.

Administration

Each of the four alternatives previously discussed for the Suwannee could apply to the Withlacoochee.

The Withlacoochee segment could be added to the Suwannee component under any of the four alternatives without causing any foreseeable problems.

Costs

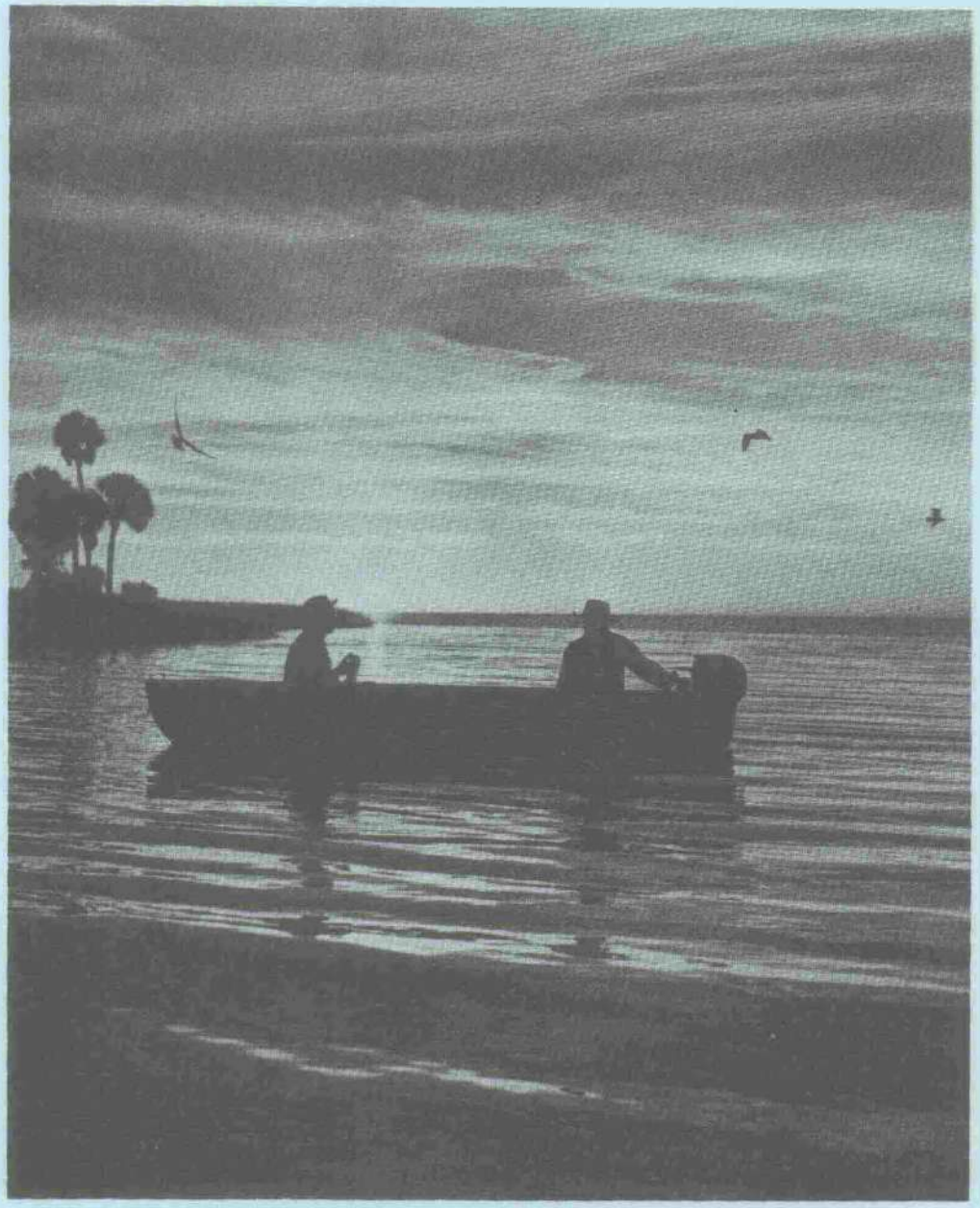
The total estimated acquisition cost for adding the Withlacoochee would be $696,000.

Preliminary Cost Estimates

Land Acquisition	Acres	Costs ($000)
Fee, Corridor	440	$490*
Springs	185	$206
	625	$696

* Scenic easements are estimated to cost $270,000.

VI. APPENDIX



VI. APPENDIX

Letters of Comment and Recommendations
Field Task Force
Fauna and Flora
Selected References

United States Department of the Interior
BUREAU OF OUTDOOR RECREATION
SOUTHEAST REGIONAL OFFICE
810 New Walton Building
Atlanta, Georgia 30303

IN REPLY REFER TO:
D4219

APR 27 1973

Mr. Ney C. Landrum
Director
Division of Recreation and Parks
Department of Natural Resources
J. Edwin Larson Building
Tallahassee, Florida 32304

Dear Mr. Landrum:

In response to the request made during our telephone conference this morning on certain alternative methods of implementing a revised Suwannee River proposal, the four proposed alternatives concerning which we would like to have Florida's position are as follows:

1. Each State assuming all responsibilities for the river segments within its jurisdiction outside of the Okefenokee National Wildlife Refuge.

2. Division of the river into segments, one of which, in addition to the segment within the wildlife refuge, would be Federal responsibility with the remaining segments the responsibility of the two States. The Federal segment might include lands on both sides of the boundary between the two States. In such case, the direct Federal cost would be limited to the federally administered segments. All costs in the remaining segments would be the responsibility of the respective State. Federal grant programs would, of course, be available to assist the States. National wild and scenic river designation of the federally administered segment would be by Act of Congress and at the State administered segments by the Secretary of the Interior. Designation of the State administered segments would be contingent upon a determination by the Secretary upon application by the Governors that the two States have initiated such land acquisition and development as are prescribed

in an approved master plan which would be prepared jointly by the affected Federal and State agencies within 1 year of designation of the Federal segment.

3. As "2" above but two Federal segments, one in each State, in addition to that on the refuge. This is less desirable than "2" because of additional administrative problems involved. All other provisions of "2" apply.

4. Federal acquisition of the necessary lands or interests in lands which would then be made available for the development of access and use facilities and administration by the States including the assumption of all costs of operation, maintenance, and replacement in accordance with an approved master plan which would be prepared jointly by concerned Federal and State agencies within 1 year of designation of the river as a component of the system. Federal grant programs, including the Land and Water Conservation Fund grants, would be available to assist the States.

Your suggestion that you include in your response acceptable variations on the above or possibly a different proposal that might be more acceptable to Florida is quite acceptable. We have a very limited time frame within which to complete our report for Washington; and it will be very helpful to have a statement of the conditions that would, or would not, be acceptable.

Your early reply will be greatly appreciated.

Sincerely yours,

Robert M. Baker
Regional Director

State of Florida

DEPARTMENT OF NATURAL RESOURCES

RANDOLPH HODGES
Executive Director

LARSON BUILDING / TALLAHASSEE 32304 / TELEPHONE 224-7141

REUBIN O'D. ASKEW
Governor
RICHARD (DICK) STONE
Secretary of State
ROBERT L. SHEVIN
Attorney General
FRED O. DICKINSON, JR.
Comptroller
THOMAS D. O'MALLEY
Treasurer
DOYLE CONNER
Commissioner of Agriculture
FLOYD T. CHRISTIAN
Commissioner of Education

May 2, 1973

Mr. Robert M. Baker
Regional Director
Southeast Region
Bureau of Outdoor Recreation
810 New Walton Building
Atlanta, Georgia 30303

Dear Mr. Baker:

Reference is made to your letter of April 27, relative to the proposed Suwannee Wild and Scenic River, and to our telephone discussion of April 26 on the same subject.

We do not feel that alternatives one, two and three, as explained in your letter, offer enough real potential to be of interest to the State of Florida. Alternative four, as amplified by our understanding of the points discussed below, would be our preference.

We do not acknowledge the need at this time for a total recreational development plan for the Suwannee River as contemplated in the Bureau of Outdoor Recreation's Wild and Scenic River study, and therefore would not recommend acceptance by the State of the full financial obligation indicated by that report. The primary object should be to preserve to the extent feasible the natural characteristics of the river, with only a minimum development program to provide appropriate access, interpretation and related use facilities. General recreation needs in the Suwannee River area will continue to be met in accordance with standard policies and procedures of the state recreation and parks program, whether or not the Suwannee Wild and Scenic River is established.

Based on our present understanding, the Division of Recreation and Parks would be willing to recommend acceptance by the State of Florida of alternative four, subject to the following clarification:

- Land acquisition needs would be determined as a part of the jointly prepared master plan.

- Sufficient lead time must be allowed prior to assumption of any responsibility by the State in order to meet budgeting requirements.

- The State would reserve the right to determine priorities for budgeting purposes, with respect both to elements of the Suwannee River project and to the project as a whole in terms of the State recreation and parks program.

We appreciate the opportunity to comment in this matter and hope you will keep us informed as your reevaluation of the original plan continues.

Sincerely,

Ney C. Landrum
Director
Division of Recreation and Parks

NCL/jap

United States Department of the Interior
BUREAU OF OUTDOOR RECREATION
SOUTHEAST REGIONAL OFFICE
810 New Walton Building
Atlanta, Georgia 30303

IN REPLY REFER TO:

D4219

MAY 2 1973

Mr. Joe D. Tanner
Commissioner
State Department of Natural
Resources
270 Washington Street, S.W.
Atlanta, Georgia 30334

Dear Mr. Tanner:

On April 16, 1973, we wrote you concerning our present project to revise the Suwannee National Wild and Scenic River proposal in accordance with instructions from our Washington Office. Those instructions required that the report be completed and returned to Washington by May 29, 1973. However, we have since received further instructions which advanced the completion date to May 10, 1973.

In view of the shortage of time available to complete this revision, we would like very much to have a statement of the extent to which the State of Georgia would be willing and able to accept increased responsibility for implementing the river proposal in Georgia. Accordingly, I am repeating below for your convenience four alternatives suggested by our Washington Office for consideration by Georgia and Florida. These alternatives are arranged in descending order of preference from the point of view of the Federal Government. In short, we would prefer to have the State accept as much responsibility for the river as possible.

1. Each State assumes all responsibilities for the river segments within its jurisdiction outside of the Okefenokee National Wildlife Refuge.

2. Division of the river into segments, one of which in addition to the segment within the wildlife refuge, would be Federal responsibility with the remaining segments the responsibility of the two States. The Federal segment might include lands on both sides of the boundary between the two States. In such case,

the direct Federal cost would be limited to the federally administered segments. All costs in the remaining segments would be the responsibility of the respective State. Federal grant programs would, of course, be available to assist the States. National wild and scenic river designation of the federally administered segment would be by Act of Congress and of the State administered segments by the Secretary of the Interior. Designation of the State administered segments would be contingent upon a determination by the Secretary, upon application by the Governors that the two States have initiated such land acquisition and development as are prescribed in an approved master plan which would be prepared jointly by the affected Federal and State agencies within 1 year of designation of the Federal segment.

3. As "2" above but two Federal segments, one in each State, in addition to the refuge. This is less desirable than "2" because of additional administrative problems involved. All other provisions of "2" apply.

4. Federal acquisition of the necessary lands or interests in lands which would then be made available for the development of access and use facilities and administration by the States including the assumption of all costs of operation, maintenance, and replacement in accordance with an approved master plan which would be prepared jointly by concerned Federal and State agencies within 1 year of designation of the river as a component of the system. Federal grant programs, including the Land and Water Conservation Fund grants, would be available to assist the States.

The statement you prepare might be in the form of a letter for inclusion with our report to Washington indicating the alternative that the State would be willing to accept. This statement would be followed at some future date by a more definite commitment should the revised proposal be acceptable to the Secretary of the Interior.

In revising the river development plan, we would emphasize those conditions necessary to the preservation of the basic river corridor plus those fragile areas and public access points necessary to assure that the values for which the river is to be preserved are not lost. The level of use and the amount of development that will be proposed will be based on estimates for the initial period of the first 5 years.

If you wish to discuss this further, I shall be happy to oblige. Mr. James T. Rousseau and Mr. James E. Williams are working on

the revision and are also available for consultation with your staff concerning any problems that might arise.

Sincerely yours,

for Paul H. Adams
Robert M. Baker
Regional Director

Joe D. Tanner
COMMISSIONER

Department of Natural Resources
270 WASHINGTON ST., S.W.
ATLANTA, GEORGIA 30334
(404) 656-3500

May 11, 1973

Mr. Robert M. Baker
Regional Director
U.S. Department of Interior
Bureau of Outdoor Recreation
810 New Walton Building
Atlanta, Georgia

Dear Mr. Baker:

Within the short amount of time allotted for review of the Suwannee River Study it is difficult to give adequate consideration to acquisition, development, and management alternatives. We certainly are anxious to do our part to preserve and protect the Suwannee River. We feel it is an important part of Georgia's and the nation's heritage and we do encourage and endorse the concept of inclusion of the Suwannee in the National Scenic Rivers System.

The State does want, and expect, to be included in any and all planning for that portion of the Suwannee within its borders. Development and management of portions of the river corridor is within the realm of possibility for the State of Georgia and we are prepared to work toward budgeting of funds for those properties designated for public use. Funding needed for fee title acquisition and easement of the corridor properties will be more difficult to achieve because of the limitation of State funds. The extent of State participation in the acquisition, development, and management aspects must, of necessity, be limited to the monies available. It is therefore important for you to understand the importance of Federal participation in the overall process. I can assure you that without Federal assistance the possibility of protecting the Suwannee River in the manner envisioned in the Study would be a remote possibility. It is essential that both levels of government pool their efforts and dollars in this important program.

For your information several State programs affecting acquisition, development, management, and planning have been initiated in Georgia since our last input into the Suwannee River Study:

--A Heritage Trust program is designed to acquire and protect selected areas of State-wide significance. Initial funds for this in the amount of $10 million was appropriated by the Georgia Legislature. Although this represents a significant move forward, the monies allocated fall far short of the need.

--Reorganization of State Government has resulted in some planning capabilities for natural resources which did not formerly exist. Among the studies to be initiated in FY' 74 is scenic rivers planning for Georgia's rivers. This program will permit us to better coordinate our State scenic rivers efforts with those of the National Scenic Rivers studies for the Suwannee and to assist more in planning for the Suwannee.

We are prepared to work with the appropriate authorities on cooperative planning, acquisition, development, and management programs that will insure the best protection of the river.

I trust that this response will satisfy your immediate need and that you will give us opportunities in the future to work out more detailed plans for the specific responsibilities of each participant.

Sincerely,

Joe D. Tanner
Commissioner

JDT/bt

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

Dear Mr. Chairman:

On November 30, 1970, you furnished comments on our proposed Suwannee Wild and Scenic River Report. A copy of your letter is enclosed for ease of reference.

The report included a finding that the Suwannee River, together with selected tributaries, qualifies for addition to the national wild and scenic rivers system, and recommended Federal administration of the river area. You concurred in that finding and recommendation.

Due to budget limitations and present priorities for Federal recreation investments, we are proposing to modify the report to recommend that the States of Florida and Georgia administer the river area through appropriate State actions and Federal assistance programs, including the Land and Water Conservation Fund. We are rewriting the recommendation section of the report to reflect this policy change. There will be no changes made with regard to the finding that the Suwannee River meets the criteria for the national system and would be a worthy addition to the system.

In order to expedite the submission of the report to the President and the Congress, may we have your views with respect to this proposed change within 15 days. The Bureau of Outdoor Recreation is providing staff assistance on this project. Should you have any questions, please contact Mr. Robert L. Eastman, Assistant Director, Area Code 202-343-8248.

Sincerely yours,

Deputy Assistant (Sgd) Douglas P. Wheeler

Secretary of the Interior

Honorable John N. Nassikas
Chairman, Federal Power Commission
Washington, D. C. 20426

Enclosure

Similar letters sent to:

Secretary of Health, Education and Welfare
Secretary of Housing and Urban Development
Secretary of Transportation
Secretary of Agriculture
Secretary of the Army
Director, Water Resources Council

DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON, D. C. 20250

September 12, 1973

Honorable Rogers C. B. Morton
Secretary of the Interior
Washington, D. C. 20240

Dear Mr. Secretary:

This is in response to Deputy Assistant Secretary Wheeler's letter of August 16 requesting our views on your Department's proposal to modify your recommendation for Federal administration of the Suwannee River area.

We assume the area you are recommending for administration by the States of Georgia and Florida is that area outside the Okefenokee National Wildlife Refuge. If this is the case, administrative responsibility for the Suwannee would be divided between your Department and the two States. We do not view this as a problem if the Suwannee is added to the national system through legislation such as the Lower St. Croix River Act of 1972. However, we do see some problems with the proposal if it is intended that the Suwannee be added to the system through the provisions of section 2 (a)(ii) of the Wild and Scenic Rivers Act. The provision of section 2 (a)(ii) regarding permanent administration by a State entity of those State rivers approved for the national system would appear to need some resolution where federally owned lands are involved. However, as in the case of the Lower St. Croix River, an equitable solution to divided jurisdiction exists.

We concur with your proposal to change the recommendation in your river study report, and view the change as an opportunity to exhibit a Federal-State cooperative effort to protect and preserve a high quality historic and esthetic resource.

Sincerely,

Robert W. Long
Assistant Secretary for Conservation,
Research and Education

DEPARTMENT OF THE ARMY
OFFICE OF THE UNDER SECRETARY
WASHINGTON, D.C. 20310

5 SEP 1973

Honorable Rogers C. B. Morton
Secretary of the Interior
Washington, D. C. 20240

Dear Mr. Secretary:

This is in response to Deputy Assistant Secretary Wheeler's recent letter requesting views of the Department of the Army on a proposed change in your report on establishment of the Suwannee River in Georgia and Florida as a component of the National Wild and Scenic River System. This change is to recommend administration of the component by the two states rather than the Federal Government.

We have no objection to the proposed modification in the recommendations or to authorization of the Suwannee River as a component of the System.

Sincerely,

Charles R. Ford

Charles R. Ford
Acting Special Assistant to the
Secretary of the Army (Civil Functions)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20201

SEP 5 1973

Mr. Douglas P. Wheeler
Deputy Assistant Secretary
of the Interior
U. S. Department of the Interior
Washington, D. C. 20240

Dear Mr. Wheeler:

Thank you for your letter of August 16, to Secretary Weinberger concerning the new recommendation section of the Suwannee Wild and Scenic River Report. We have no additional comments to offer at this time. Please provide us with a copy of the revised report when it becomes available.

Sincerely yours,

Paul Cromwell
Acting Chief
Office of Environmental Affairs

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, D. C. 20410

OFFICE OF THE ASSISTANT SECRETARY FOR
COMMUNITY PLANNING AND MANAGEMENT

IN REPLY REFER TO:

Mr. Douglas P. Wheeler
Deputy Assistant Secretary
Fish, Wildlife and Parks
Department of the Interior
Washington, D. C. 20240

AUG 31 1973

Dear Mr. Wheeler:

Your letter of August 16, 1973, to Secretary Lynn indicated a proposed modification of the Suwannee Wild and Scenic River Report whereby the State of Florida and Georgia would administer the river area through appropriate State actions and Federal assistance programs. We have no objections to the proposed modifications, and find that they are entirely consistent with our previous comments and suggestions which encouraged continued participation of State and local governments in the further development and management of the Wild and Scenic River System.

Thank you for advising us of the change in the recommended administrative arrangement for this important recreational facility and a further opportunity to provide comments.

Sincerely,

Richard H. Broun
Acting Director

FEDERAL POWER COMMISSION
WASHINGTON, D.C. 20426

IN REPLY REFER TO:

Honorable Rogers C. B. Morton
Secretary of the Interior
Washington, D. C. 20240

Dear Mr. Secretary:

This is in reply to Deputy Assistant Secretary Wheeler's letter of August 16, 1973, addressed to Chairman Nassikas, requesting our views on your proposal to modify the proposed Suwannee Wild and Scenic River Report. The modified report would recommend that the States of Florida and Georgia administer the river area through appropriate State actions and Federal assistance programs, in lieu of the previous recommendation for Federal administration of the river area.

In its letter of November 30, 1970, commenting on the previous report, the Commission concluded that the wild and scenic river proposal for the Suwannee River would not adversely affect any existing or known potential hydroelectric power developments. It noted, however, that the proposed scenic and recreation areas included important power and gas pipeline facilities and that additional facilities of that type would undoubtedly be required. The Commission recommended, therefore, that plans for administering the proposed wild and scenic river recognize such requirements.

We have no objection to the currently proposed recommendation that the river area be administered by the States of Florida and Georgia. We urge, however, that the Commission's recommendation regarding plans for administering the wild and scenic river be incorporated in the proposal.

Very truly yours,

Kenneth F. Plumb

Secretary

UNITED STATES WATER RESOURCES COUNCIL

SUITE 800 • 2120 L STREET, N.W. WASHINGTON, D.C. 20037

SEP 13 1973

Honorable Douglas P. Wheeler
Deputy Assistant Secretary
Department of the Interior
Washington, D. C. 20240

Dear Mr. Wheeler:

Your August 16, 1973, letter requested the views of the Water Resources Council regarding a proposed modification of the previously reviewed Suwannee Wild and Scenic River Report. The proposed modification would recommend that the States of Georgia and Florida administer the area instead of the Federal Government.

The Council reaffirms its support for the establishment of the Suwannee River as a component of the National Wild and Scenic River system. The Council has for some time been a proponent of greater State and local involvement in resource planning, management and decisionmaking. Therefore, the Council is pleased to support the proposed modification assuming that the States are willing and able to fulfill the additional responsibility.

The Council calls attention to the statement in its letter of February 25, 1971, that provisions may be necessary to allow for possible utility and transportation routes within the wild and scenic areas. Allowances may also be required to install and operate water and climatic data devices.

The opportunity to provide these comments is appreciated.

Sincerely yours,

Warren D. Fairchild
Director

FIELD TASK FORCE

STATE OF FLORIDA

GOVERNOR'S REPRESENTATIVE

Nathaniel P. Reed
Ney C. Landrum

AGENCIES

Department of Community Affairs
Department of Natural Resources
University of Florida

STATE OF GEORGIA

GOVERNOR'S REPRESENTATIVE

George T. Bagby
Joe D. Tanner

AGENCIES

State Game and Fish Commission
Bureau of State Planning and Community Affairs
Natural Areas Council
Water Quality Control Board
Department of State Parks
Department of Mines, Mining, and Geology
State Historical Commission
University of Georgia

FEDERAL AGENCIES

Department of Agriculture
- Economic Research Service
- Forest Service--State and Private Forestry
- Soil Conservation Service

Department of the Interior
- Bureau of Outdoor Recreation
- Bureau of Sport Fisheries and Wildlife
- Geological Survey
- National Park Service

Environmental Protection Agency
- Water Quality Office

EX-OFFICIO TASK FORCE PARTICIPANTS

U.S. Army Engineer District, Jacksonville
Bureau of Mines
Resources Advisory Board

FAUNA AND FLORA
COMMON NAMES

AMPHIBIANS AND REPTILES

SALAMANDERS

Greater Siren
Eastern Lesser Siren
Narrow-striped Dwarf Siren
Broad-striped Dwarf Siren
Two-toed Amphiuma
Frosted Flatwoods Salamander
Mole Salamander
Eastern Tiger Salamander
Central Newt
Striped Newt
Southern Dusky Salamander
Southern Slimy Salamander
Gulf Coast Mud Salamander
Rusty Mud Salamander
Southern Red Salamander
Southern Two-lined Salamander

FROGS AND TOADS

Eastern Spadefoot Toad
Greenhouse Frog
Southern Toad
Oak Toad
Southern Cricket Frog
Florida Cricket Frog
Southern Spring Peeper
Green Treefrog
Pine Woods Treefrog
Squirrel Treefrog
Eastern Gray Treefrog
Barking Treefrog
Little Grass Frog
Southern Chorus Frog
Ornate Chorus Frog
Eastern Narrow-mouthed Toad
Bullfrog
River Frog
Pig Frog
Carpenter Frog
Bronze Frog
Southern Leopard Frog
Florida Gopher Frog

CROCODILIANS

American Alligator
Spectacled Caiman

TURTLES

Common Snapping Turtle
Florida Snapping Turtle
Alligator Snapping Turtle
Stinkpot Turtle
Loggerhead Musk Turtle
Striped Mud Turtle
Eastern Mud Turtle
Florida Mud Turtle
Spotted Turtle
Eastern Box Turtle
Gulf Coast Box Turtle
Florida Box Turtle
Ornate Diamondback Terrapin
Yellow-bellied Turtle
Florida Cooter
Peninsula Cooter
Suwannee Cooter
Florida Red-bellied Turtle
Eastern Chicken Turtle
Gopher Tortoise
Florida Softshell Turtle

LIZARDS

Green Anok
Southern Fence Lizard
Six-lined Racerunner
Ground Skink
Five lined Skink
Broad-headed Skink
Southeastern Five-lined Skink
Georgia Red-tailed Skink
Eastern Glass Lizard
Island Glass Lizard
Florida Worm Lizard

SNAKES

Florida Green Water Snake
Brown Water Snake
Red-bellied Water Snake
Banded Water Snake
Florida Water Snake
Gulf Salt Marsh Snake
Glossy Water Snake
North Florida Swamp Snake
Florida Brown Snake
Florida Red-bellied Snake
Eastern Garter Snake
Southern Ribbon Snake
Rough Earth Snake
Eastern Earth Snake
Striped Swamp Snake
Eastern Hognose Snake
Southern Hognose Snake
Yellow-lipped Snake
Southern Ringneck Snake
Rainbow Snake
Mud Snake
Southern Black Racer
Eastern Coachwhip
Rough Green Snake
Eastern Indigo Snake
Corn Snake
Yellow Rat Snake
Gray Rat Snake
Florida Pine Snake
Eastern Kingsnake
Scarlet Kingsnake
Short-tailed Snake
Scarlet Snake
Florida Crowned Snake
Eastern Coral Snake
Eastern Cottonmouth
Dusky Pigmy Rattlesnake
Canebrake Rattlesnake
Eastern Diamondback Rattlesnake

FISHES

Bull Shark
Atlantic Sturgeon
Bowfin
Longnose Gar
Florida Gar
American Eel
Gizzard Shad
Threadfin Shad
Alabama Shad
Atlantic Menhaden
Speckled Trout
Redfin Pickerel
Chain Pickerel
Eastern Mudminnow
Lake Chubsucker
Spotted Sucker
Golden Shiner
White Catfish
Yellow Bullhead
Brown Bullhead
Channel Catfish
Flat Bullhead (Snail Catfish)
Tadpole Madtom
Pirate Perch
Atlantic Needlefish
Golden Topminnow
Banded Topminnow
Starhead Topminnow
Pygmy Killfish
Mosquitofish
Brook Silversides
Mud Sunfish
Flier
Warmouth
Everglades Pygmy Sunfish
Okefenokee Pygmy Sunfish
Blackbanded Sunfish
Bluespotted Sunfish
Banded Sunfish
Redbreast Sunfish
Bluegill
Dollar Sunfish
Spotted Sunfish
Shellcracker
Largemouth Bass
Suwannee Bass
Black Crappie
Scalyhead Darter
Swamp Darter
Spotfin Mojarra
Channel Bass
Sheepshead
Striped Mullet
Southern Flounder

MAMMALS

Florida Opossum
Southeastern Shrew
Carolina Short-tailed Shrew
Least Shrew
Star-nosed Mole
Florida Mole
Georgian Bat
Big Brown Bat
Northern Red Bat
Seminole Red Bat
Florida Yellow Bat
Evening Bat
Eastern Big-eared Bat
Florida Black Bear
Raccoon
Long-tailed Weasel
Mink
Florida River Otter
Florida Striped Skunk
Red Fox
Florida Gray Fox
Florida Panther
Florida Bobcat
Southern Gray Squirrel
Southern Fox Squirrel
Florida Flying Squirrel
Georgia Pocket Gopher
Florida Pocket Gopher
Cotton Mouse
Southern Golden Mouse
Swamp Rice Rat
Hispid Cotton Rat
Florida Wood Rat
Florida Water Rat
House Mouse
Norway Rat
Black Rat
Roof Rat
Eastern Cottontail
Marsh Rabbit
White-tailed Deer
Manatee

BIRDS

Common Loon
Horned Grebe
Pied billed Grebe
White Pelican
Brown Pelican
Double-crested Cormorant
Anhinga
Great Blue Heron
Cattle Egret
Common Egret
Snowy Egret
Louisiana Heron
Black-crowned Night Heron
Yellow-crowned Night Heron
Least Bittern
American Bittern
Wood Ibis
Glossy Ibis
White Ibis
Canada Goose
Mallard
Bald Eagle
Marsh Hawk
Osprey
Peregrine Falcon
Pigeon Hawk
Sparrow Hawk
Bobwhite
Turkey
Sandhill Crane
Limpkin
King Rail
Clapper Rail
Virginia Rail
Sora
Black Rail
Purple Gallinule
Common Gallinule
American Coot
Semipalmated Plover
Wilson's Plover
Killdeer

Black Duck
Mottled Duck
Gadwall
Pintail
Green-winged Teal
Blue-winged Teal
American Widgeon
Shoveler
Wood Duck
Red head
Ring-necked Duck
Canvasback
Greater Scaup
Lesser Scaup
Common Goldeneye
Bufflehead
Ruddy Duck
Hooded Merganser
Red-breasted Merganser
Turkey Vulture
Black Vulture
Swallow-tailed Kite
Sharp-shinned Hawk
Cooper's Hawk
Red-tailed Hawk
Red-shouldered Hawk
Broad-winged Hawk
Black-bellied Plover
Ruddy Turnstone
American Woodcock
Common Snipe
Spotted Sandpiper
Solitary Sandpiper
Willet
Greater Yellowlegs
Lesser Yellowlegs
Least Sandpiper
Dunlin
Short-billed Dowitcher
Long-billed Dowitcher
Semipalmated Sandpiper
Western Sandpiper
Sanderling
American Avocet
Black-necked Stilt
Herring Gull
Ring-billed Gull
Laughing Gull
Bonaparte's Gull
Gull-billed Tern
Common Tern
Least Tern
Royal Tern
Caspian Tern
Black Tern
Black Skimmer
Mourning Dove
Ground Dove
Yellow-billed Cuck
Black-billed Cuckoo
Barn Owl
Screech Owl
Great Horned Owl
Barred Owl
Chuck-will's Widow
Whip-poor-will
Common Nighthawk
Chimney Swift
Ruby-throated Hummingbird
Belted Kingfisher
Yellow-shafted Flicker
Pileated Woodpecker
Red-bellied Woodpecker
Red-headed Woodpecker
Yellow-bellied Sapsucker
Hairy Woodpecker
Downy Woodpecker
Red-cockaded Woodpecker
Eastern Kingfish
Great Crested Flycatcher
Eastern Phoebe
Acadian Flycatcher
Eastern Wood Pewee
Tree Swallow
Rough-winged Swallow
Barn Swallow
Purple Martin
Blue Jay
Common Crow
Fish Crow
Carolina Chickadee
Tufted Titmouse
White-breasted Nuthatch
Red-breasted Nuthatch
Brown Creeper
House Wren
Winter Wren
Bewick's Wren
Carolina Wren
Long-billed Marsh Wren
Short-billed Marsh Wren

Mockingbird
Catbird
Brown Thrasher
Robin
Wood Thrush
Hermit Thrush
Swainson's Thrush
Gray-cheeked Thrush
Veery
Eastern Bluebird
Blue-Gray Gnatcatcher
Golden-crowned Kinglet
Ruby-crowned Kinglet
Water Pipit
Cedar Waxwing
Loggerhead Shrike
Starling
White-eyed Vireo
Red-eyed Vireo
Black-and-White Warbler
Prothonotary Warbler
Swainson's Warbler
Worm-eating Warbler
Golden-winged Warbler
Blue-winged Warbler
Orange-crowned Warbler
Parula Warbler
Yellow Warbler
Magnolia Warbler
Cape May Warbler
Black-throated Blue Warbler
Myrtle Warbler
Black-throated Green Warbler
Cerulean Warbler
Blackburnian Warbler
Yellow-throated Warbler
Chestnut-sided Warbler
Blackpoll Warbler
Pine Warbler
Prairie Warbler
Palm Warbler
Ovenbird
Northern Waterthrush
Louisiana Waterthrush
Kentucky Warbler
Connecticut Warbler
Yellowthroat
Yellow-breasted Chat
Hooded Warbler
Canada Warbler
American Redstart
House Sparrow
Bobolink
Eastern Meadowlark
Red-winged Blackbird
Orchard Oriole
Baltimore Oriole
Rusty Blackbird
Brewer's Blackbird
Boat-tailed Grackle
Common Grackle
Brown-headed Cowbird
Scarlet Tanager
Summer Tanager
Cardinal
Rose-breasted Grosbeak
Blue Grosbeak
Indigo Bunting
Painted Bunting
Purple Finch
Pine Siskin
American Goldfinch
Rufous-sided Towhee
Savannah Sparrow
Grasshopper Sparrow
LeConte's Sparrow
Henslow's Sparrow
Vesper Sparrow
Lark Sparrow
Bachman's Sparrow
Slate-colored Junco
Chipping Sparrow
Field Sparrow
White-crowned Sparrow
White-throated Sparrow
Fox Sparrow
Lincoln's Sparrow
Swamp Sparrow
Song Sparrow

FLORA

American Holly
Azalea
Bald Cypress
Bamboo
Basswood
Beautyberry
Birch
Black Cherry
Blueberry
Bluejack Oak
Bullace Grape
Buttonbush
Cabbage Palm
Dogbane
Florida Elm
Golden Aster
Hickory
Huckleberry
Laurel
Live Oak
Loblolly Pine
Longleaf Pine
Magnolia
Partridge Berry
Passion Flower
Persimmon
Prickley Pear
Red Ash
Red Maple
Rosemary
Sand Pine
Scuppernong
Scrub Oak
Soapberry
Spruce
Staggerbush
Swamp Poplar
Sweetgum
Tupelo
Turkey Oak
Waterelm
Waterlocust
Waxmyrtle
Wild Grape
Wild Olive
Willow
Wire Grass
Yellow Jasamine

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