

draft

wild and scenic river study
environmental impact statement

july, 1982

LOXAHATCHEE RIVER



FLORIDA

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UNITED STATES DEPARTMENT OF THE INTERIOR/NATIONAL PARK SERVICE

THIS REPORT WAS PREPARED PURSUANT TO PUBLIC LAW 90-542, THE WILD AND SCENIC RIVERS ACT, AS AMENDED. PUBLICATION OF THE FINDINGS AND RECOMMENDATIONS HEREIN SHOULD NOT BE CONSTRUED AS REPRESENTING EITHER THE APPROVAL OR DISAPPROVAL OF THE SECRETARY OF THE INTERIOR. THE PURPOSE OF THIS REPORT IS TO PROVIDE THE INFORMATION AND ALTERNATIVES FOR FURTHER CONSIDERATION BY THE NATIONAL PARK SERVICE, THE SECRETARY OF THE INTERIOR, AND OTHER FEDERAL AND STATE AGENCIES.



As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U. S. administration.

LOXAHATCHEE RIVER

DRAFT WILD AND SCENIC RIVER STUDY/DRAFT ENVIRONMENTAL IMPACT STATEMENT
Palm Beach and Martin Counties, Florida

Agency: National Park Service, Department of the Interior

Action: Legislative Proposal

Abstract: The Loxahatchee Wild and Scenic River Study was conducted pursuant to the Wild and Scenic Rivers Act, Public Law 90-542, as amended. The National Park Service considers a 7.5-mile segment of the river eligible for inclusion in the National System based on its outstandingly remarkable ecological, fish and wildlife, and recreational values. The National Park Service proposes that this eligible segment be included as a State-administered component of the National Wild and Scenic Rivers System. Under the proposed concept plan management of the Loxahatchee River would be a cooperative effort by the State of Florida and the County of Palm Beach.

Three alternatives were developed and evaluated in accordance with the National Environmental Policy Act (NEPA). Alternative A is the recommended proposal to include the 7.5-mile eligible segment of the river as a State-administered component of the National System. Alternative B involves designation of a 7.5-mile segment of the river as a State-administered component of the national system but provides additional protection in the corridor as well as restoration of the Loxahatchee Slough. Alternative C is the No Action or Existing Trends alternative and characterizes the future conditions expected to occur in the study area without a formal management plan or designation as a wild and scenic river.

This environmental impact statement will serve as the proposals' compliance document for Section 7 of the Endangered Species Act of 1973, Executive Order 11988 (Floodplain Management), Executive Order 11990 (Protection of Wetlands), Section 106 of the 1966 National Historic Preservation Act and Executive Order 11593 (Protection and Enhancement of the Cultural Environment).


Comments on the DEIS will be received for ⁶⁰ days following the date of this publication. Comments should be submitted by ~~September 1, 1982~~ OCT 13 1982

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Errata

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ADDENDUM

Subsequent to the preparation of this report the South Florida Water Management District (SFWD) announced its intention to purchase 1500 acres along the Loxahatchee River. It is one of the first areas to be purchased by the District under Florida's Documentary Stamp Tax "Save Our Rivers" Act. The acreage to be purchased along the river abuts Palm Beach County's Riverbend Park and continues north to the Jonathan Dickinson State Park boundary. The District is acquiring the land in order to preserve and manage the outstanding values associated with the Loxahatchee River.

SUMMARY

SUMMARY

This study was undertaken at the direction of the Congress to determine the potential of the Loxahatchee River for inclusion in the National Wild and Scenic Rivers System. The National Park Service considers a 7.5-mile segment of the river eligible for inclusion in the National System based on its outstandingly remarkable ecological, fish and wildlife, and recreational values. It is proposed that this eligible segment of the river be included as a State-administrated component of the National Wild and Scenic Rivers System. Under the proposed concept plan (Alternative A), management of the Loxahatchee River would be a cooperative effort by the the State of Florida and the County of Palm Beach.

The study was conducted in close cooperation with federal, State, and local agencies of government, particularly the Florida Department of Natural Resources and Palm Beach County. The public was involved throughout the study process through public meetings, a public planning workshop, and numerous personal contacts and letters. The overwhelming consensus of this public input, supported by the local news media, is that the Loxahatchee River is of national significance and should be preserved as a national wild and scenic river.

Three alternatives were developed and evaluated in accordance with the National Environmental Policy Act (NEPA).

Alternative A is the proposed alternative and involves designation of a 7.5-mile segment of the Northwest Fork of the Loxahatchee River as a State-administered component of the National Wild and Scenic Rivers System. The river could be included in the National System by State action under Section 2(a)(ii) of the National Wild and Scenic Rivers Act or by an Act of Congress. To achieve national designation the State of Florida would be required to adopt a program of action to provide permanent protection for the natural and cultural qualities of the segment proposed for designation. Protective measures may include, but are not limited to, fee acquisition, scenic easements or other than fee acquisition, zoning, construction setback lines, building permits, or other similar land use controls enacted in cooperation with local jurisdictions.

Under the proposed alternative some 350 acres along the river corridor between Indiantown Road and Jonathan Dickinson State Park would be protected. Management of the Loxahatchee River would be a cooperative effort by the State of Florida and the County of Palm Beach. The State of Florida would manage the river corridor from Indiantown Road to river mile 6 and the County of Palm Beach would manage the portion of the river within its Riverbend Park. Martin County could cooperate in management of the river by enacting appropriate land use controls along the portion of the river within Martin County, if necessary. A cooperative agreement with water management agencies would ensure adequate water quality and quantity for the designated portion of the river.

Management District could provide more feasible management alternatives to meet the objective of improving environmental quality on the Northwest Fork and other vital area concerns such as flood control.

Alternative C is the No Action or Existing Trends Alternative and characterizes the future conditions expected to occur in the study area without a formal management plan or designation as a wild and scenic river. The effects of selecting this alternative are presented both as a standard of reference to which other alternatives can be compared, and as an option which can be chosen. Existing local land use regulations permit residential development of one unit per 5 acres in the river corridor between Indiantown Road and Jonathan Dickinson State Park. Anticipated development may result in adverse impacts on the eligible river segment.

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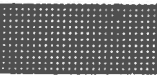
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CHAPTER I

I. PURPOSE OF AND NEED FOR THE ACTION

On October 2, 1968, the Congress enacted Public Law 90-542 which established the National Wild and Scenic Rivers System. In Section 1(b) of that Act Congress stated that:

"It is hereby declared 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."

To carry out this policy, the Congress instituted the Wild and Scenic Rivers System initially composed of eight rivers which were designated in Section 3(a) of the Act. The Congress provided for additions to that System in Section 5(a) by designating 27 potential wild and scenic rivers which were to be studied. Subsequent amendments to the Act and Secretarial actions pursuant to Section 2(a)(ii) have increased the number of rivers, or segments of rivers, in the National System to 61 and the number of study rivers to 88.

The Congress authorized a study of the Loxahatchee River in an amendment to the Wild and Scenic Rivers Act on November 10, 1978. Section 5(a) states that, "The following rivers are hereby designated for potential addition to the National Wild and Scenic Rivers System . . . (60) Loxahatchee, Florida. The entire river including its tributary, North Fork."

Section 4(a) of the Wild and Scenic Rivers Act specifies that a study report shall accompany proposals and recommendations submitted by the President to Congress for additions to the National Wild and Scenic System. Reports must set forth:

1. The area included within the report;
2. The characteristics which do or do not make the river a worthy addition to the system;
3. The current status of landownership and use in the area;

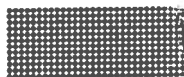
important to the river as a whole. This portion of the river should come under special management to insure the biological integrity of the entire river system.

4. The banks of the portion of the Loxahatchee River from river mile 6 on the Northwest Fork downstream to the mouth of the river at Jupiter Inlet are urbanized to such an extent that the values which may have qualified this reach of the river for designation have been removed. However, this portion of the river does possess certain biological features which are important to the river as a whole. This portion of the river should come under special management to insure the biological integrity of the entire river system.

Proposal

The study of the Loxahatchee River found the segment from Palm Beach County's Riverbend Park at river mile 13.5 to the southern boundary of the Jonathan Dickinson State Park at river mile 6 qualified for inclusion in the National Wild and Scenic Rivers System. To protect the free-flowing condition and outstandingly remarkable values of this segment of the river and the System as a whole it is proposed that:

1. The 7.5-mile segment of the Loxahatchee River from Riverbend Park to river mile 6 at the southern boundary of Jonathan Dickinson State Park be included as a State-administered component of the National Wild and Scenic Rivers System.
2. This segment be classified as is indicated on the proposed classification map.
3. The State of Florida adopt a program of action to provide permanent protection for the natural and cultural qualities of the designated segment of the Loxahatchee River. Protective devices may include, but are not limited to fee acquisition, scenic easements or other than fee acquisition, zoning, construction setback lines, building permits, or other similar land use controls enacted in cooperation with local jurisdictions.
4. The Loxahatchee Wild and Scenic River area be jointly administered by the Florida Department of Natural Resources and the Palm Beach County Department of Parks and Recreation.
5. An intergovernmental cooperative agreement be concluded between the State of Florida and the County of Palm Beach concerning the management of the Loxahatchee River.
6. Federal agencies be required to support in their planning and projects the preservation of the Loxahatchee River as a national wild and scenic river.



CHAPTER II

CONDUCT OF THE STUDY

The Loxahatchee River has been the subject of much attention and sometimes controversy since an increased environmental awareness has focused concerns of area residents on the local environment. In 1965, 52 boats and approximately 200 persons conducted a five mile tour of the river. The trip was conducted by conservation groups and public officials to draw attention to the need to preserve the remaining natural areas of the Loxahatchee River. Pressures to channelize and dredge the river, as well as commercial fishing pressures, aroused citizen opposition to the further development and exploitation of this fragile and unique resource. On January 29, 1966, the Loxahatchee River Chapter of the Izaak Walton League was formed for those concerned with the preservation of the river.

A subsequent controversy involved dredging of oyster bars in the Loxahatchee River to improve the flushing of the river. The intense nature of the controversy reflected concern for the river by local citizens on both sides of the issue.

In 1975, the Florida Department of Natural Resources evaluated the river for possible purchase under the Environmentally Endangered Lands Program. The river was included by the Florida Cabinet on a list of top priority acquisitions, but State officials abandoned the \$3.7 million project to buy 690 acres along the Loxahatchee when owners of the riverbank property refused to sell.

A bill to study the Loxahatchee River for Wild and Scenic River designation was first introduced to the Congress by Representative L. A. (Skip) Bafalis. The river was included in the National Parks and Recreation Act of 1978 (Public Law 95-625) which was passed on November 10, 1978. The National Park Service held a public meeting on January 17, 1979 in the Jupiter-Tequesta area and found strong local support for starting the study as soon as possible. Personnel became available to conduct the Loxahatchee River study in December 1979 and a March 7, 1980 press release announced the formal initiation of the study.

Governmental and Organizational Interrelationships

The study was conducted in close cooperation with other agencies of government, particularly the Florida Department of Natural Resources and Palm Beach County. Prior to formal initiation of the study, the National Park Service held an organizational meeting with representatives of local, State, and federal agencies in the study area. The purpose of this meeting was to conduct joint field work and identify issues of concern as well as identify the potential roles of agencies cooperating in the study.

numerous to list. Cooperating agencies include the following:

Local/Regional Agencies

Martin County

Palm Beach County

Jupiter Inlet District

Palm Beach Area Planning Board

Loxahatchee River Environmental Control District (ENCON)

Treasure Coast Regional Planning Council

Loxahatchee Council of Governments

State Agencies

South Florida Water Management District

Department of Environmental Regulation

Game and Fresh Water Fish Commission

Department of Natural Resources

Office of the Attorney General

Department of Community Affairs

Division of Forestry

Division of Archives, History and Records Management

Federal Agencies

Forest Service

Southeastern Area, Atlanta

Fish and Wildlife Service

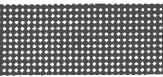
Southeast Region, Atlanta

Jacksonville Area Office

Vero Beach Field Office

Loxahatchee Wildlife Refuge

Department of Housing and Urban Development



CHAPTER III

CHARACTERISTICS WHICH MAKE THE AREA A WORTHY ADDITION TO THE NATIONAL WILD AND SCENIC RIVERS SYSTEM

Wild and Scenic Rivers Act

The Loxahatchee River was designated for study as a potential candidate for inclusion in the Wild and Scenic Rivers System. The Loxahatchee River was added to the study list through an amendment of the Wild and Scenic Rivers Act, Public Law 90-542. The Act sets forth certain criteria by which each candidate for the System is to be evaluated. Section 1(b) of the Act, in a statement of policy, specifies the basic requirements of rivers to be selected for inclusion in the System:

"(b) It is hereby declared 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."

Section 2(b) of the Act requires the following classifications to be made:

"Every wild, scenic or recreational river in its free-flowing condition, or upon restoration to this condition, shall be considered eligible for inclusion in the National Wild and Scenic Rivers System and, if included, shall be classified, designated and administered as one of the following:

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 areas--Those rivers or section of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.
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 cypress are from 300-500 years old. This represents a virtually irreplaceable and unique resource. Because it is a narrow meandering river, the water course is almost entirely canopied from Indiantown Road to Trapper Nelson's adding to the unique character of the river.

In relation to the rest of the United States, the diversity of plant species along the Loxahatchee River is remarkable. Tropical vegetation such as wild coffee, myrsine, leather fern, and cocoplum can be found along with water ash, maple, royal fern, and buttonbush which are considered to be examples of a more northern flora.

The Loxahatchee River as a subtropical river-swamp ecosystem would make a unique addition to the National Wild and Scenic Rivers System. There are currently no rivers within the National System which even approximate the character of this unique subtropical coastal plain river. All the existing components of the National System are within the temperate zone or in the State of Alaska.

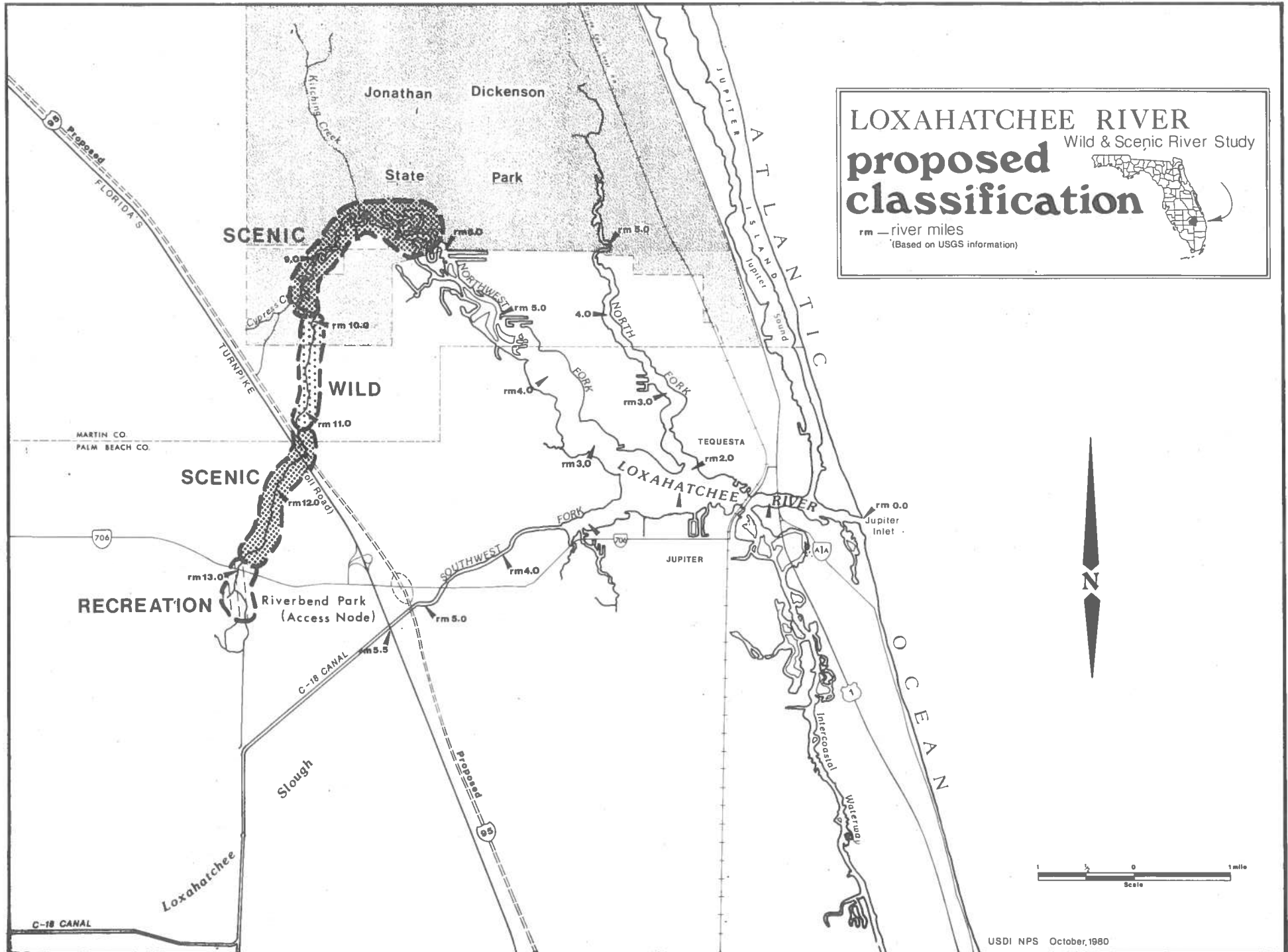
Outstandingly Remarkable Fish and Wildlife Values. The expansiveness and diversity of habitats occurring on or adjacent to the river has attracted and continues to support many species of native animals. Two hundred sixty-seven species representing 169 genera and 78 families have been recorded in the Loxahatchee River and its estuary (Christensen, 1965). These include temperate, tropical, and pelagic gulf species due to location of the river in a faunal boundary area. Certain species are of special concern because of their appearance on the lists compiled by the Florida Committee on Rare and Endangered Plants and Animal Species.

Plants or animals included on the federal list of endangered species known to occur as residents or migrants to the Loxahatchee River study area are: bald eagle (*Haliaeetus leucocephalus*), red-cockaded woodpecker (*Picoides borealis*), brown pelican (*Pelecanus*), Florida everglade kite (*Posthrampus sociabilis plubeus*), eastern indigo snake (*Drymarchon corais couperi*), West Indian manatee (*Trichechus manatus*), and the American alligator (*Alligator mississippiensis*).

In addition, the entire Loxahatchee River has been designated as a critical habitat for the West Indian (or Florida) manatee by the U.S. Fish and Wildlife Service.

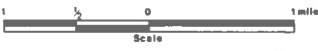
Outstandingly Remarkable Recreational Values. The narrow channel of the Northwest Fork of the river and its sinuous, meandering course under a canopy of majestic cypress trees offers the canoeist a challenging and interesting recreational experience. The diverse vegetation and habitats also offer an outstanding opportunity for amateur nature study.

The rapidly growing southeast Florida area does not have any comparable recreation resources. Almost all south Florida waterways have been channelized to meet flood control and drainage objectives.



LOXAHATCHEE RIVER
 Wild & Scenic River Study
proposed classification

rm — river miles
 (Based on USGS information)



4. Section downstream from Trapper Nelson's to the Jonathan Dickinson State Park boundary at river mile 6.

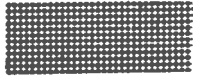
This portion of the river has seen some development for recreational purposes. There have been significant changes in the plant communities along this portion of the river which have been attributed to increased salinity levels. However, there are significant values in this segment of the river which qualify it for designation. Because of the presence of existing development and existing recreational uses, this portion of the river is classified as scenic.

5. Section downstream of the Jonathan Dickinson State Park boundary at river mile 6 to the mouth of the river at Jupiter Inlet.

This section of the river has been extensively modified. There are four bridge crossings, numerous residential and commercial docks, and extensive streamside residential development which has almost entirely eliminated many of the natural values of the river and its shoreline. In addition, a portion of the river is used as the Intracoastal Waterway and is subject to continuing heavy use for recreational and commercial boat traffic. Despite the presence of some noteworthy values, this portion of the river does not possess the outstandingly remarkable values to qualify for designation.

6. The North Fork of the Loxahatchee River from its headwaters in Jonathan Dickinson State Park to its confluence with the main stem of the Loxahatchee River.

There were no outstandingly remarkable values noted on the North Fork and it does not qualify for designation.



IV

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Three alternatives were developed and evaluated in accordance with the National Environmental Policy Act (NEPA). Alternative A is the recommended proposal to include the 7.5-mile eligible segment of the river as a State-administered component of the National System. Alternative B involves designation of a 7.5-mile segment of the river as a State-administered component of the national system but provides additional protection in the corridor as well as restoration of the Loxahatchee Slough. Alternative C is the No Action or Existing Trends alternative and characterizes the future conditions expected to occur in the study area without a formal management plan or designation as a wild and scenic river.

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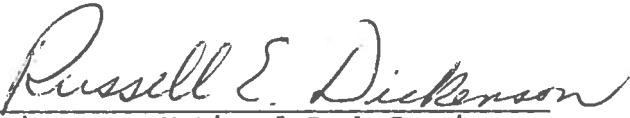
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The study was conducted in close cooperation with federal, State, and local agencies of government, particularly the Florida Department of Natural Resources and Palm Beach County. The public was involved throughout the study process through public meetings, a public planning workshop, and numerous personal contacts and letters. The overwhelming consensus of this public input, supported by the local news media, is that the Loxahatchee River is of national significance and should be preserved as a national wild and scenic river.

Study participants identified outstandingly remarkable ecological, fish and wildlife, and recreational values on the Northwest Fork of the Loxahatchee River between river mile 13.5 and river mile 6. Ecological values identified included the unique status of the river as the best remaining example of a southeast Florida river swamp, in an area where most natural waterways have been channelized. Also, in relation to the rest of the United States, the diversity of plant species along the Loxahatchee is remarkable because of overlapping vegetative zones. Tropical vegetation such as wild coffee, myrsine, leather fern, and cocoplum can be found along with water ash, water hickory, maple, royal fern, and buttonbush, which are considered to be examples of a more northern temperate flora. The narrow channel of the Northwest Fork and its sinuous meandering course under a canopy of majestic cypress trees, offers the canoeist a challenging and interesting recreational experience. The Northwest Fork, as an example of a subtropical river-swamp ecosystem, would make a unique addition to the National Wild and Scenic Rivers System. There are currently no rivers within the National System which approximate the character of this unique subtropical coastal plain river. All the existing components of the National System are within the temperate zone or the State of Alaska.

The outstandingly remarkable values identified in the Loxahatchee River study area were restricted to the Northwest Fork. No outstandingly remarkable values were identified on the North Fork or in the estuary, thereby making these areas ineligible for system inclusion. Extensive development on the shorelines generally disqualified the North Fork and the estuary from further consideration.

Three alternatives were developed and evaluated in accordance with the National Environmental Policy Act (NEPA).

Alternative A is the proposed alternative and involves designation of a 7.5-mile segment of the Northwest Fork of the Loxahatchee River as a State-administered component of the National Wild and Scenic Rivers System. The river could be included in the National System by State action under Section 2(a)(ii) of the National Wild and Scenic Rivers Act or by an Act of Congress. To achieve national designation the State of Florida would be required to adopt a program of action to provide permanent protection for the natural and cultural qualities of the segment proposed for designation. Protective measures may include, but are not limited to, fee acquisition, scenic easements or other than fee acquisition, zoning, construction setback lines, building permits, or other similar land use controls enacted in cooperation with local jurisdictions.

Under the proposed alternative some 350 acres along the river corridor between Indiantown Road and Jonathan Dickinson State Park would be protected. Management of the Loxahatchee River would be a cooperative effort by the State of Florida and the County of Palm Beach. The State of Florida would manage the river corridor from Indiantown Road to river mile 6 and the County of Palm Beach would manage the portion of the river within its Riverbend Park. Martin County could cooperate in management of the river by enacting appropriate land use controls along the portion of the river within Martin County, if necessary. A cooperative agreement with water management agencies would ensure adequate water quality and quantity for the designated portion of the river.

A potential role exists for the Department of the Interior in the development of a management plan for the Loxahatchee River. The expertise of the National Park Service could benefit the State and the county in preparing their joint management plan.

Alternative B also involves designation of the 7.5-mile eligible segment of the river as a State-administered component of the National System but provides additional protection in the river corridor as well as restoration of the Loxahatchee Slough. Under this alternative 700 acres of riparian land would be acquired by the State of Florida in the river corridor between Indiantown Road and Jonathan Dickinson State Park. This alternative would also entail backfilling a segment of the C-18 canal and a partial restoration of the Loxahatchee Slough. The study found that restoration of the Loxahatchee Slough is not the most cost effective or necessarily the best means of maximizing environmental quality on the Northwest Fork. However, the restoration of the Slough may have broader regional benefits and may be implemented through concerted efforts of State and local governments and private interests. The acquisition of an excessively wide corridor along the segment from Indiantown Road to the Jonathan Dickinson State Park was not found to be as cost effective as the corridor described in the preferred alternative.

A ongoing study of the C-18 canal by the U.S. Army Corps of Engineers and a comprehensive study of the basin by the U.S. Geological survey will provide additional information concerning management of the Loxahatchee Slough. These studies and current planning efforts by the South Florida Water

Management District could provide more feasible management alternatives to meet the objective of improving environmental quality on the Northwest Fork and other vital area concerns such as flood control.

Alternative C is the No Action or Existing Trends Alternative and characterizes the future conditions expected to occur in the study area without a formal management plan or designation as a wild and scenic river. The effects of selecting this alternative are presented both as a standard of reference to which other alternatives can be compared, and as an option which can be chosen. Existing local land use regulations permit residential development of one unit per 5 acres in the river corridor between Indiantown Road and Jonathan Dickinson State Park. Anticipated development may result in adverse impacts on the eligible river segment.

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CHAPTER I

I. PURPOSE OF AND NEED FOR THE ACTION

On October 2, 1968, the Congress enacted Public Law 90-542 which established the National Wild and Scenic Rivers System. In Section 1(b) of that Act Congress stated that:

"It is hereby declared 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."

To carry out this policy, the Congress instituted the Wild and Scenic Rivers System initially composed of eight rivers which were designated in Section 3(a) of the Act. The Congress provided for additions to that System in Section 5(a) by designating 27 potential wild and scenic rivers which were to be studied. Subsequent amendments to the Act and Secretarial actions pursuant to Section 2(a)(ii) have increased the number of rivers, or segments of rivers, in the National System to 61 and the number of study rivers to 88.

The Congress authorized a study of the Loxahatchee River in an amendment to the Wild and Scenic Rivers Act on November 10, 1978. Section 5(a) states that, "The following rivers are hereby designated for potential addition to the National Wild and Scenic Rivers System . . . (60) Loxahatchee, Florida. The entire river including its tributary, North Fork."

Section 4(a) of the Wild and Scenic Rivers Act specifies that a study report shall accompany proposals and recommendations submitted by the President to Congress for additions to the National Wild and Scenic System. Reports must set forth:

1. The area included within the report;
2. The characteristics which do or do not make the river a worthy addition to the system;
3. The current status of landownership and use in the area;

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 Wild and Scenic Rivers System;
5. The federal agency by which it is proposed the area, should it be added to the System, be administered;
6. The extent to which it is proposed that such administration including costs thereof, be shared by State and local agencies; and,
7. The estimated cost to the United States of acquiring necessary lands and interests in land and of administering the area, should it be added to the System.

In accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, the impacts on the human and natural environment of the recommended plan, and the alternatives considered, were assessed and are discussed in this report.

National Environmental Policy Act (NEPA) regulations require preparation of an environmental impact statement to accompany any legislative proposal to the Congress such as a wild and scenic river study recommending component designation. This report combines the wild and scenic river study report with an environmental impact statement, as is encouraged by NEPA regulations. This report also serves as a compliance document for the National Historic Preservation Act, Public Law 89-665; the Fish and Wildlife Coordination Act, Public Law 85-264 and the Floodplain and Wetlands Executive Orders (E.O. 11988 and E.O. 11990).

Findings

The study of the Loxahatchee River and its basin produced the following findings:

1. The freeflowing portion of the Northwest Fork of the Loxahatchee River from Riverbend Park south of Indiantown Road at approximately river mile 13 downstream to river mile 6 at the southern boundary of the Jonathan Dickinson State Park possesses such outstandingly remarkable and unique values as to qualify the river for inclusion in the National Wild and Scenic Rivers System.
2. The portion of the Northwest Fork of the Loxahatchee River upstream of Riverbend Park (river mile 13.5) does not possess the outstandingly remarkable values necessary to qualify a river for inclusion in the National Wild and Scenic Rivers System. However, special management of this portion of the river and the Loxahatchee Slough is necessary to assure adequate water quality and quantity for the remainder of the river downstream.
3. The North Fork of the Loxahatchee River does not qualify for inclusion in the National Wild and Scenic Rivers System. However, this portion of the river does possess certain biological features which are

important to the river as a whole. This portion of the river should come under special management to insure the biological integrity of the entire river system.

4. The banks of the portion of the Loxahatchee River from river mile 6 on the Northwest Fork downstream to the mouth of the river at Jupiter Inlet are urbanized to such an extent that the values which may have qualified this reach of the river for designation have been removed. However, this portion of the river does possess certain biological features which are important to the river as a whole. This portion of the river should come under special management to insure the biological integrity of the entire river system.

Proposal

The study of the Loxahatchee River found the segment from Palm Beach County's Riverbend Park at river mile 13.5 to the southern boundary of the Jonathan Dickinson State Park at river mile 6 qualified for inclusion in the National Wild and Scenic Rivers System. To protect the free-flowing condition and outstandingly remarkable values of this segment of the river and the System as a whole it is proposed that:

1. The 7.5-mile segment of the Loxahatchee River from Riverbend Park to river mile 6 at the southern boundary of Jonathan Dickinson State Park be included as a State-administered component of the National Wild and Scenic Rivers System.
2. This segment be classified as is indicated on the proposed classification map.
3. The State of Florida adopt a program of action to provide permanent protection for the natural and cultural qualities of the designated segment of the Loxahatchee River. Protective devices may include, but are not limited to fee acquisition, scenic easements or other than fee acquisition, zoning, construction setback lines, building permits, or other similar land use controls enacted in cooperation with local jurisdictions.
4. The Loxahatchee Wild and Scenic River area be jointly administered by the Florida Department of Natural Resources and the Palm Beach County Department of Parks and Recreation.
5. An intergovernmental cooperative agreement be concluded between the State of Florida and the County of Palm Beach concerning the management of the Loxahatchee River.
6. Federal agencies be required to support in their planning and projects the preservation of the Loxahatchee River as a national wild and scenic river.



CHAPTER II

CONDUCT OF THE STUDY

The Loxahatchee River has been the subject of much attention and sometimes controversy since an increased environmental awareness has focused concerns of area residents on the local environment. In 1965, 52 boats and approximately 200 persons conducted a five mile tour of the river. The trip was conducted by conservation groups and public officials to draw attention to the need to preserve the remaining natural areas of the Loxahatchee River. Pressures to channelize and dredge the river, as well as commercial fishing pressures, aroused citizen opposition to the further development and exploitation of this fragile and unique resource. On January 29, 1966, the Loxahatchee River Chapter of the Izaak Walton League was formed for those concerned with the preservation of the river.

A subsequent controversy involved dredging of oyster bars in the Loxahatchee River to improve the flushing of the river. The intense nature of the controversy reflected concern for the river by local citizens on both sides of the issue.

In 1975, the Florida Department of Natural Resources evaluated the river for possible purchase under the Environmentally Endangered Lands Program. The river was included by the Florida Cabinet on a list of top priority acquisitions, but State officials abandoned the \$3.7 million project to buy 690 acres along the Loxahatchee when owners of the riverbank property refused to sell.

A bill to study the Loxahatchee River for Wild and Scenic River designation was first introduced to the Congress by Representative L. A. (Skip) Bafalis. The river was included in the National Parks and Recreation Act of 1978 (Public Law 95-625) which was passed on November 10, 1978. The National Park Service held a public meeting on January 17, 1979 in the Jupiter-Tequesta area and found strong local support for starting the study as soon as possible. Personnel became available to conduct the Loxahatchee River study in December 1979 and a March 7, 1980 press release announced the formal initiation of the study.

Governmental and Organizational Interrelationships

The study was conducted in close cooperation with other agencies of government, particularly the Florida Department of Natural Resources and Palm Beach County. Prior to formal initiation of the study, the National Park Service held an organizational meeting with representatives of local, State, and federal agencies in the study area. The purpose of this meeting was to conduct joint field work and identify issues of concern as well as identify the potential roles of agencies cooperating in the study.

As the National Park Service (NPS) conducted its study of the Loxahatchee River, a number of other agencies were conducting studies of their own. Whenever possible the NPS study coordinated with or was able to utilize the findings of these other studies. The two major ongoing studies are being conducted by the U.S. Army Corps of Engineers and the U.S. Geological Survey. The principle objective of the Corps of Engineers study (Canal 18, Jupiter Inlet and Loxahatchee River Central and Southern Florida Project), known as the C-18 study, is "to evaluate the feasibility of providing structural and/or nonstructural measures which will address the water and water-related problems of the Canal 18 and Loxahatchee River Basins within Palm Beach and Martin Counties." The U.S. Geological Survey study entitled the Loxahatchee River Estuary Assessment is a comprehensive ecological study of the basin to guide future management decisions concerning the Loxahatchee River basin.

Citizen Participation

Public involvement is an important aspect of any study process. It is the policy of the Department of the Interior, ". . .to offer the public meaningful opportunities for participation in decisionmaking processes leading to actions and policies which may significantly affect or interest them."^{1/} The National Park Service policy on public participation in park planning declares that, ". . .the Service will take positive actions to involve the public as individuals and through public interest groups and organizations at the earliest possible stage in the planning process before planning decisions have been made."^{2/}

The public participated throughout the study process in public meetings, a public planning workshop, and by numerous personal contacts and letters. The overwhelming consensus of this public input, supported by the local news media, is that the Loxahatchee River is of national significance and should be preserved as a national wild and scenic river. A copy of a public information brochure summarizing the results of a public planning workshop is provided in the Appendix and provides greater detail on public response to the issues raised by the study. Many of the comments and suggestions provided by the public have been incorporated in the proposed alternative.

Acknowledgements

The National Park Service has received the advice and enthusiastic assistance of the representatives of private organizations and public agencies in the preparation of this report. Most gratifying has been the interest, assistance, and support of many private individuals who gave freely of their time to assist the National Park Service in its study of the river. Individuals who assisted the National Park Service study effort are too

^{1/} U.S. Department of the Interior, Departmental Manual, Part 301.

^{2/} U.S. Department of the Interior, National Park Service, Management Policies, 1978.

numerous to list. Cooperating agencies include the following:

Local/Regional Agencies

Martin County

Palm Beach County

Jupiter Inlet District

Palm Beach Area Planning Board

Loxahatchee River Environmental Control District (ENCON)

Treasure Coast Regional Planning Council

Loxahatchee Council of Governments

State Agencies

South Florida Water Management District

Department of Environmental Regulation

Game and Fresh Water Fish Commission

Department of Natural Resources

Office of the Attorney General

Department of Community Affairs

Division of Forestry

Division of Archives, History and Records Management

Federal Agencies

Forest Service

Southeastern Area, Atlanta

Fish and Wildlife Service

Southeast Region, Atlanta

Jacksonville Area Office

Vero Beach Field Office

Loxahatchee Wildlife Refuge

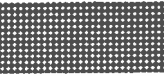
Department of Housing and Urban Development

Corps of Engineers

South Atlantic Division, Atlanta
Jacksonville, District

U.S. Geological Survey

Environmental Protection Agency



CHAPTER III

CHARACTERISTICS WHICH MAKE THE AREA A WORTHY ADDITION TO THE NATIONAL WILD AND SCENIC RIVERS SYSTEM

Wild and Scenic Rivers Act

The Loxahatchee River was designated for study as a potential candidate for inclusion in the Wild and Scenic Rivers System. The Loxahatchee River was added to the study list through an amendment of the Wild and Scenic Rivers Act, Public Law 90-542. The Act sets forth certain criteria by which each candidate for the System is to be evaluated. Section 1(b) of the Act, in a statement of policy, specifies the basic requirements of rivers to be selected for inclusion in the System:

"(b) It is hereby declared 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."

Section 2(b) of the Act requires the following classifications to be made:

"Every wild, scenic or recreational river in its free-flowing condition, or upon restoration to this condition, shall be considered eligible for inclusion in the National Wild and Scenic Rivers System and, if included, shall be classified, designated and administered as one of the following:

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 areas--Those rivers or section of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.
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."

Guidelines

The primary criteria under the Wild and Scenic Rivers Act for determining eligibility is the presence of, ". . . outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values." Outstandingly remarkable values should be of national or multistate significance, unique or very rare when compared with similar areas, and valuable scientific and educational resources. Only one outstandingly remarkable value is required for eligibility. The determination of whether a river area contains "outstandingly remarkable" values is a professional judgement on the part of the study team. However, the basis for this judgement should be well documented in the study report.

Guidelines for evaluating study rivers, based on the Wild and Scenic Rivers Act, are currently being revised.* Proposed clarifications which may affect the evaluation of the Loxahatchee River concern the eligibility of rivers that contain outstandingly remarkable ecological values, free flowing urban and near urban river segments, and river segments under 25 miles in length.

General Assessment of the River's Qualifications

As a result of public planning workshops and detailed study by the National Park Service outstandingly remarkable ecological, fish and wildlife, and recreational values were identified on the Northwest Fork of the Loxahatchee River.

Outstandingly Remarkable Ecological Values. The Loxahatchee River, a naturally meandering subtropical river, is unique in southeast Florida because it remains in a largely undeveloped and pristine natural condition. Due to intensive water management to provide drainage and flood control in the low lying and swampy areas of south Florida most natural waterways have been channelized. Rapid urbanization in southeast Florida has led to the development of almost all available waterfront property. Due to drainage over the last 70 years, many south Florida river swamps have been invaded by mangroves. Salinities of these river systems have increased due to decreased discharge, drainage of headwaters, inlet improvements and salt water intrusion. The Northwest Fork of the Loxahatchee River has signs of salt water intrusion as is demonstrated by the presence of mangroves as understory plants to dead cypress trees in the segment downstream from Trapper Nelson's. However, many of the other rivers in south Florida have been converted over from freshwater swamp to mangroves, because of the implementation of the Intracoastal Waterway and development pressures. The highest value of the Loxahatchee River lies in the fact that the Northwest Fork of the Loxahatchee River is the best remaining example of a south Florida river-swamp.

Although portions of the Loxahatchee River were logged for cypress in the early 1940's, it is still a largely pristine cypress river-swamp. Some of

*Federal Register/Vol.46 No. 18/January 28, 1981, "Draft Revised Guidelines for Eligibility, Classification and Management of River Areas".

the cypress are from 300-500 years old. This represents a virtually irreplaceable and unique resource. Because it is a narrow meandering river, the water course is almost entirely canopied from Indiantown Road to Trapper Nelson's adding to the unique character of the river.

In relation to the rest of the United States, the diversity of plant species along the Loxahatchee River is remarkable. Tropical vegetation such as wild coffee, myrsine, leather fern, and cocoplum can be found along with water ash, maple, royal fern, and buttonbush which are considered to be examples of a more northern flora.

The Loxahatchee River as a subtropical river-swamp ecosystem would make a unique addition to the National Wild and Scenic Rivers System. There are currently no rivers within the National System which even approximate the character of this unique subtropical coastal plain river. All the existing components of the National System are within the temperate zone or in the State of Alaska.

Outstandingly Remarkable Fish and Wildlife Values. The expansiveness and diversity of habitats occurring on or adjacent to the river has attracted and continues to support many species of native animals. Two hundred sixty-seven species representing 169 genera and 78 families have been recorded in the Loxahatchee River and its estuary (Christensen, 1965). These include temperate, tropical, and pelagic gulf species due to location of the river in a faunal boundary area. Certain species are of special concern because of their appearance on the lists compiled by the Florida Committee on Rare and Endangered Plants and Animal Species.

Plants or animals included on the federal list of endangered species known to occur as residents or migrants to the Loxahatchee River study area are: bald eagle (*Haliaeetus leucocephalus*), red-cockaded woodpecker (*Picoides borealis*), brown pelican (*Pelecanus*), Florida everglade kite (*Posthrampus sociabilis plubeus*), eastern indigo snake (*Drymarchon corais couperi*), West Indian manatee (*Trichechus manatus*), and the American alligator (*Alligator mississippiensis*).

In addition, the entire Loxahatchee River has been designated as a critical habitat for the West Indian (or Florida) manatee by the U.S. Fish and Wildlife Service.

Outstandingly Remarkable Recreational Values. The narrow channel of the Northwest Fork of the river and its sinuous, meandering course under a canopy of majestic cypress trees offers the canoeist a challenging and interesting recreational experience. The diverse vegetation and habitats also offer an outstanding opportunity for amateur nature study.

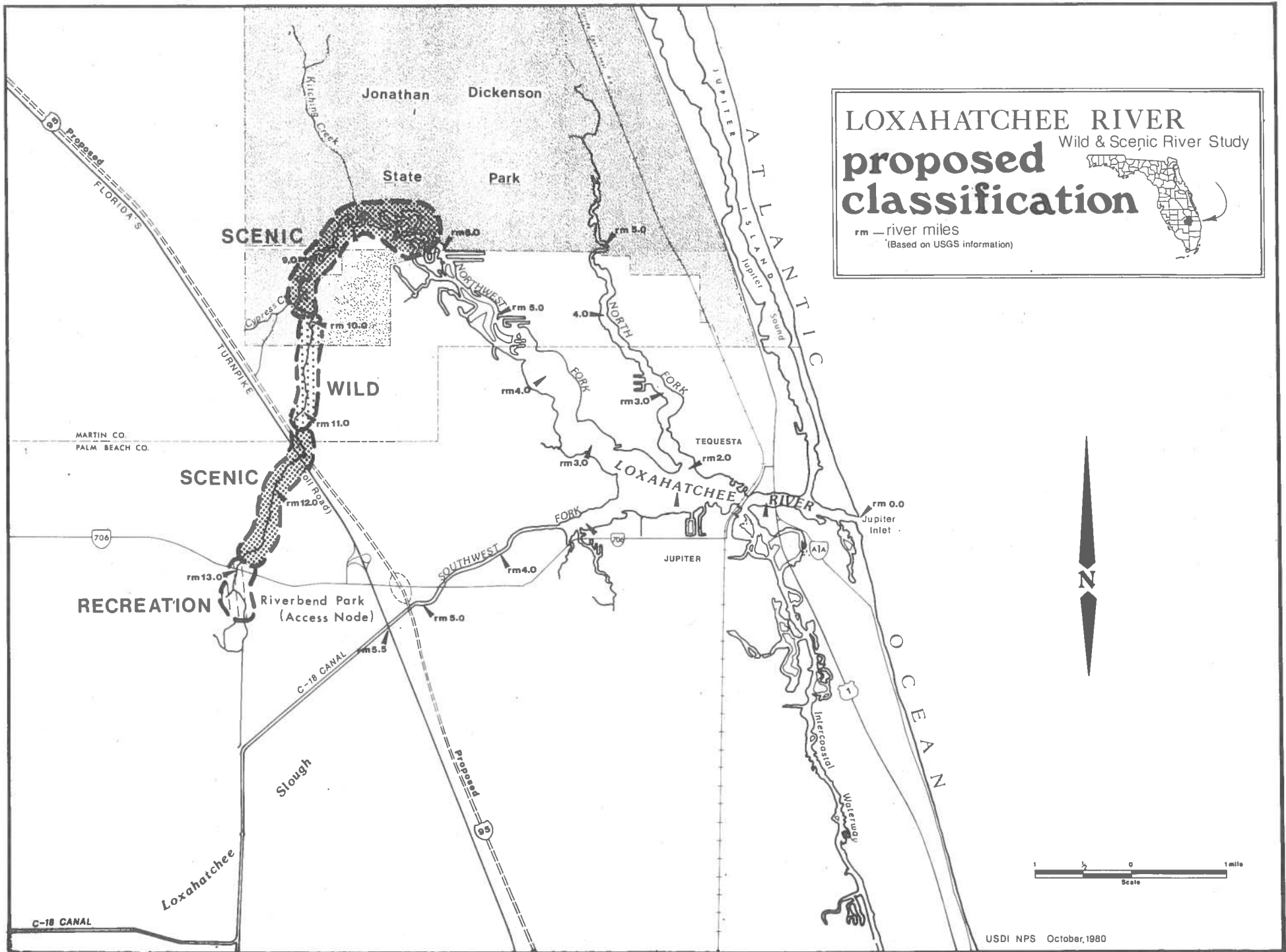
The rapidly growing southeast Florida area does not have any comparable recreation resources. Almost all south Florida waterways have been channelized to meet flood control and drainage objectives.

The river is presently little used for recreation. There is a carrying capacity beyond which increased use would damage resource values. However, current recreational use is much less than the projected carrying capacity of the river.

Although not outstandingly remarkable, certain other values were thought to be noteworthy by study participants. These included:

- The proximity of the resource to major population centers.
- The lack of exotics.
- The important role of this unique river ecosystem in the region.
- The river is a prime nursery area for fresh and salt water fish.
- The historic and archeological significance of the river and adjacent lands.
- The river is a potential educational resource for environmental education and interpretive purposes.





—Good water quality.

No outstandingly remarkable values were found on the North Fork of the Loxahatchee River.

Eligibility and Classification

The conclusion of the National Park Service is that 7.5 miles of the Loxahatchee River possess outstandingly remarkable values and qualify for inclusion in the National Wild and Scenic Rivers System under criteria set forth in the Wild and Scenic Rivers Act. This segment is classified as follows:

- 1.25 miles - Wild
- 5.75 miles - Scenic
- .5 miles - Recreation

Classification and locations are shown on the stream classification map on page 3-5. The basis for the classification are as follows:

1. Section from the Indiantown Road (State Road 706) bridge southward to the upper reaches of the Loxahatchee River.

This section of the river has been extensively modified and does not meet the qualifications for designation. However, the segment which has been purchased by Palm Beach County (approximately 1/2 mile) has not been extensively modified. The county plans to restore this segment to a more natural condition thereby qualifying it for designation at sometime as it is restored. The segment within Palm Beach County's Riverbend Park and in the immediate vicinity of Indiantown Road (SR 706) is classified as recreational.

2. Section northward of the Indiantown Road (State Road 706) bridge to approximately river mile 11.25, north of the I-95/Florida Turnpike alignment.

This section is in a largely natural condition and has many values which qualify it for designation. There are several houses, paralleling unimproved roads, or other evidences of development adjacent to or very near the river in this section. The most obvious and intrusive development is the Florida Turnpike crossing, soon to be joined by I-95. Despite these intrusions on the natural scene, this segment is classified as scenic.

3. Section northward of river mile 11.25 to Trapper Nelson's at approximately river mile 10.

This segment remains almost entirely undeveloped and has many values which qualify it for designation. Because of its pristine natural condition, this portion of the river is classified as wild.

4. Section downstream from Trapper Nelson's to the Jonathan Dickinson State Park boundary at river mile 6.

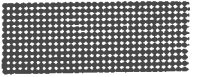
This portion of the river has seen some development for recreational purposes. There have been significant changes in the plant communities along this portion of the river which have been attributed to increased salinity levels. However, there are significant values in this segment of the river which qualify it for designation. Because of the presence of existing development and existing recreational uses, this portion of the river is classified as scenic.

5. Section downstream of the Jonathan Dickinson State Park boundary at river mile 6 to the mouth of the river at Jupiter Inlet.

This section of the river has been extensively modified. There are four bridge crossings, numerous residential and commercial docks, and extensive streamside residential development which has almost entirely eliminated many of the natural values of the river and its shoreline. In addition, a portion of the river is used as the Intracoastal Waterway and is subject to continuing heavy use for recreational and commercial boat traffic. Despite the presence of some noteworthy values, this portion of the river does not possess the outstandingly remarkable values to qualify for designation.

6. The North Fork of the Loxahatchee River from its headwaters in Jonathan Dickinson State Park to its confluence with the main stem of the Loxahatchee River.

There were no outstandingly remarkable values noted on the North Fork and it does not qualify for designation.



IV

CHAPTER IV

ALTERNATIVES, INCLUDING THE PROPOSED ACTION

Study reports will include an examination of alternatives. Each alternative is to be developed into a conceptual plan identifying the proposed administering agency or agencies; showing the classification of the river or river segments; delineating a generalized river area boundary; describing proposed acquisition and development and setting forth broad management objectives and strategies. The alternative plans are to be evaluated and compared according to the National Environmental Policy Act.

Three alternative plans for the Loxahatchee River were developed and evaluated by the National Park Service in cooperation with State and local governments. The general public participated throughout the planning process in public meetings, public planning workshops, and by numerous contacts and letters.

The proposed action (Alternative A) involves designation of the 7.5 mile eligible segment as a State-administered component of the National Wild and Scenic Rivers System. The State of Florida would be responsible for adopting a program of action to provide permanent protection for the natural and cultural qualities of the designated segment as well as determining the precise boundaries of the wild and scenic river area. Alternative B also involves designation of the 7.5-mile eligible segment as a State-administered component of the National System but provides additional protection beyond the concept plan described in the proposed action. Alternative C represents a no-action plan. These plans are described below. Other plans considered but eliminated during the study process are also discussed.

ALTERNATIVE A/PROPOSED ACTION

The study of the Loxahatchee River found the segment from Palm Beach County's Riverbend Park to river mile 6 qualified for inclusion in the National Wild and Scenic Rivers System. To protect the free-flowing condition and outstandingly remarkable values of this segment of the river and to protect other values of the river system as a whole it is proposed that:

--The 7.5-mile segment of the Loxahatchee River from Riverbend Park to river mile 6 at the southern boundary of Jonathan Dickinson State Park be included as a State-administered component of the National Wild and Scenic Rivers System.

--The State of Florida adopt a program of action to provide permanent protection for the natural and cultural qualities of the designated segment of the Loxahatchee River. Protective measures may include, but are not limited to, fee acquisition, scenic easements or other than fee acquisition, zoning, construction and setback lines, building permits, or other similar land use controls enacted in cooperation with local jurisdictions.

--The Loxahatchee Wild and Scenic River area be jointly managed by the State of Florida and the County of Palm Beach.

--An intergovernmental cooperative agreement be concluded between the State of Florida and the County of Palm Beach concerning the management of the Loxahatchee River.

--Federal agencies be required to support in their planning and projects the preservation of the Loxahatchee River as a national wild and scenic river.

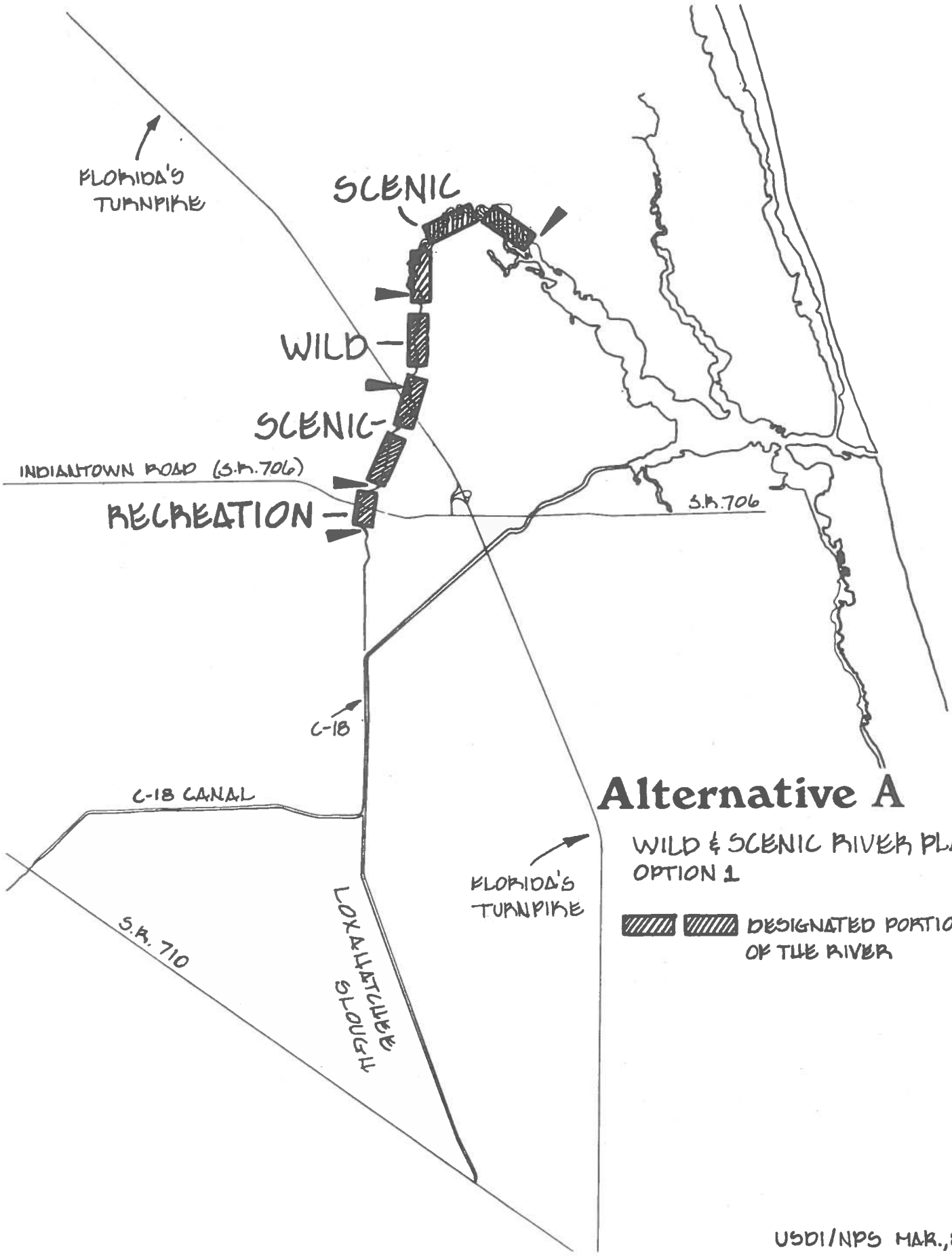
Wild and Scenic River Designation

National wild and scenic river designation represents a federal commitment to the protection of a river and its immediate environment. The specific benefits provided by national designation include the following:

1. Protection from federally licensed or funded water resources projects, such as dams, water conduits, reservoirs, powerhouses, transmission lines and other project works. Section 7 of the Wild and Scenic Rivers Act addresses the question of water resource development restrictions and project impacts on stream segments being studied for potential inclusion or which are already included in the National Wild and Scenic Rivers System. It states that no federally assisted, licensed, or aided projects will be permitted on rivers in the National System if they "invade the area" or "unreasonably diminish" values which are present.
2. Added incentive to improve water quality through cooperative efforts by the managing agency, the Secretary of the Interior, the State water pollution control agencies and the Environmental Protection Agency (Section 11(c) of P.L. 90-542).
3. Higher priority for financing from existing federal programs for compatible projects which improve the river and its watershed.

For the Loxahatchee River, wild and scenic river designation would provide an additional layer of protection in which the Federal Government takes a special interest in preservation of the river. This federal interest could provide the "added leverage" needed in dealing with certain problems resulting from growth in the Jupiter-Tequesta area, and the expansion of recreational facilities.

There are two methods by which the Loxahatchee River could be included as a State-administered component of the National Wild and Scenic Rivers System:



FLORIDA'S
TURNPIKE

SCENIC

WILD

SCENIC

INDIANTOWN ROAD (S.R. 706)

RECREATION

S.R. 706

C-18

C-18 CANAL

S.R. 710

LOXLEY
SLOUGH

FLORIDA'S
TURNPIKE

Alternative A

WILD & SCENIC RIVER PLAN,
OPTION 1

  DESIGNATED PORTION
OF THE RIVER

1. By application of the State of Florida to the Secretary of the Interior pursuant to Section 2(a)(ii) of the National Wild and Scenic Rivers Act.

Under this option the values which cause the river to be qualified for the National System must be assured of permanent protection by or pursuant to State statute. To gain designation the Governor of the State of Florida must forward a letter to the Secretary of the Interior requesting that the river be added to the National System and documenting the State's program of action to provide permanent protection for the river.

2. By an Act of Congress designating the river as a State-administered component of the National System.

Under this option the Congress would designate the river and assign the responsibilities for administering the river to the State of Florida. The State of Florida would be required to prepare a detailed management plan for the area within 1 year following designation.

Concept Plan

In addition to determining the segments of the Loxahatchee River eligible for inclusion in the National Wild and Scenic Rivers System the National Park Service has developed, in cooperation with State and local governments, a conceptual management plan (see concept plan map).

Under the proposed concept plan the County of Palm Beach will manage the designated segment of the river within the county's Riverbend Park. The State of Florida's Department of Natural Resources will manage the designated segment downstream of Indiantown Road, including the portion of the river within the Jonathan Dickinson State Park. The State of Florida would continue its current management practices protecting the natural and cultural resources associated with the Loxahatchee River within the Jonathan Dickinson State Park.

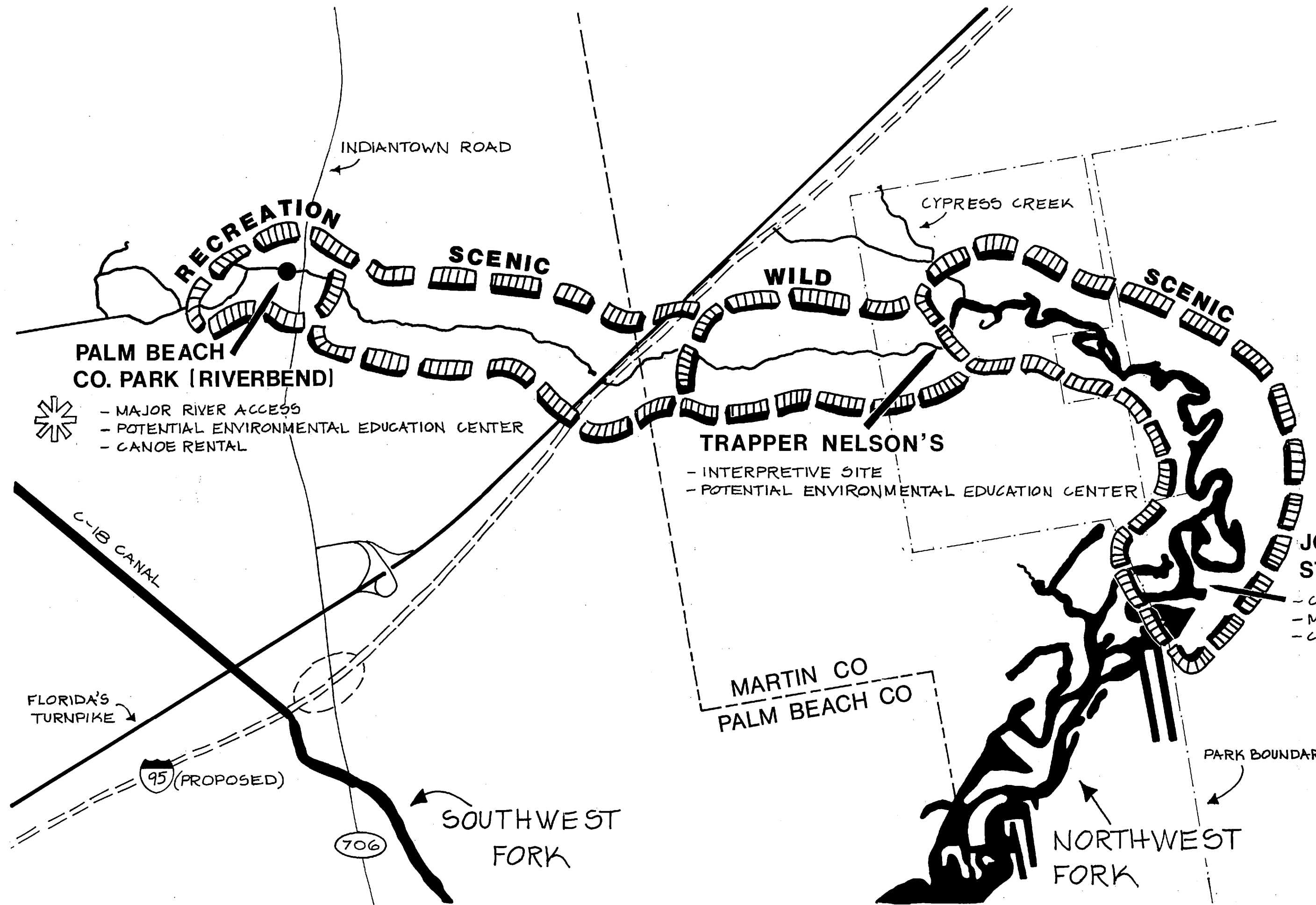
A key component of the proposed concept plan is the protection of the river corridor between Riverbend Park and Jonathan Dickinson State Park. This reach of the river is currently in private ownership and the landowners have proven to be excellent stewards of the river. However, future growth and development in the area may adversely affect this segment of the river. In addition, increased recreational use of the river could result in greater problems with trespass and vandalism on private land. Therefore, the State of Florida should adopt a program of action to adequately protect and manage the outstandingly remarkable values of this segment of the river in the future. Based on an analysis of the floodplain and vegetation patterns a minimum of 350 acres require protection. The State, in its management planning, may opt for a larger area to ensure adequate protection for the river. Protective devices may include, but are not limited to, fee

*The way this
to write this:*


LOXAHATCHEE RIVER
wild and scenic river study

CONCEPT PLAN

 MAJOR RIVER ACCESS



**PALM BEACH
CO. PARK (RIVERBEND)**

-  - MAJOR RIVER ACCESS
- POTENTIAL ENVIRONMENTAL EDUCATION CENTER
- CANOE RENTAL

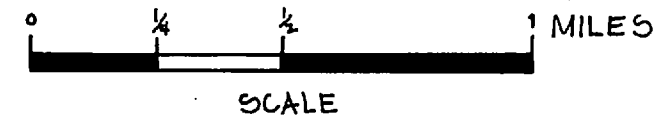
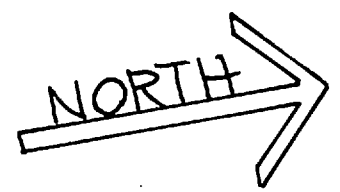
TRAPPER NELSON'S

- INTERPRETIVE SITE
- POTENTIAL ENVIRONMENTAL EDUCATION CENTER

**JONATHAN DICKINSON
STATE PARK**

-  - CONCESSION AREA
- MAJOR ACCESS SITE
- CANOE RENTAL

MARTIN CO
PALM BEACH CO



acquisition, scenic easements or other than fee acquisition, zoning, construction setback lines, building permits, or other similar land use controls enacted in cooperation with local jurisdictions. There is also a potential for donation along portions of the river currently owned by private foundations.

Under the proposal the State of Florida will be responsible for management of the river corridor between Riverbend Park and Jonathan Dickinson State Park. The protected area will be fenced to prevent domestic livestock from feeding on vegetation along the river's edge and prevent recreationists from crossing over to private property. The Florida Park Service professional staff will use appropriate management techniques to prevent invasion of exotic plant species into the river corridor. Florida Park Service rangers will patrol the area to ensure the safety of visitors and to enforce regulations. A gravel road to provide emergency access to the corridor will be provided along the higher ground adjacent to the river swamp corridor.

There are two access sites provided for in the concept plan. The county's Riverbend Park would provide the major canoe access point for those wishing to float the river from Indiantown Road downstream to the Jonathan Dickinson State Park. The county is currently developing a concept plan for Riverbend Park which includes a canoe rental facility and an environmental education center. The National Park Service has coordinated its planning efforts with Palm Beach County. Development, operation and maintenance costs for Riverbend will be included in ongoing Palm Beach County programs.

The Federal Government will have a continuing role in protection of the river pursuant to Section 7(a) of the Wild and Scenic Rivers Act. Under provisions of the Act any federally funded, assisted or permitted actions which have an adverse effect on the values of the designated segment of the river are prohibited. The Federal Government could also play a role through the continued involvement of the National Park Service in planning for the National Wild and Scenic River Area.

Management Guidelines. Items to be addressed in an eventual joint management plan should include site protection and restoration, recreation site and riverbank maintenance agreements, user regulations and limits, user permits, fire protection, river patrols and law enforcement, plant disease and insect protection, endangered species protection, search and rescue provisions, and road signs. As part of management planning, provisions should be made for coordination among river management agencies and for management plan revision. During the cooperative management planning process, a detailed boundary description should be prepared for the river area included in the National System.

Cultural resources currently listed or eligible for inclusion on the National Register of Historic Places are entitled to the protection afforded by Section 106 of the National Historic Preservation Act. In addition, Section 2(b) of Executive Order 11593 directs federal agencies to exercise caution to ensure cultural resources that may qualify for inclusion on the National Register are not inadvertently transferred, sold, destroyed, or

substantially altered pending a determination as to whether or not they are eligible for the register. Accordingly, the management plans for the area should be developed in consultation with the Florida Historic Preservation Officer and the Advisory Council on Historic Preservation.

Cost of Proposal. Costs for each of the Alternatives are provided in Table 1. These figures reflect the maximum costs which could be incurred in a comprehensive protection program which would include fee acquisition, scenic easements or other than fee acquisition, zoning, construction setback lines, building permits or other similar land use controls enacted in cooperation with local jurisdictions.

Development costs to the State of Florida are estimated at \$61,000. This includes costs of road construction, fencing, survey of boundaries, and additional staff equipment. Development costs to the County of Palm Beach are estimated at \$110,000 in addition to projected development costs for Riverbend Park. This additional development cost is primarily for additional parking capacity.

Annual operation and maintenance costs are not expected to increase greatly over the cost of operation and maintenance of Palm Beach County's Riverbend Park and the Jonathan Dickinson State Park without the proposal. The increased annual cost to the State Park will be approximately \$11,300. The increased annual costs to the county will be approximately \$30,000.

Cooperative Agreements. To provide a basis for joint management of the Loxahatchee River as a component of the National Wild and Scenic Rivers System a cooperative agreement should be concluded between the managing agencies. It is also essential to conclude cooperative agreements with agencies responsible for water management to assure adequate water quality and water quantity to the Northwest Fork.

Mitigating Measures Included in the Proposed Action. National designation of the Loxahatchee River will increase public awareness of the resource. Increased use could damage the fragile ecological values associated with the river. A key component of the proposed management strategy is the establishment and enforcement of a carrying capacity to limited use. Management by the Florida Department of Natural Resources and the County of Palm Beach of the designated portion of the river will increase public safety by regulating access and use.

ALTERNATIVE B/STATE-ADMINISTERED WILD AND SCENIC RIVER WITH SLOUGH PROTECTION

The State of Florida, in cooperation with local governments, may choose to go beyond the proposed plan and provide additional segment protection for the Loxahatchee River.

Under this alternative:

--The 7.5-mile segment of the Loxahatchee River from Riverbend Park to river mile 6 at the southern boundary of Jonathan Dickinson State Park would be

included as a State-administered component of the National Wild and Scenic Rivers System.

- The State of Florida would adopt a program of action to provide permanent protection for the natural and cultural qualities of the designated segment of the Loxahatchee River. Protective measures may include, but are not limited to, fee acquisition, scenic easements or other than fee acquisition, zoning, construction and setback lines, building permits, or other similar land use controls enacted in cooperation with local jurisdictions.
- An extensive program of environmental protection and restoration would be undertaken by the State of Florida in cooperation with local agencies to restore the Loxahatchee Slough.
- The Loxahatchee Wild and Scenic River area would be jointly managed by the State of Florida and the County of Palm Beach.
- An intergovernmental cooperative agreement would be concluded between the the State of Florida and the County of Palm Beach concerning the management of the Loxahatchee River.
- Federal agencies would be required to support in their planning and projects the preservation of the Loxahatchee River as a national wild and scenic river.

Under this alternative a maximum width corridor would be acquired between Indiantown Road and the Jonathan Dickinson State Park. This corridor would include some 700 acres of riparian land. This would double the area proposed for protection in the corridor under the proposed alternative. In addition, the canal area between the existing C-18 Canal System and Riverbend Park would be acquired and allowed to return to a more natural riverine character.

Under this alternative the estuary would be managed and patrolled by the Florida Department of Natural Resources. Wake and speed regulations would be put in place to protect the manatee and other river values.

Recent water shortages in south Florida due to drought conditions point up the water management problems of the area. The Loxahatchee River basin typifies the problems of water management in south Florida and could serve as a model for solutions based on the restoration and repair of natural systems. As was discussed in the affected environment section, the Loxahatchee Slough historically remained inundated for much of the year. Water levels rose during the rainy season and, owing to Florida's topography, drained off gradually as a shallow sheet flow during the dry season. The introduction of an extensive drainage system has resulted in surface waters being transported rapidly to tide. The period of surface flooding has been reduced to 3 or 4 months, about half the length of the historic hydroperiod. As a result, the recharge of shallow aquifers has been decreased and groundwater levels have been lowered.

This alternative entails an extensive program of environmental protection and restoration. A key component of the plan is the backfilling of a segment of the C-18 canal and a partial restoration of the natural water levels and sheet flow of the Loxahatchee Slough. In reflooding the Slough, water supply reservoirs could be created to augment municipal water supply sources in the area. Flood control protection for adjacent development areas would be reduced. However, the construction of levees around the inundated area could provide sufficient flood protection.

Restoration of the Loxahatchee Slough offers direct benefits in terms of municipal water supply for Palm Beach County. The creation of water supply reservoirs in the Slough and the increase in groundwater levels and the recharge of aquifers will help to meet the municipal water needs of the area.

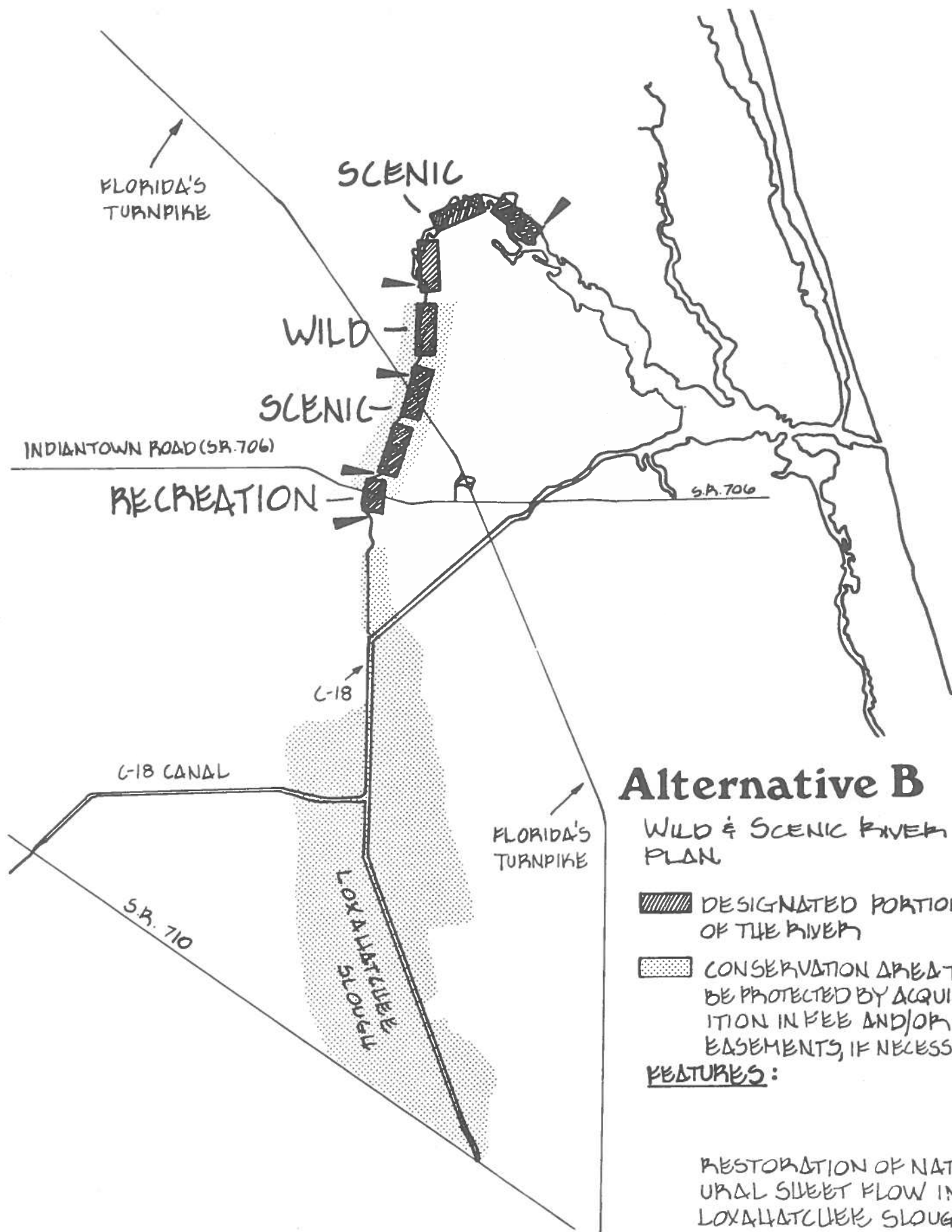
The natural environment will also benefit from the repair of natural systems. The Northwest Fork of the Loxahatchee River would be assured a constant level of freshwater flow throughout the year. Water quality of flows from the Slough would be improved due to the increased contact time with vegetation.

For the purpose of this analysis, the implementation of the Loxahatchee Slough restoration component of the plan is carried out through State action. However, this aspect of the plan could be implemented in a separate program by local government, water management authorities, and private interests.

It is the finding of this study that restoration of the Loxahatchee Slough is not the most cost effective or necessarily the best means of maximizing environmental quality on the Northwest Fork. However, the restoration of the Slough has broader potential regional benefits and could be implemented through the concerted efforts of State and local governments and private interests.



Current studies of the Loxahatchee River basin and the C-18 canal by the U.S. Army Corps of Engineers and the U.S. Geological Survey will provide river managers with more complete information concerning water management in the basin. The results of these studies and planning efforts by the South Florida water Management District may provide more cost effective measures for management of the C-18 Canal that will meet the objective of maximizing environmental quality on the Northwest Fork and providing adequate flood protection.

Costs of Alternative B. Total land acquisition costs to the State of Florida under this alternative are estimated at \$19,100,000 based on estimated values in 1981. These costs could be substantially less depending on the extent to which purchase of easements, transfer of development rights, zoning or other methods of protection are used. Total development costs of \$10,000,000 reflect the extensive water resource engineering works such as levees and culverts involved in this alternative. Operation and maintenance costs can not be determined without further study and consideration of this alternative.



Alternative B

WILD & SCENIC RIVERS PLAN

-  DESIGNATED PORTION OF THE RIVER
 -  CONSERVATION AREA TO BE PROTECTED BY ACQUISITION IN FEE AND/OR EASEMENTS, IF NECESSARY
- FEATURES:

RESTORATION OF NATURAL SWEET FLOW IN LOXAHATCHEE SLOUGH

ALTERNATIVE C/NO ACTION

This alternative characterizes the future conditions expected to occur in the study area without a formal management plan or designation as a wild and scenic river. The existing trend plan assumes that growth and development in the river basin study area will occur as projected in existing local and regional plans. The river would not be included in the National Wild and Scenic Rivers System but would continue to receive protection from local, State, and Federal Government agencies.

Local governments and special districts are presently attempting to protect the Loxahatchee River corridor in a number of ways. Palm Beach County is pioneering the use of the Transfer of Development Rights concept to protect environmentally sensitive areas in the Loxahatchee Slough. Both Martin and Palm Beach Counties have zoning ordinances which limit densities in the river corridor. The Jupiter Inlet District is exploring with other local governments a dock ordinance to limit dock construction on the river. Palm Beach County is currently developing Riverbend Park, south of Indiantown Road, as a multi-use recreation area. Facilities for camping, canoeing, picnicing, softball, and an interpretive center are being developed there.

Federal agencies which may play a role in the protection of the Loxahatchee River include the Environmental Protection Agency, the Fish and Wildlife Service, and the U.S. Army Corps of Engineers. The Corps of Engineers is considering the environmental integrity of the Loxahatchee River in its present study of the C-18 Canal system. Federal agencies, however, would be required to give greater consideration to the protection of the river under the provisions of the Wild and Scenic Rivers Act.

The Loxahatchee is currently protected under Section 7(b) of the Wild and Scenic Rivers Act.

PLANS DROPPED FROM CONSIDERATION

During the planning process several alternatives were developed which were eventually dropped from further consideration as candidate plans.

1. Early in the planning process consideration was given to a federal role in acquiring land along the Loxahatchee River. The river would have been included as a jointly administrated component of the National Wild and Scenic Rivers System. Lands acquired by the Federal Government would have been conveyed to the State of Florida for management with no direct federal role in management. This plan was considered infeasible because of budgetary considerations and current federal land acquisition policies.

2. A plan was developed to maximize national economic development through various public works projects utilizing the resources of the river basin. These projects included (a) expanding levees and installation of drainage works in order to drain additional wetland areas not now suitable for

residential development; (b) dredging Jupiter Inlet to form a navigable harbor suitable for ocean going craft; and (c) construction of small low-sill hydroelectric power facilities. None of these projects, however, have been proposed either by local interests or by government agencies. The overwhelming interest expressed is for the preservation of the river rather than its further development.

3. Other alternatives were considered which included the North Fork, the estuary, and the segment of the river above Riverbend. The North Fork was found to be ineligible and no public support surfaced for its designation as a national wild and scenic river. The segments above river mile 13.5 and below river mile 6 were also found to be ineligible for inclusion in the National System. However, these areas are important to the river system as a whole. These areas should come under special management by federal, State and local governments to support the preservation of the segment proposed for designation.

TABLE 1 - SUMMARY OF ALTERNATIVES

PLAN ELEMENTS	Alternative A	Alternative B	Alternative C																
Segment Designation	Designation by the Secretary of the Interior pursuant to application by the State of Florida or designation by the Congress of a 7.5-mile segment	Same as Alternative A.	No Designation																
Classification	<table border="0"> <tr> <td>Wild</td> <td>1.35</td> </tr> <tr> <td>Scenic</td> <td>5.65</td> </tr> <tr> <td>Recreational</td> <td>0.5</td> </tr> <tr> <td>TOTAL</td> <td>7.5 mi.</td> </tr> </table>	Wild	1.35	Scenic	5.65	Recreational	0.5	TOTAL	7.5 mi.	<table border="0"> <tr> <td>Wild</td> <td>1.35</td> </tr> <tr> <td>Scenic</td> <td>5.65</td> </tr> <tr> <td>Recreational</td> <td>0.5</td> </tr> <tr> <td>TOTAL</td> <td>7.5 mi.</td> </tr> </table>	Wild	1.35	Scenic	5.65	Recreational	0.5	TOTAL	7.5 mi.	N/A
Wild	1.35																		
Scenic	5.65																		
Recreational	0.5																		
TOTAL	7.5 mi.																		
Wild	1.35																		
Scenic	5.65																		
Recreational	0.5																		
TOTAL	7.5 mi.																		
Managing Agency	State of Florida County of Palm Beach	State of Florida County of Palm Beach	N/A																
Land Acquired for Preservation and Recreation Use	Preservation of 350 acres in the river corridor between Indiantown Road and Jonathan Dickinson State Park through a combination of transfer of development rights, donation, zoning or other land use regulations, purchase of easements, and purchase of fee title. For purpose of cost analysis 250 acres are assumed to be purchased in fee and 100 acres less than fee by the State of Florida. Final costs could be substantially lower.	Acquisition by the State of Florida of 700 acres in fee in the river corridor between Indiantown Road and Jonathan Dickinson State Park. Preservation of 6,889 acres in the Loxahatchee Slough through a combination of transfer of development rights, purchase of easements, and purchase of fee title. For purpose of cost analysis, lands in the Loxahatchee Slough are assumed to be purchased in fee by the State of Florida. Final costs could be substantially lower.	N/A																

TABLE 1 - SUMMARY OF ALTERNATIVES

PLAN ELEMENTS	Alternative A	Alternative B	Alternative C
Recreational use and access	No additional access. Use of segment from Indiantown Road to Jonathan Dickinson State Park restricted based on carrying capacity established by State and county. National designation will increase visitation to Palm Beach County's Riverbend Park and Jonathan Dickinson State Park.	Same as Alternative A.	No Additional Access
Projected Visitation			
Jonathan Dickinson State Park			
1985	276,000*	276,000*	172,000
1990	200,000	200,000	191,000
2000	230,000	230,000	210,000
Riverbend Park			
1985	83,000*	83,400*	62,600
1990	70,000	70,000	69,500
2000	80,000	80,000	73,000

Assumes initial surge of visitation resulting from designation followed by a drop and resumption of normal rate of increase.

TABLE 1 - SUMMARY OF ALTERNATIVES

	Alternative A	Alternative B	Alternative C
<u>SOCIOECONOMIC IMPACTS</u>			
<u>Costs</u>			
<u>State of Florida</u>			
Acquisition	2,860,000	19,100,000	No acquisition
Development	61,000	10,000,000	No development
Operation and Maintenance (Annual)	11,300	Undetermined	-----
<u>Local</u>			
Development of Riverbend Park	110,000	110,000	No additional development
Operation and Maintenance (Annual)	25,000	25,000	-----

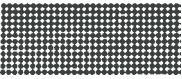
TABLE 1 - SUMMARY OF ALTERNATIVES

	Alternative A	Alternative B	Alternative C
SOCIOECONOMIC IMPACTS			
Impact On Land Use	Approximately 350 acres along the Northwest Fork from Indiantown Road to Jonathan Dickinson State Park would be protected to prevent land use changes in the river corridor.	Approximately 750 acres along the Northwest Fork from Indiantown Road to Jonathan Dickinson State Park would be protected to prevent land use changes in the river corridor. Approximately 6,889 acres in the Loxahatchee Slough would be protected.	Existing local land use regulations permit 1 unit/5acres. Current area growth trends indicate that the general area will be developed and approximately 70 residential structures built in the river corridor between Indiantown Road and the Jonathan Dickinson State Park.

TABLE 1 - SUMMARY OF ALTERNATIVES

IMPACTS ON NATURAL RESOURCES	Alternative A	Alternative B	Alternative C
Vegetation and wildlife habitat	<p>Preservation of the river corridor between Indiantown Road and Jonathan Dickinson State Park and enforcement of a carrying capacity will minimize impacts from visitor use and encroaching development.</p> <p>Management by Florida DNR professional staff will prevent invasion by exotic plants and allow controlled burning and other management practices to maintain existing vegetative community.</p>	<p>Provides additional protection through a wider corridor and restoration of the Loxahatchee Slough.</p>	<p>Increased residential development and unrestricted recreation use may result in destruction of vegetation and wildlife habitat.</p>
Water Quality	<p>Wild and Scenic River designation would provide an additional incentive for preservation of water quality through careful development and special management of the C-18 canal system to provide adequate flows of fresh water to the Northwest Fork.</p>	<p>Same as Alternative A</p>	<p>No effect</p>

4-116



CHAPTER V

AFFECTED ENVIRONMENT

Regional Location, Access and Existing Development

The Loxahatchee River is located in Palm Beach and Martin Counties in southeast Florida (see location map). The river system is comprised of three forks: the Southwest Fork, the North Fork, and the Northwest Fork. The Southwest Fork of the Loxahatchee River was not included in the legislation authorizing the river for study. The Southwest Fork is almost entirely channelized and serves as the main outlet for the C-18 Canal System. The North Fork rises in the Jonathan Dickinson State Park and flows in a southerly direction to its confluence with the main channel of the river near the Village of Tequesta. The Northwest Fork rises in the Loxahatchee Slough and flows in a northerly direction towards the Jonathan Dickinson State Park and then turns in a southerly direction. Here the Northwest Fork becomes the main channel of the river and is joined first by the Southwest Fork and then by the North Fork.

Public road access to the vicinity of the river is provided by the Florida Turnpike, U.S. 1, A1A, and State Road 706 (also known as Indiantown Road). Present plans call for linking existing segments of Interstate 95 and crossing the Loxahatchee River adjacent to the present Florida Turnpike crossing. The Florida Turnpike crossing and the proposed I-95 crossing are limited access highways and do not provide direct access to the river. Other access to the Northwest Fork between river mile 13 and river mile 6 includes a few unimproved dirt roads between State Road 706 (Indiantown Road) and the Florida Turnpike as well as public access roads within Jonathan Dickinson State Park. There is an unimproved road to the Trapper Nelson's interpretive site at river mile 10 within the Jonathan Dickinson State Park but it is not open to the public.

Below river mile 6 to Jupiter Inlet the shoreline of the Loxahatchee River is entirely developed. Numerous residential streets provide continuous access to this section of the Loxahatchee River. Existing development along the river includes the Village of Tequesta and the Town of Jupiter.

Description of the River Corridor

The Northwest Fork of the Loxahatchee River originates in the Loxahatchee Slough in an area where surface flows have been dramatically altered by an extensive network of drainage canals and levees. From its origin to river mile 13.5, the Northwest Fork has been straightened and channelized and receives its flow from a series of smaller canals and drainage ditches.

The river's natural meander pattern begins at approximately river mile 13.5, however, this segment has been channelized in the past. Palm Beach County has purchased a 187-acre tract along this segment of the river to develop a passive recreation area named Riverbend Park.



The Loxahatchee River Rises in the Loxahatchee Slough



The C-18 Canal System Drains the Loxahatchee Slough



River Mile 14.5 - The Loxahatchee River (left) Flow is Augmented by the C-18 Canal System (right) Culvert Diversion



River Mile 14 - From its Origin to River Mile 13.5 the Northwest Fork Receives its Flow From a Series of Smaller Canals and Drainage Ditches



River Mile 13.5 - Palm Beach County has Purchased a 187-Acre Site Along the Loxahatchee River at Indiantown Road. The County Removed an Existing Trailer Park and Plans to Develop the Site as a Passive Recreation Park Focused on the River



River Mile 13 - Indiantown Road Presently Serves as an Undeveloped Launching Site for Canoeists. Downstream of the Indiantown Road Bridge the Canoeist Enters a Cypress River-Swamp Community.



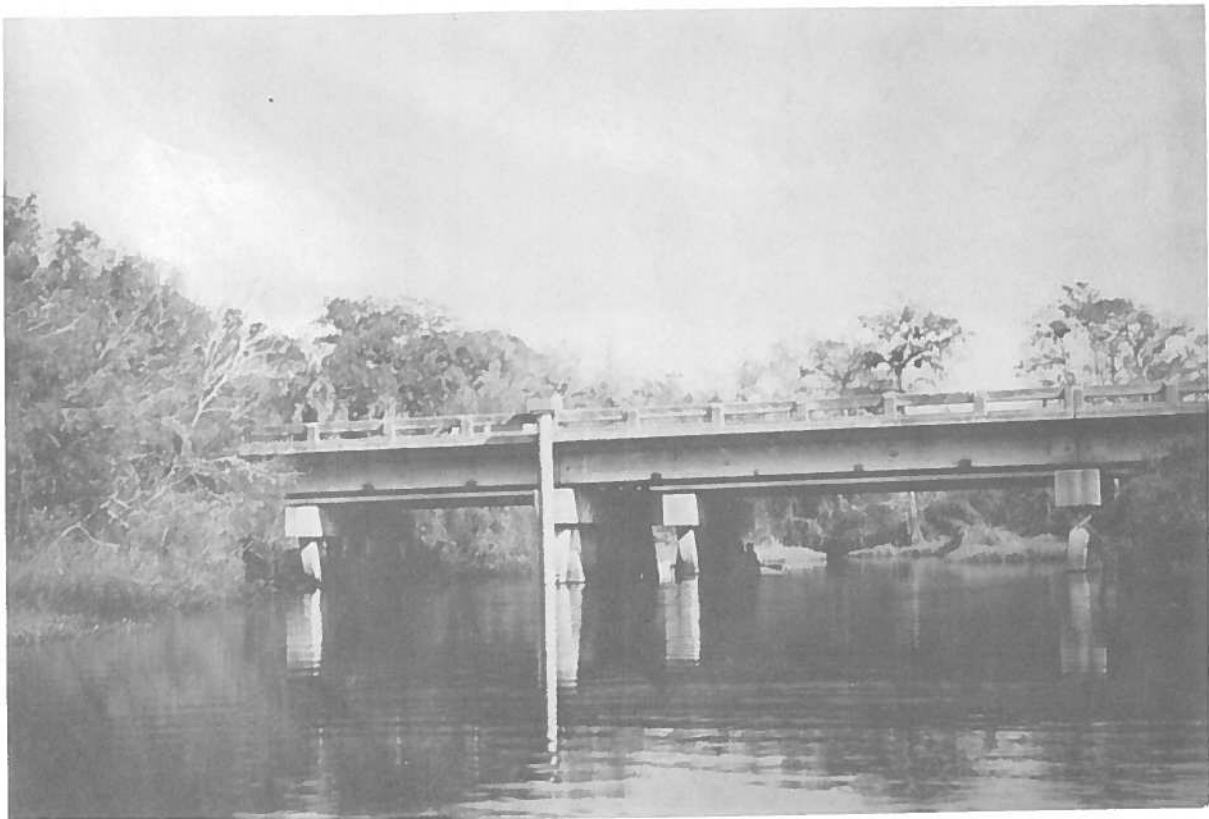
River Mile 12.5 - Bald Cypress Trees Tower Overhead and Provide a Canopy Over the River



River Mile 12 - Species Diversity in the Understory is High Due to the Overlap of Tropical and Temperate Communities in the Loxahatchee River Area



The Most Mature Cypress Range From 300 - 500 Years of Age



River Mile 11.5 - The First Major Intrusion on the Natural Scene is the Florida Turnpike Highway Crossing



River Mile 11 - Beyond the Florida Turnpike the Canoeist is Once Again in a Pristine Cypress River Swamp Environment





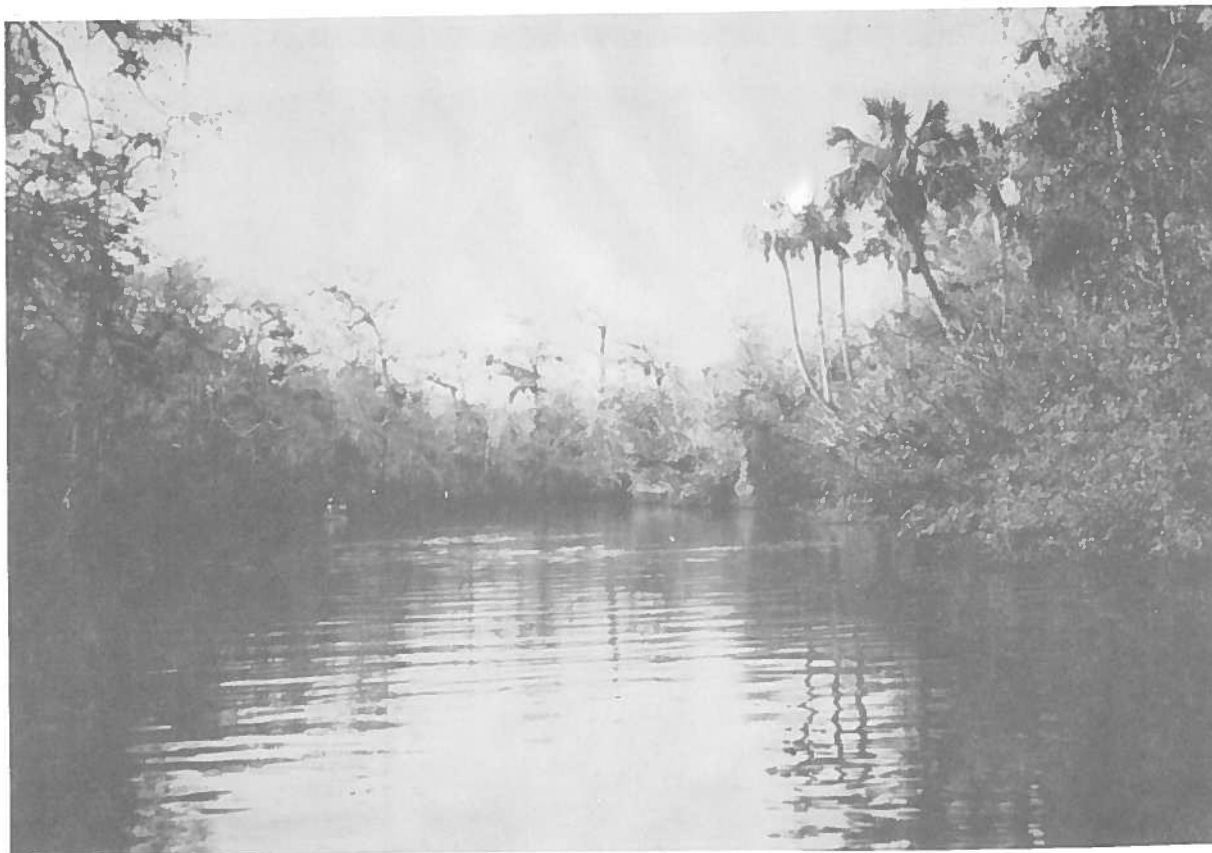
River Mile 10 - Trapper Nelson's, a Remote Homestead, is Managed by Jonathan Dickinson State Park as an Interpretive Site. Below Trapper Nelson's the River Becomes Wider and is no Longer Canopied.



River Mile 10 - Public Access to Trapper Nelson's is Provided by the "Loxahatchee Queen" Tour Boat.



River Mile 9 - Downstream of Trapper Nelson's Mangroves Dominate the River's Edge and Most of the Cypress Trees are Dead.



River Mile 9.5 - Below Trapper Nelson's the First Mangroves Appear and Most Cypress Trees Appear Stressed



River Mile 8 - Within the Jonathan Dickinson State Park the Loxahatchee River Remains Undeveloped. Residential Development Dominates the River Edge Downstream of the State Park.



River Mile 1 - The Estuary Near Jupiter Inlet is Highly Developed. This Portion of the River is a Segment of the Intracoastal Waterway.



River Mile 0 - The Loxahatchee River Flows Into the Atlantic Ocean at Jupiter Inlet.

Below State Road 706 (Indiantown Road) the river remains in a largely natural condition. Presently canoeists using the river gain access to the river at the Indiantown Road bridge. There is no developed canoe launching site available or a parking area at this site. Presently cars park along the side of the road to gain canoe access to the river. The County of Palm Beach is planning to develop a canoe launching site and provide adequate parking in Riverbend Park. The concept plan for the park calls for a concessionaire to provide canoe rentals.

Downstream of the Indiantown Road bridge the canoeist enters a cypress river-swamp community. The channel is still narrow at the point and its sinuous, meandering course offers the canoeist a challenging and interesting journey through the largely pristine cypress river swamp. Bald cypress (Taxodium distichum) trees in this reach of the river tower overhead and provide a canopy over the river. The most mature of these trees range from 300-500 years. Species diversity in the understory is high due to the overlapping of tropical and temperate vegetation communities in the Loxahatchee River area. There are several small cabins along this reach of the river but these do not constitute a major intrusion on the natural scene. The land use beyond the river-swamp vegetation corridor is primarily agriculture but little evidence of this is visible from the river. Occasionally cattle wander close to the river and feed on the lush vegetation there or are heard beyond the tree line. A small run of the river private dam requires portaging of canoes at times of low flow.

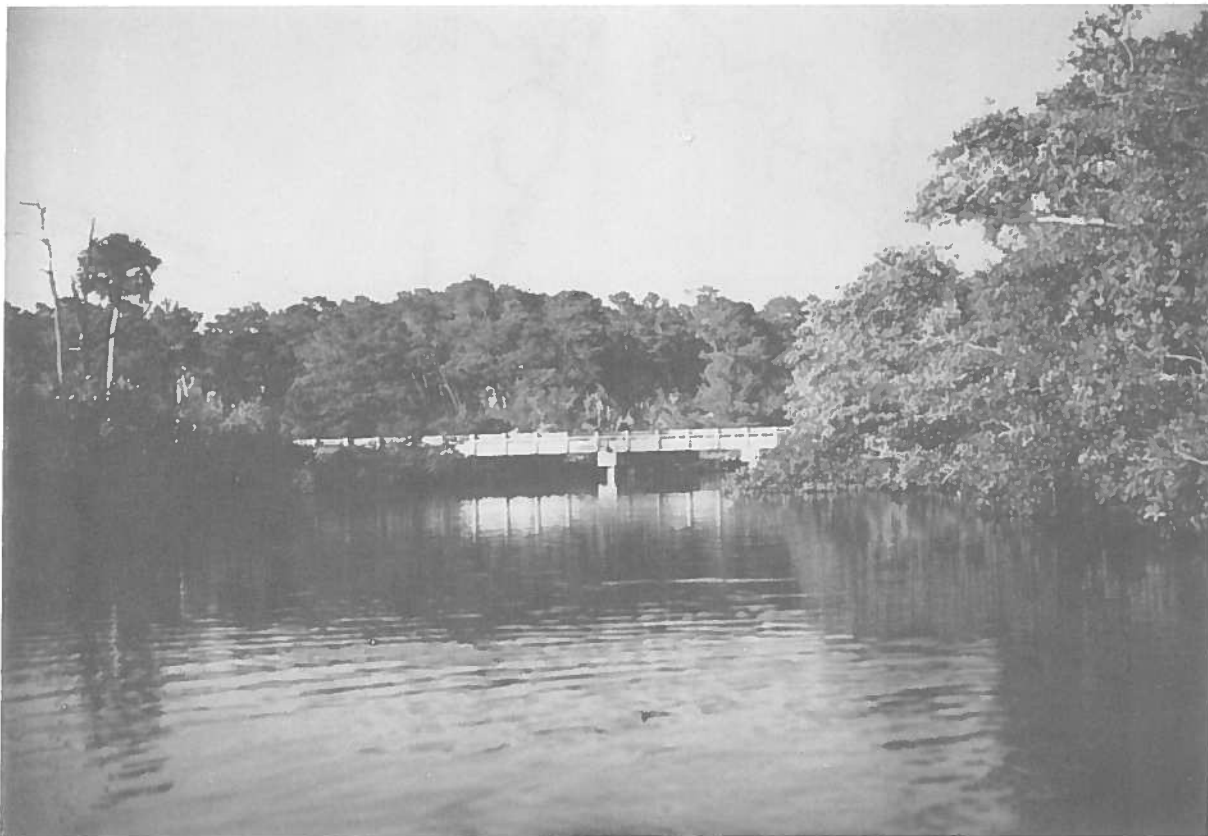
The first major intrusion on the natural scene is the Florida Turnpike crossing at approximately river mile 11.5. The proposed alignment of I-95 linking existing segments in Martin County and Palm Beach County, will cross the Loxahatchee River adjacent to the Florida Turnpike. Due to concerns about preservation of the river, the proposed I-95 bridge crossing has been designed to closely abut the existing highway in order to minimize impacts on the river.

The river turns in a northwesterly direction beyond the Florida Turnpike crossing and once again the canoeist is in a pristine cypress river-swamp environment. However, the sound of the Florida Turnpike intrudes on the wilderness experience of the visitor and it is expected that the noise levels will increase with the addition of I-95. The river enters Jonathan Dickinson State Park at river mile 10.25. There are no significant man-made intrusions between the Florida Turnpike and Trapper Nelson's. The Jonathan Dickinson State Park manages Trapper Nelson's, an early resident's homesite at river mile 10, as an interpretive center which is accessible to the public only by boat.

Below Trapper Nelson's the character of the Northwest Fork changes dramatically. The river widens and there is no longer a closed canopy overhead. The main channel of the river is joined by Cypress Creek, Kitching Creek, and several smaller tributaries swelling the volume of the river. The first mangroves begin to appear in this reach of the river. Cypress trees close to Trapper Nelson's appear stressed, presumably by salt water. Further downstream, mangroves dominate the river's edge and most of the Cypress trees are dead. The Jonathan Dickinson State Park concession area provides access to this reach of the river. Canoe rentals are



The North Fork Originates in the Jonathan Dickinson State Park and Flows South through a Developed Area



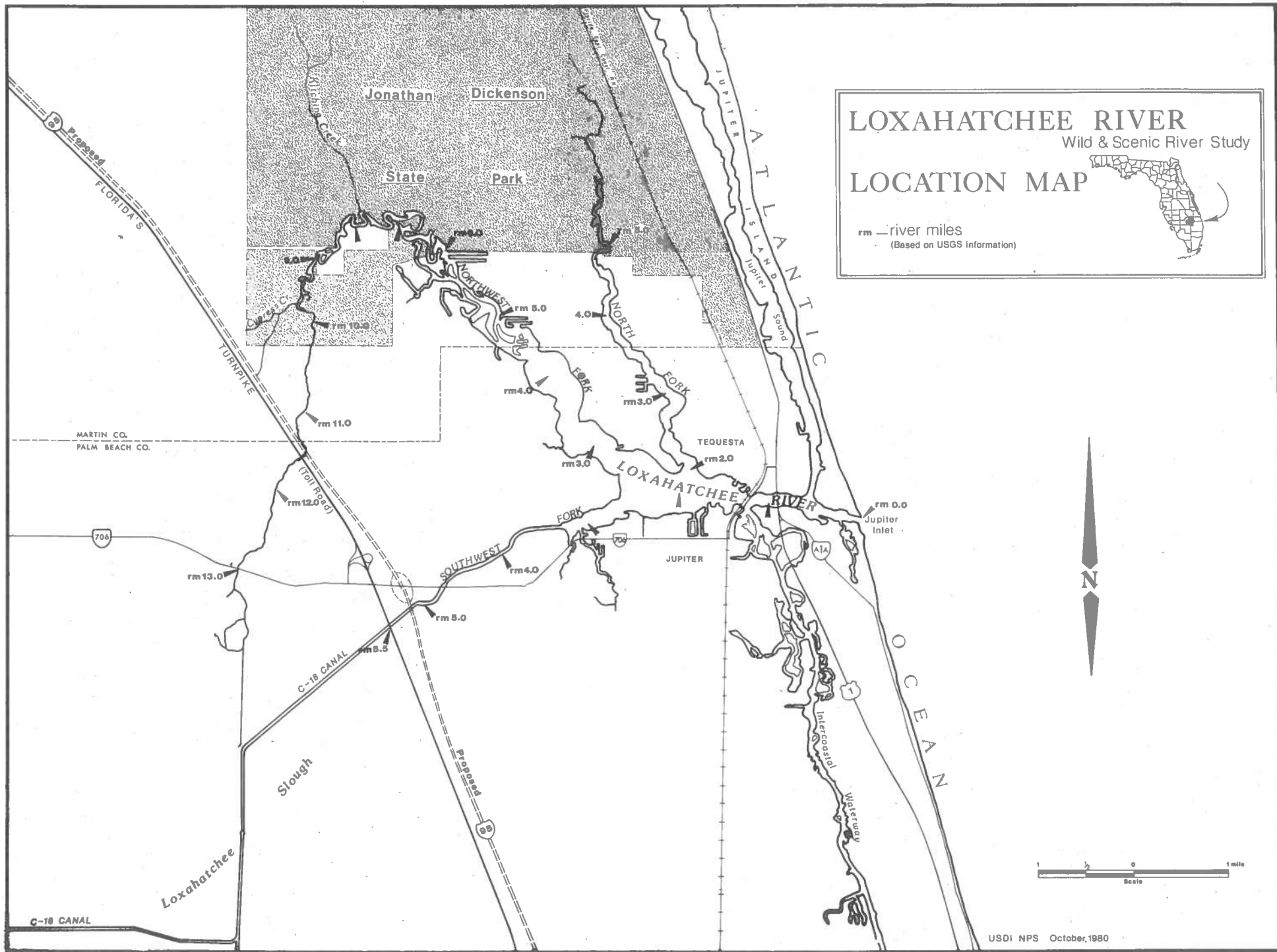
Mangroves Dominate the North Fork's River Banks Well Within the State Park Boundary

LOXAHATCHEE RIVER

Wild & Scenic River Study

LOCATION MAP

rm — river miles
(Based on USGS information)





USDI NPS October, 1980

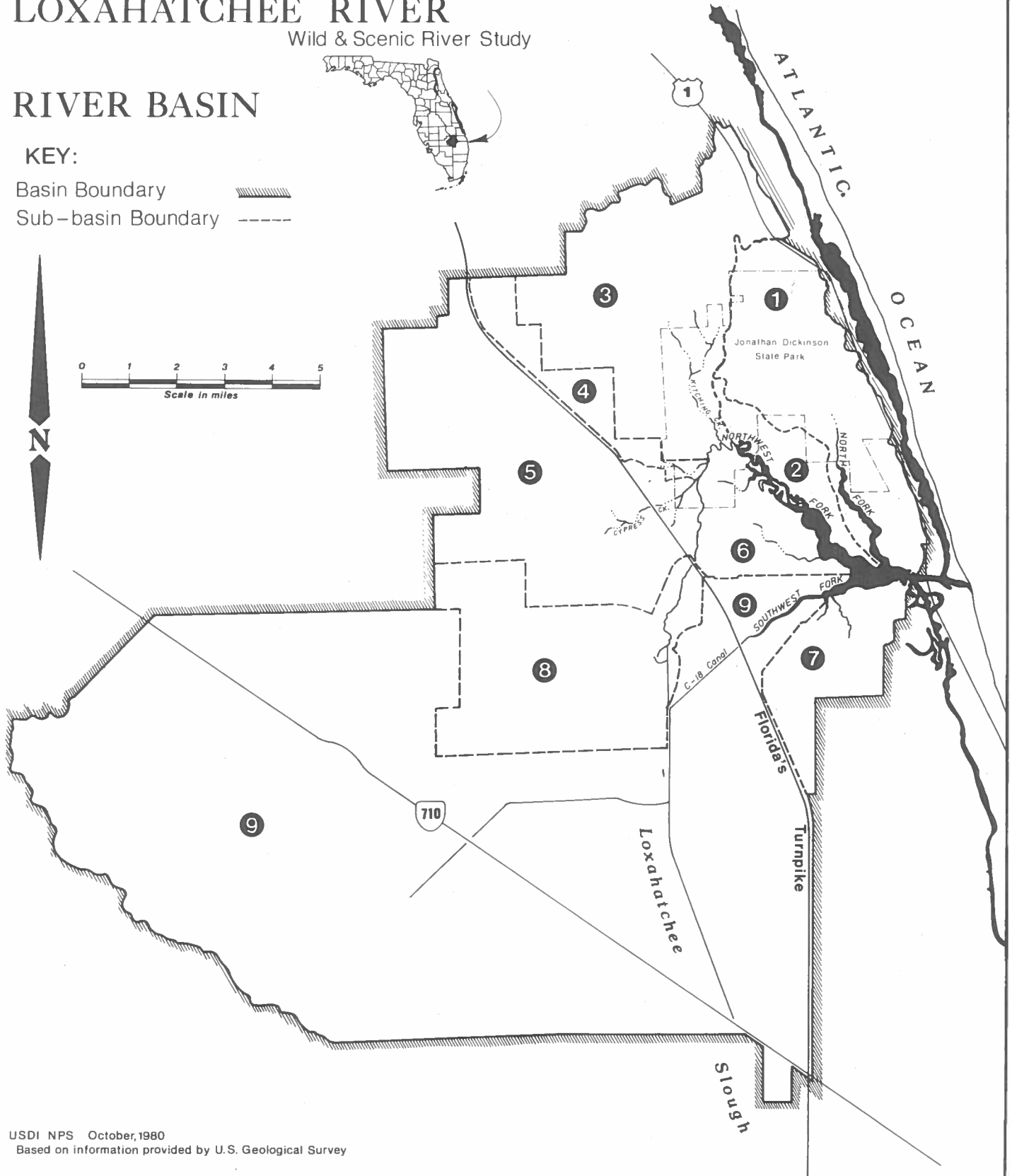
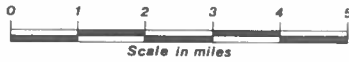
LOXAHATCHEE RIVER

Wild & Scenic River Study

RIVER BASIN

KEY:

Basin Boundary 
Sub-basin Boundary 



available here and most canoeists who float the Northwest Fork take their canoes out of the water at this point.

At approximately river mile six the river leaves the Jonathan Dickinson State Park. Once outside the park the banks of the river are almost entirely developed with single family homes for the entire length of the river to Jupiter Inlet. There are several bridge crossings including U.S. 1 and A1A. The presence of the lighthouse near the Intracoastal Waterway provides a scenic glimpse into the past in an otherwise densely developed area.

The North Fork of the Loxahatchee River originates in a pond cypress (*Taxodium ascendens*) strand, a marshy area in the Jonathan Dickinson State Park. The freshwater environment soon gives way to more saline conditions and mangroves dominate the North Fork's river banks well within the State park boundary. The North Fork of the Loxahatchee River estuary is shallower and receives less freshwater inflow than the Northwest Fork. As a result, the North Fork has a more uniform, brackish salinity than the Northwest Fork.

The North Fork flows in a southerly direction and leaves the State park near the County Line Road bridge crossing. The 3-mile segment between this bridge crossing and the confluence with the main channel of the river is almost entirely developed with private single family residences. There are several small canals in this reach of the river as well as the Tequesta Drive bridge over the North Fork.

The River Basin

The Loxahatchee River basin covers approximately 210 square miles (see River Basin map). The basin is comprised of nine subbasins that range in size from 3 square miles to 117 square-miles. Man's activities since the turn of the century have changed dramatically the natural drainage patterns of the basin. Drainage canals, roadways, railroads, residential developments and other man-made features now define much of the basin and its subbasins.

Historically the basin covered about 270 square miles and was defined entirely by the natural landforms of the region. In the past 50 years the natural hydrologic regime of this watershed has been altered by drainage activities associated with real estate and agricultural development. Much of the area has been transected by canals and levees with the area's water table being lowered because of these activities. The Northwest Fork of the Loxahatchee River originally received surface flows from the Loxahatchee Slough and Hungryland Slough. The construction of canals for drainage and flood protection has diverted this surface flow to the Southwest Fork of the river.

The drainage and diversion of the headwaters of the Loxahatchee River has caused changes in the flow characteristics of the Northwest Fork. River flow rates are now more varied, since there is no large storage area to supply water during drought periods. As a result, brackish water can move further upstream from the estuary area than it did historically. This has

contributed to stress and eventual death of the cypress trees which added to the scenic qualities of the Loxahatchee River in Jonathan Dickinson State Park. In place of the freshwater cypress dominated river forest community, saline tolerant red mangroves have invaded and succeeded the original cypress forest along the lower reaches of the river.

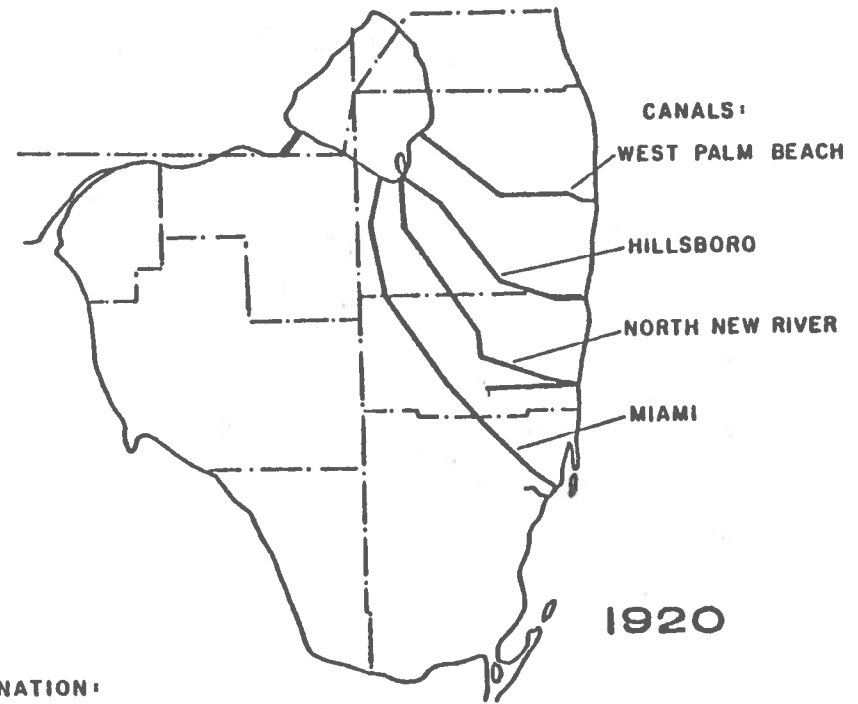
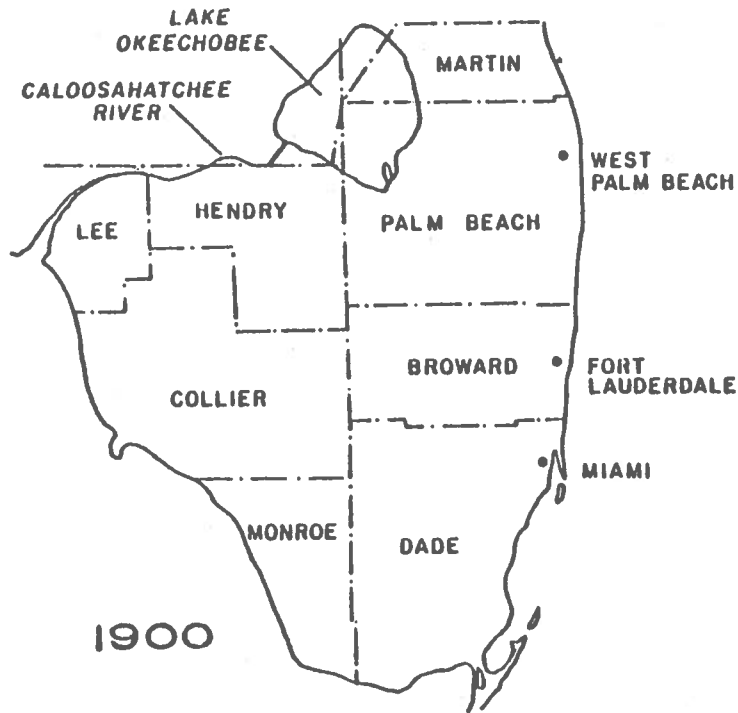
Water Management in South Florida. Despite extensive modifications in the Loxahatchee River basin, the natural condition of the Northwest Fork of the system makes it relatively unique in south Florida as a natural waterway. Prior to 1900, large portions of the native south Florida environment were inundated during the wet season. Development of the area dictated mechanisms for removal of this water. This resulted in the construction of an extensive drainage system.

The first major canal in south Florida was begun in 1882. This was the Caloosahatchee Canal, a flood control and drainage canal connecting Lake Okeechobee with the Caloosahatchee River to the west (Map 3a). In 1905, the Florida Legislature established the Everglades Drainage District and by 1921 the Miami, North New River, Hillsboro, and West Palm Beach canals had been constructed for land drainage and "reclamation" purposes. Between 1916 and 1924, the St. Lucie Canal was excavated to regulate the water level of Lake Okeechobee. The first levee along the south and east sides of Lake Okeechobee was completed in 1924, but it was destroyed by the hurricanes of 1926 and 1928. A replacement, Hoover Dike, was in place by 1938 and has subsequently been enlarged several times. Since the 1920's numerous other major and minor canals have been built, and the natural pre-1900 drainage patterns in the Everglades and along the east coast of south Florida have been thoroughly distorted. These canals have also lowered ground water levels by several feet in southeast Florida.

After the Central and Southern Florida Flood Control District was formed in 1949, one of their initial major projects was the enclosure of conservation areas. This project began in the early 1950's and the impoundments were essentially completed by 1967. These large reservoirs are manipulated through a complex system of canals and control structures to remove and/or temporarily store flood water during the wet season and then disburse it during the dry season.

C-18 Canal System. Canal 18 was constructed in 1958 with a design capacity of 30 percent standard project flood to provide increased drainage and flood protection for adjacent agricultural lands, manufacturing firms, and the J.W. Corbett Wildlife Management Area. The system supplanted and augmented earlier drainage works. Canal 18 and Structure 46, the control structure at the mouth of the canal, drain a 106 square mile area into the Southwest Fork of the Loxahatchee River. The C-18 drainage area includes the northern section of the Loxahatchee Slough and lands west of the Slough. This area comprises over 50 percent of the total Loxahatchee River basin.

The alteration of the historic water flows in the Loxahatchee River basin has endangered a unique and scenic river ecosystem. Historically the Loxahatchee Slough remained inundated for much of the year. Water levels rose during the rainy season and, owing to Florida's flat topography, drained off gradually as a shallow sheet flow during the dry season. The introduction of an extensive drainage system has resulted in surface waters

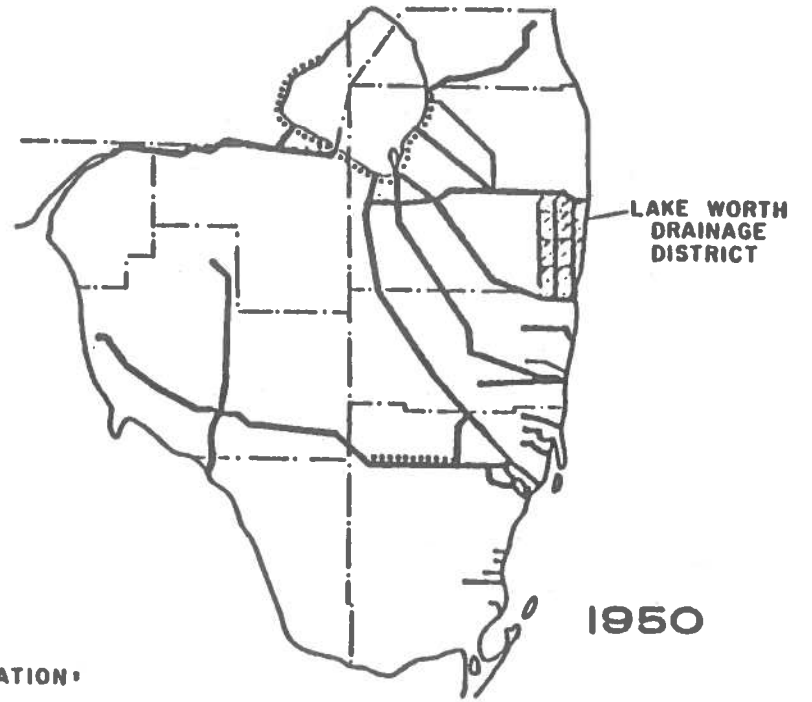
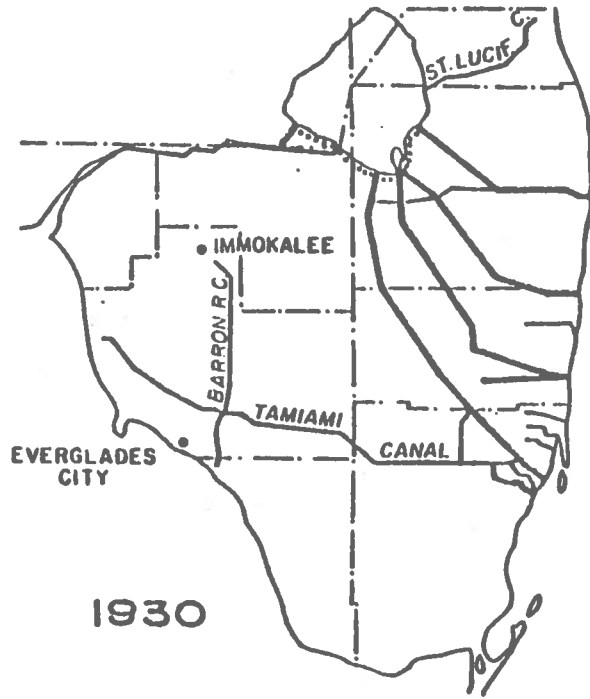


EXPLANATION:
 — MAJOR CANAL EXISTING AT GIVEN DATE
 - - - NEW CANAL SINCE LAST DATE

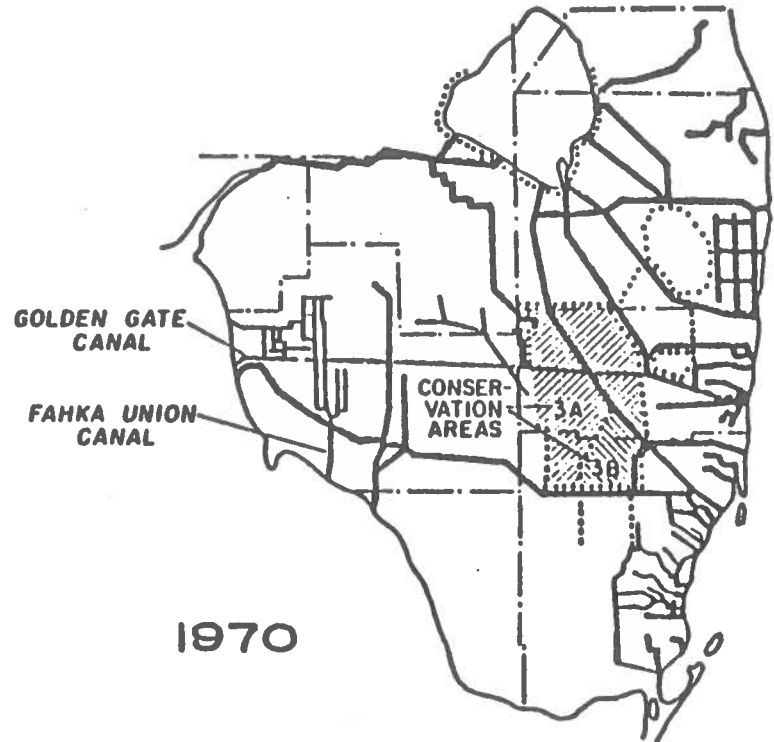
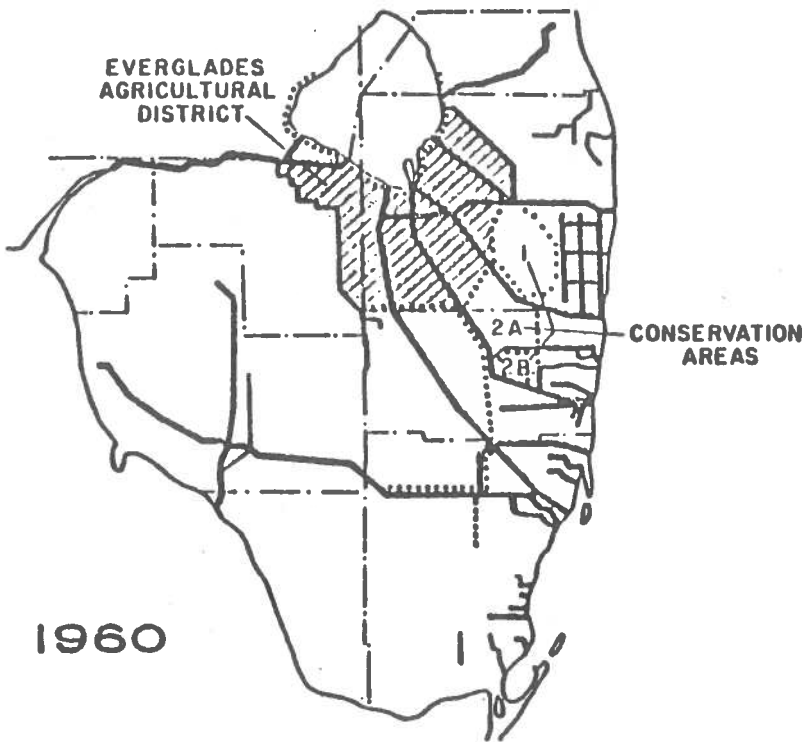
Historical Development of the South Florida Canal System

Source: Klein et al, 1975

5-19



- EXPLANATION:**
- MAJOR CANAL EXISTING AT GIVEN DATE
 - - -** NEW CANAL SINCE LAST DATE
 -** MAJOR LEVEE



- EXPLANATION:
- MAJOR CANAL EXISTING AT GIVEN DATE
 - NEW CANAL SINCE LAST DATE
 - MAJOR LEVEE

being transported rapidly to tide. The period of surface flooding has been reduced to only three or four months, about half the length of the historic hydroperiod. As a result, the recharge of shallow aquifers has been decreased and ground water levels have been lowered.

The C-18 Canal System was modified in 1972 by the placement of a culvert to divert up to 50 cubic feet per second (cfs) of water to the Northwest Fork of the Loxahatchee River. The South Florida Water Management District, which is responsible for the management of the C-18 Canal System, agreed with the Loxahatchee Environmental Control District (ENCON) and the South Indian River Drainage District to provide this additional freshwater input to the Northwest Fork in order to preserve the reach of the river from Indiantown Road to the junction of Cypress Creek. The additional flow was intended to prevent the migration of saltwater further upstream. Discharge through the culvert has averaged 21 cfs resulting in the diversion of millions of gallons from C-18 to the Northwest Fork to benefit the freshwater vegetation community in the middle reach of the river. However, since Canal 18 has little storage capacity, no deliveries can be made during drought conditions. The modification of the original project, while successful to a great extent, has not achieved the goal of a guaranteed minimum flow to protect the freshwater character of the Northwest Fork.

Another concern is focused on the kind and amount of suspended sediment transported to the Loxahatchee River estuary by Canal 18. There is concern that the settling of this sediment in the estuary might smother benthic life and alter circulation patterns. To answer this and other questions related to water resources, water quality, estuarine mechanics, and the estuarine environment, the U.S. Geological Survey is currently conducting a comprehensive investigation of the river system. The results of this study will provide managers of the river with baseline data for making management decisions.

The U.S. Army Corps of Engineers is currently conducting a study of the C-18 Canal System to formulate plans for water supply, flood control, and maintenance of environmental quality in the river basin. The condition of the Northwest Fork is an important consideration in the ongoing Corps of Engineers study.

Water Quality

Existing water quality data which has been collected at various stations on the Loxahatchee River is not comprehensive enough to conclusively assess water quality; however, data currently available indicate water quality is good. Currently water quality information is being collected by the U.S. Geological Survey, the U.S. Army Corps of Engineers, and other agencies. Upon completion, these studies will provide much more in depth information than is currently available.

Water quality in portions of national wild and scenic rivers that are designated "wild" must meet or exceed federal criteria or federally approved state standards for aesthetics, for propagation of fish and wildlife normally adapted to the habitat of the river, and for primary contact recreation (swimming) except where exceeded by natural background

TABLE 2

WATER QUALITY CRITERIA AND FIELD SAMPLING DATA

Federal/State Criteria		Loxahatchee River				
		River Bend Park River Mile 13	Cypress Creek River Mile 9.5	Kitching Creek River Mile 8	Jonathan Dickinson State Park River Mile 6.5	At North Fork Bridge
Fecal Coliforms 14/100 ml. maximum Federal 14/100 ml. maximum State	<u>Mean</u>	145.0	No Date Available	10.0	193.0	15.16
	<u>Maximum</u>	145.0		10.0	350.0	46.0
	<u>Minimum</u>	145.0		10.0	49.0	2.0
Temperature (centigrade) 29.6°C maximum	<u>Mean</u>	25.6	21.0	21.6	22.0	23.0
	<u>Maximum</u>	27.0	21.0	22.2	22.0	23.0
	<u>Minimum</u>	25.0	21.0	21.0	22.0	23.0
Dissolved Oxygen Minimum 5mg/L Federal Minimum 4mg/L State	<u>Mean</u>	5.2	6.8	7.8	9.4	9.4
	<u>Maximum</u>	6.0	6.8	7.8	9.4	9.4
	<u>Minimum</u>	4.3	6.8	7.8	9.4	9.4
pH 6.5 - 8.5pH units	<u>Mean</u>	7.5	7.0	7.3	7.4	7.75
	<u>Maximum</u>	8.1	7.0	7.4	7.5	7.8
	<u>Minimum</u>	6.2	7.0	7.2	7.3	7.7

Source: EPA STORET Data File, May 1979; Florida Administrative Code, Chapter 17.3

conditions. "Scenic" and "recreational" portions of a designated river have no water quality criteria prescribed in the National Wild and Scenic Rivers Act. However, the Federal Water Pollution Control Act Amendments of 1972 have established a national goal that all waters of the United States be made fishable and swimmable by July 1, 1983.

Water quality criteria established by the Environmental Protection Agency in 1972 include parameters such as aesthetics, microbiological considerations, temperature, pH, and dissolved oxygen (DO) levels. The State of Florida's water quality criteria, established by Chapter 17.3 of the Florida Administrative Codes, is stricter in the areas of fecal coliforms and dissolved oxygen levels. To meet aesthetic criteria the river must be free from matter that settles to form objectionable deposits, floating debris, oil or scum, substances producing objectionable color, odor, taste or turbidity, and substances or conditions producing undesirable aquatic life. Failure to meet the established water quality criteria will not preclude a river from scenic or recreational classification at the time of the study, provided a water quality improvement plan exists or is being developed.

A major water quality concern is the interrelationship of the C-18 canal and the Loxahatchee River. The natural hydroperiod of the river has been altered, resulting in threats to the unique and scenic qualities of the river. When drought or low rainfall conditions exist and the water supply from the C-18 to the Loxahatchee River is diminished, brackish water moves further upstream.

A second major water quality concern is the high level of fecal coliforms in portions of the river. This is partially due to runoff from agricultural and pasture lands and the lack of sufficient movement of water.

Criteria for Class II waters (Florida Administrative Code, Chapter 17.3):

<u>Parameter</u>	<u>Limitation</u>
Bacteriological Quality (total coliform bacteria and fecal coliform bacteria)	The medium coliform MPN (most probable number) of water shall not exceed seventy (70) per one hundred (100) milliliters, and not more than ten (10) percent of the samples shall exceed an MPN of two hundred and thirty (230) per one hundred (100) milliliters. The fecal coliform bacteria level shall not exceed a median value of fourteen (14) MPN per one hundred (100) milliliters with not more than ten (10) percent of the sample exceeding forty three (43) MPN per one hundred (100) milliliters.
Dissolved Oxygen (DO)	The concentration in all waters shall not average less than five (5) milligrams per liter (mg/L) in a twenty four (24) hour period and shall never be less than four (4) mg/L. Normal daily and seasonal fluctuations above these levels shall be maintained.

The Loxahatchee has been classified a Class II river. Waters under this classification are suitable for shellfish propagation or harvesting and surface water supply.

Vegetation

The first detailed account of plant communities in southeastern Florida was given by Jonathan Dickinson in 1699. He noted in his journal the presence of freshwater marsh, swamp, and mangrove communities. Modern botanists have noted the "massive deterioration" of the natural vegetation in the region due to increased urbanization and water management practices (Richardson 1977).

The Northwest Fork of the Loxahatchee River represents a last vestige of the native vegetational communities of southeast Florida. Most of the native bald cypress (*Taxodium distichum*) in southern Florida was harvested by the lumber industry by the 1930's and only isolated strands of cypress exist in places which were extensive forests. The cypress river-swamp community on the Northwest Fork of the Loxahatchee River remains largely intact from the pressures of lumbering and urban development. Many specimens along this reach of the river range from 300-500 years in age, representing an irreplaceable ecological and scenic resource.

The cypress river-swamp community of the Northwest Fork extends for a 4-mile segment along the river from Indiantown Road to approximately river mile 9. Originally extending further downriver the freshwater cypress river-swamp community has receded and a more saline tolerant mangrove community has migrated upriver due to increased saltwater intrusion from the estuary (Alexander 1975). Dead cypress trees towering amid dense mangroves along this section of the river bear witness to the former character of the river. Along tributaries of the Northwest Fork within Jonathan Dickinson State Park (Kitching Creek, Cypress Creek, and Moonshine Creek), the native cypress communities still exist.

The cypress river-swamp community along the Northwest Fork exhibits high species diversity due to the overlap of tropical and temperate zones. Along with cypress, the floodplain harbors maple, water hickory, cabbage palm, pond apple, water oak, and cocoplum. Tropical vegetation such as wild coffee, myrsine, leather fern, and cocoplum may be found along with water ash, water hickory, red bay, royal fern and buttonbush, which are considered to be examples of more northern flora. Abundant ferns, bromelads and orchids enhance the lush tropical environment of this reach of the river.

The slightly elevated areas which border the Loxahatchee River are dominated by pine. These are primarily south Florida slash pine which are widely scattered and provide very little canopy. More abundant in these areas is the saw palmetto. Also common are areas of dwarfed and gnarled scrub oak, and many herbs and grasses. Major grasses include wire grass and broom sedge. Pennyroyal, pine lily, and rabbit tobacco may be found under the shade of the pines.

Red mangroves dominate the river banks from river mile 9 to river mile 6. Below the Jonathan Dickinson State Park to the mouth of the river at Jupiter Inlet very little native vegetation remains due to residential and commercial development along the river banks.

LOXAHATCHEE RIVER

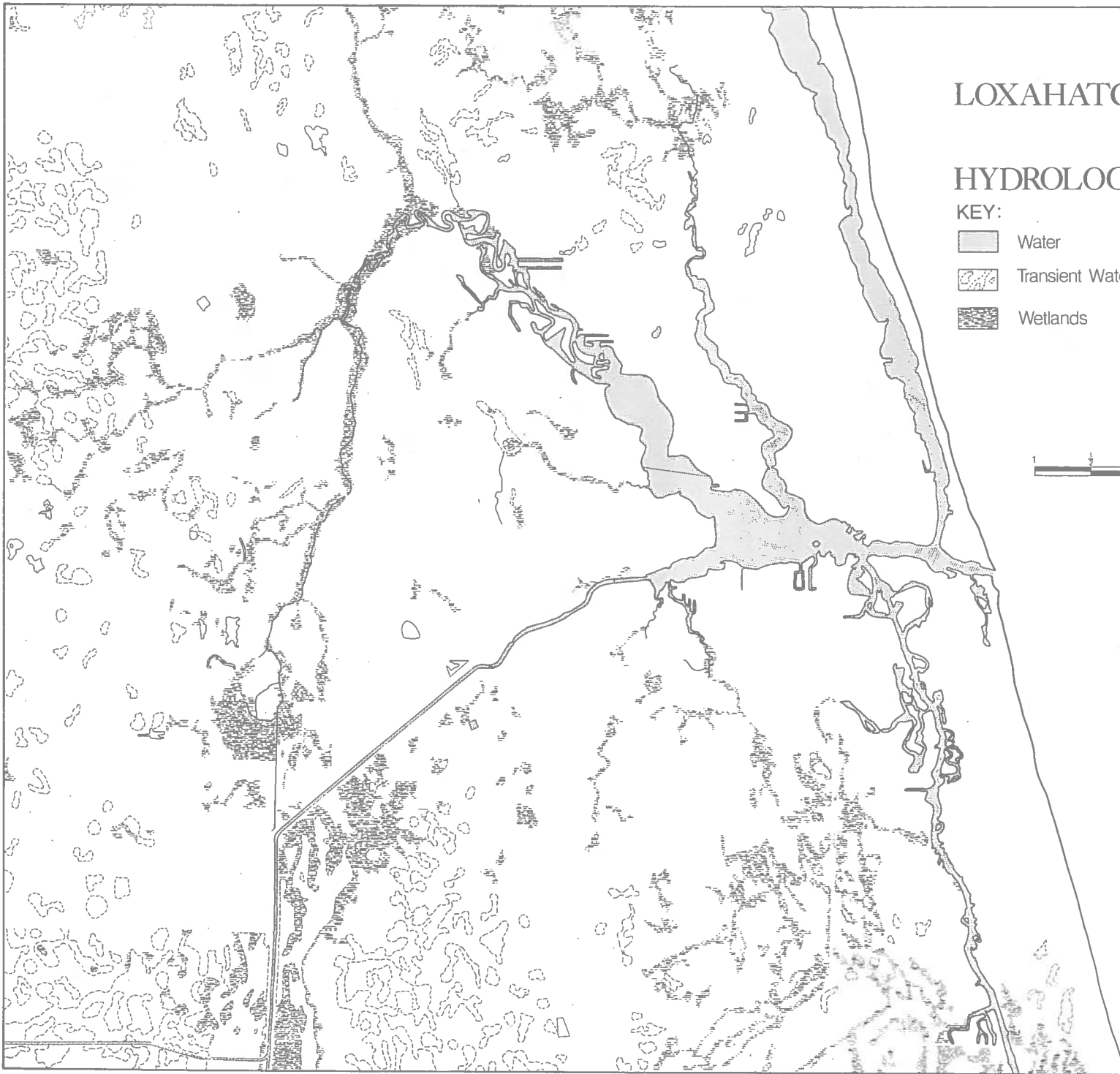
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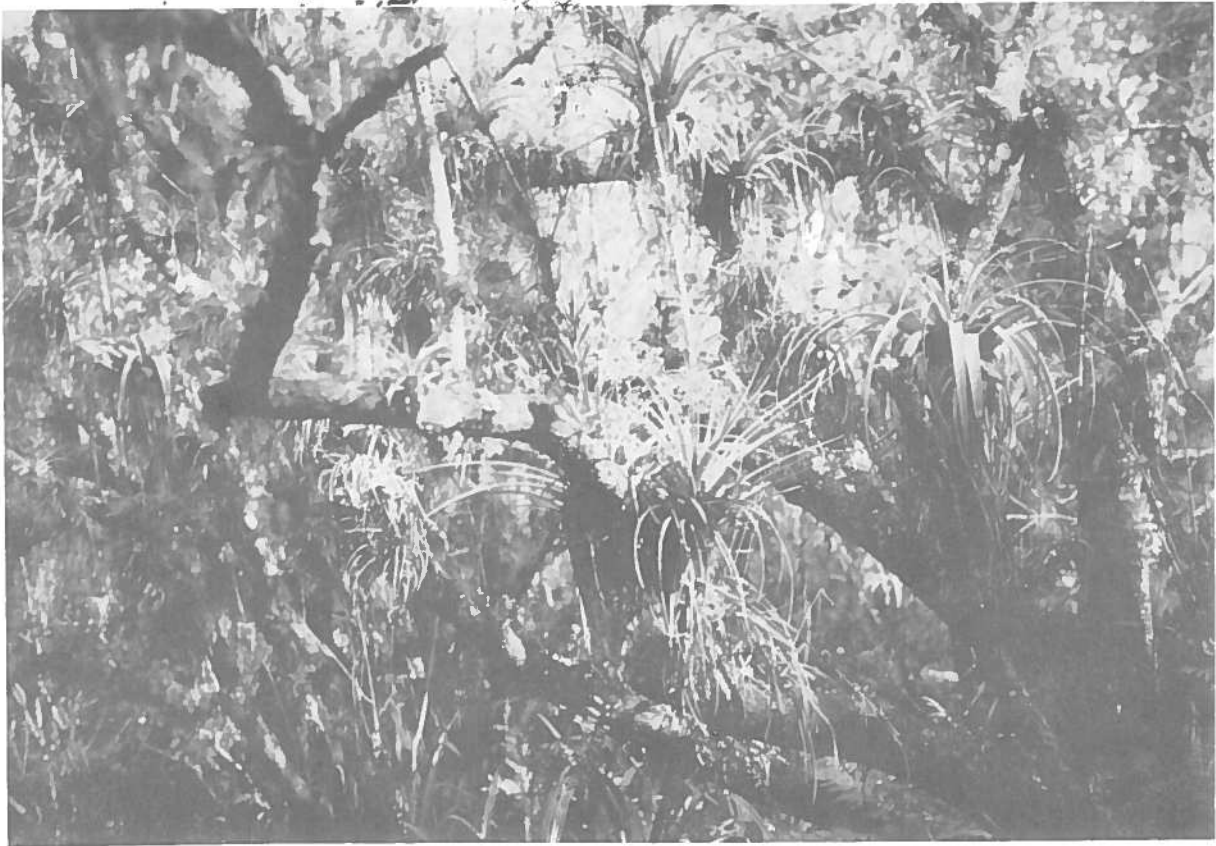


HYDROLOGY

KEY:

-  Water
-  Transient Water
-  Wetlands





Abundant Ferns, Bromeliads and Orchids Enhance the Lush Tropical Environment of this Reach of the River



The Bromeliad is Related to the Pineapple



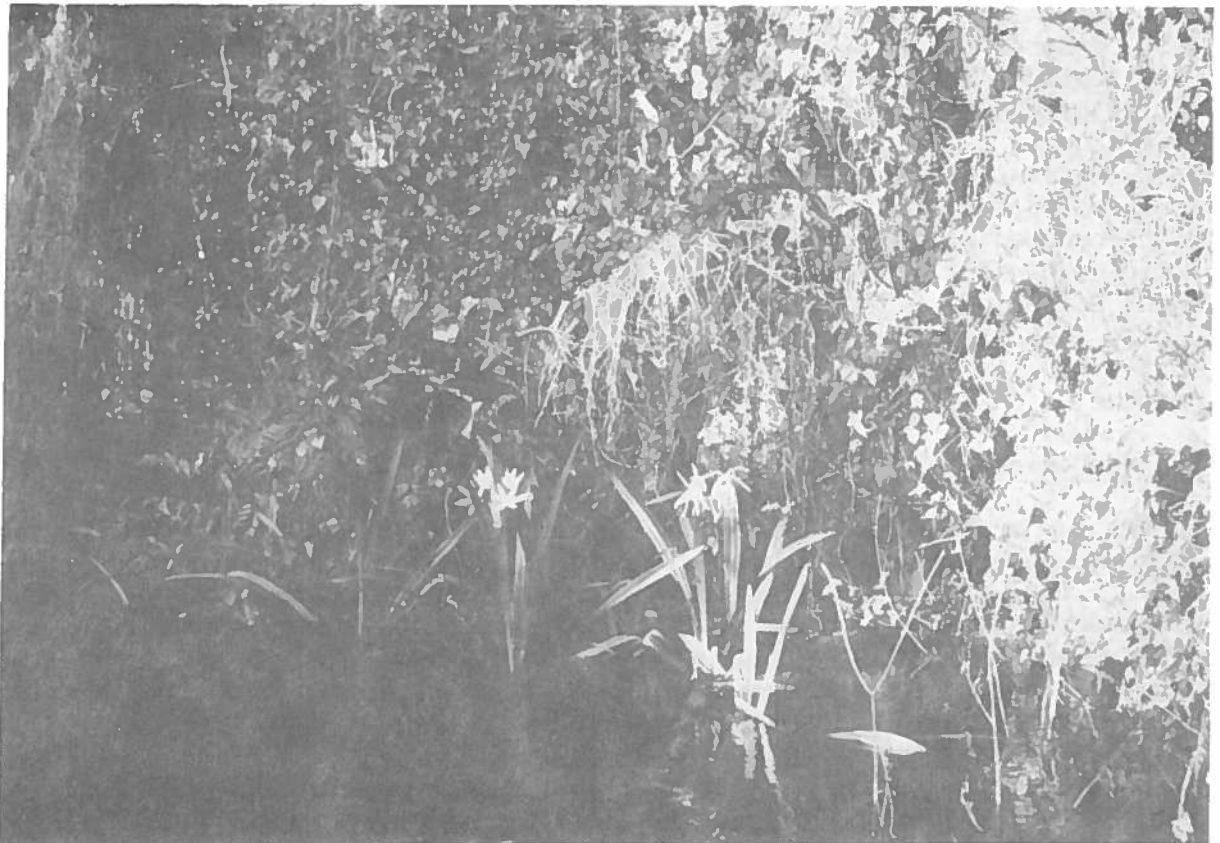
Wild Orchids



Cypress River Swamp Adjacent to the River



Strangler Fig



Crinum Lily

Fish and Wildlife

The expansiveness and diversity of habitats occurring in or adjacent to the Loxahatchee River has attracted and continues to support many species of native animals. This is apparent to the canoeist on the Northwest Fork who encounters numerous animals at the waters edge as well in the water itself. These include such common species as racoon, opposum, turtles, and an occassional deer as well as rare species such as the bald eagle, osprey, red-cockaded woodpecker and the West Indian manatee.

Two hundred sixty-seven species representing 169 genera and 78 families have been recorded in the Loxahatchee River and its estuary (Christensen, 1965). These include temperate, tropical, and pelagic gulf stream species due to location of the river in a faunal boundary area.

Certain of these species are of special concern because of their appearance on the lists compiled by the Florida Committee on Rare and Endangered Plants and Animals. These include:

Gopher Tortoise	- threatened
American Alligator	- species of special concern
Eastern Indigo Snake	- species of special concern
Wood Stork	- endangered
Red-cockaded Woodpecker	- endangered
Brown Pelican	- threatened
Osprey	- threatened
Florida Sandhill Crane	- threatened
Florida Scrub Jay	- threatened
Bald Eagle	- threatened
Little Blue Heron	- species of special concern
Great Egret	- species of special concern
Snowy Egret	- species of special concern
Louisiana Heron	- species of special concern
Black-crowned Night Heron	- species of special concern
Yellow-crowned Night Heron	- species of special concern
Least Bittern	- species of special concern
Glossy Ibis	- species of special concern
White Ibis	- species of special concern
Manatee	- threatened

Endangered and Threatened Species

Plants or animals included on the federal list of endangered species and known to occur as residents or migrants to the Loxahatchee River study area are: bald eagle (*Haliaeetus leucocephalus*), red-cockaded woodpecker (*Picoides borealis*), brown pelican (*Pelecanus*), Florida everglade kite (*Posthramus sociabilis plubeus*), eastern indigo snake (*Drymarchon corais couperi*), West Indian manatee (*Trichechus manatus*), and the American alligator (*Alligator mississippiensis*).

In addition, the entire Loxahatchee River has been designated as a critical habitat for the West Indian (or Florida) manatee by the U.S. Fish and Wildlife Service.

The National Park Service has completed a biological assessment analyzing the impacts of the proposed action on endangered and threatened species as required by the 1973 Endangered Species Act, as amended. The National Park Service concluded that the proposed actions would have beneficial effects on endangered species in the area. The U.S. Fish and Wildlife Service has concurred that the proposals will have no effect on the continued existence of listed endangered or threatened species. However, if the river is designated, the proposed State-administering agency would reevaluate effects on endangered or threatened species during development of a river management plan.

Geology

The Loxahatchee River study area is divided into three physiographic regions: the Atlantic Coastal Ridge, Eastern Flatlands, and Everglades.

The Atlantic Coastal Ridge parallels the coast and extends inland 2 to 3 miles. This is the only part of the study that has any noticeable relief or slope with elevations on the ridge ranging from 35 to 50 feet above sea level. The geological development of Florida and the eastern portions of Palm Beach and Martin Counties resulted in the shallow Anastasia rock formation which forms the backbone of the Atlantic Coastal Ridge. This formation is underlain by the Tamiami and Fort Thompson formations and the Caloosahatchee Marl.

The Eastern Flatlands lie between the Atlantic Coastal Ridge and the Everglades. Elevations in this area range from 110 to 20 feet above sea level. The area consists mostly of pine and palmetto flatwoods with numerous small ponds and shallow depressions.

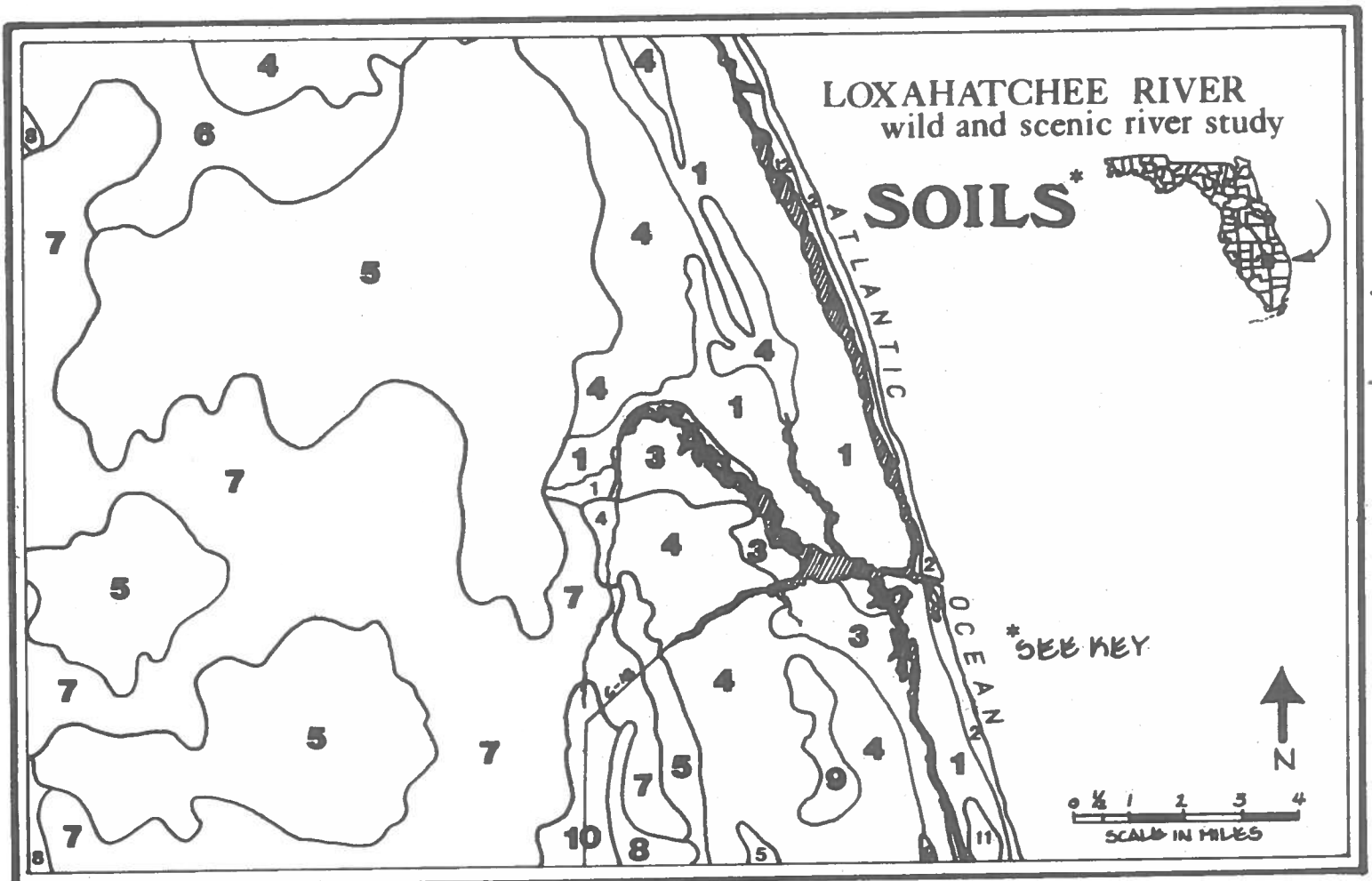
The Everglades region includes a portion of the study area drained by the C-18 Canal System. This area is a nearly level, generally treeless, sawgrass marsh that has an elevation of only 14 to 16 feet above sea level. Under natural conditions water inundates the surface for months and only during extremely dry seasons is the surface exposed. The soils are organic and are underlain by limestone at a depth that ranges from 2 to 8 feet. Drainage of much of the Everglades region in the Loxahatchee basin has resulted in changes to the native vegetation, hydrologic regime, and soils.

Soils

There are three basic types of soil in the study area:

- 1) Sandy, droughty soils not subject to flooding;
- 2) Moderately well to poorly drained soils not subject to flooding;
and
- 3) Poorly and very poorly drained soils subject to flooding.

The soils map indicates the general location of these soil types and groups soil types into various associations (see key). Along the north bank of the river from the mouth through the Jonathan Dickinson State Park, soils of the St. Lucie, Urban Land-Paola Association are dominant. These soils are nearly level to sloping, excessively drained and sandy. In this same area



along the southern banks of the river soils of the Pomello-Immokalee Association dominate. These soils are gently sloping, moderately well drained and sandy, with weakly cemented sandy subsoil.

Between the boundary of the Jonathan Dickinson State Park and the area of the Florida Turnpike, the Myakka Immokalee-Basinger Association is dominate on both sides of the river. These soils are nearly level, poorly drained and sandy. South of the Florida Turnpike to the area where the river becomes channelized, the Riviera Association dominates. These soils are nearly level, poorly drained and sandy with loamy subsoil. The Loxahatchee Slough area contains the poorly drained Winder-Tequesta Association which is characterized by long periods of flooding.

An inventory of prime and unique farmland conducted by the U.S. Department of Agriculture indicated that there are no soils within Palm Beach and Martin Counties which meet the criteria for designation as prime farmland or prime forest land.

Mineral Resources

Mining in the study area is limited to several inoperative gravel pits. There are no known oil, gas, phosphate, or other commercially significant mineral deposits, present in the study area.

KEY TO LOXAHATCHEE SOIL ASSOCIATIONS MAP

AREAS DOMINATED BY SANDY DROUGHTY SOILS NOT SUBJECT TO FLOODING

1. ST. LUCIE, URBAN LAND-PAOLA ASSOCIATION: Nearly level to sloping, excessively drained soils, sandy throughout; much of which has been developed for urban uses.
2. PALM BEACH, URBAN LAND-CANAVERAL ASSOCIATION: Nearly level to sloping long narrow ridges of excessively and moderately well drained soils, sandy throughout; much of which has been developed for urban uses.

AREAS DOMINATED BY MODERATELY WELL TO POORLY DRAINED SOILS NOT SUBJECT TO FLOODING

3. POMELLO-IMMOKALEE ASSOCIATION: Nearly level to gently sloping moderately well and poorly drained sandy soils with weakly cemented sandy subsoil.
4. MYAKKA-IMMOKALEE-BASINGER ASSOCIATION: Nearly level poorly drained sandy soils with weakly cemented sandy subsoil and poorly drained soils, sandy throughout.
5. WABASSO-RIVIERA-OLDSMAR ASSOCIATION: Nearly level poorly drained sandy soils with a weakly cemented sandy subsoil layer underlain by loamy subsoil and poorly drained sandy soils with loamy subsoil.
6. OLDSMAR-WABASSO-EAU GALLIE ASSOCIATION: Nearly level poorly drained sandy soils with a weakly cemented sandy subsoil layer underlain by loamy subsoil and poorly drained soils with very thick sandy layers over loamy subsoil.

AREAS DOMINATED BY POORLY AND VERY POORLY DRAINED SOILS SUBJECT TO FLOODING

7. RIVIERA ASSOCIATION: Nearly level poorly drained sandy soils with loamy subsoil.
8. RIVIERA-BOCA ASSOCIATION: Nearly level poorly drained sandy soils with loamy subsoil and poorly drained sandy soils with loamy subsoil, underlain by limestone.
9. BASINGER ASSOCIATION: Nearly level poorly drained soils, sandy throughout.
10. WINDER-TEQUESTA ASSOCIATION: Nearly level poorly drained soils with thin sandy layers over loamy subsoil and very poorly drained soils with thin mucky surface layers over sands, underlain by loamy subsoil.
11. TERRA CEIA ASSOCIATION: Nearly level very poorly drained, well decomposed organic soils more than 51 inches thick.
12. TIDAL SWAMPS ASSOCIATION: Nearly level very poorly drained soils subject to frequent flooding by tidal waters.

Air Quality

Currently transportation activities represent the largest source of air pollution in the study area. The most widely distributed and most commonly occurring air pollutant is carbon monoxide (CO). The National Ambient Air Quality Standards (NAAQS) for carbon monoxide have been established by the federal government as 35 parts per million (ppm) maximum 1-hour concentration, and 9 ppm maximum 8-hour concentration. In August 1980, the U.S. Environmental Protection Agency proposed the maximum 1-hour concentration be changed from 35 ppm to 25 ppm.

Air quality data for the immediate study area has not been collected. The closest permanent air quality monitoring station is located in downtown West Palm Beach, a heavily congested area. The 1-hour maximum CO concentration for this monitoring station, in 1975, was 8.6 ppm, while the 8-hour maximum was 5.0 ppm. Because the monitoring site is in an area which is more developed than the study area and CO is a highly localized pollutant that is usually detected in high concentrations near the emission source, the CO levels recorded cannot be considered representative of the study area. It is reasonable to assume that ambient CO concentrations within the project corridor are lower than those at the monitoring station. According to the U.S. Environmental Protection Agency's "Guidelines for Air Quality Maintenance Planning and Analysis Volume 9: Evaluating Indirect Sources," a background CO concentration level of 1 ppm can generally be assumed for rural areas. CO concentrations in the study area probably fall between the Palm Beach readings and the background level for rural areas (1 ppm - 8.6 ppm).

In the area where the Florida Turnpike and the proposed I-95 route cross the river, slightly higher levels of CO are probable. However, according to the final Environmental Impact Statement (EIS) prepared by Florida's Department of Transportation, for I-95, there will be no violations of either the 1-hour or the 8-hour NAAQS. The EIS projects that in the year 2000, 1-hour concentrations of CO at the river crossing will be 7.2 ppm and 8-hour concentrations will be 4.3 ppm.

There is a NAAQS for airborne lead, but no Florida urbanized area was listed by the U.S. EPA as exceeding the 1975 standard. The average lead content in gasoline will be reduced by 91 percent between 1975 and 1985, which will greatly reduce airborne lead levels.

While no serious air quality problems currently occur in the study area, further development may increase concentrations of CO and other air pollutants.

Climate

The stable, temperate/tropical climate of the study area is a result of its southerly location and marine influences. Summer temperatures are generally tempered by the ocean breeze. August is the warmest month usually having over 20 days with temperatures above 90 degrees. The average temperature for the summer months is approximately 82 degrees. Even in the coldest winters, temperatures which reach the freezing point are rare. The average winter time temperature is approximately 66 degrees.

Air in the study area is moist and unstable. These characteristics lead to frequent rain showers, usually of short duration. During the summer months, thundershowers can be expected on the average of every other day. The total annual average rainfall is approximately 61 inches. However, most of this rainfall occurs during the rainy season from June through October.

Prevailing winds are east/southeast with an average velocity of approximately 10 miles per hour.

Archaeology and History

Jupiter Inlet has been known by several names throughout its existence. First, the inlet was known as Hobe or Jobe for a tribe of aboriginal Jeaga Indians who lived near the inlet. The English interpretation of Jobe was Jove, which later became Jupiter.

Later in history, Indians which became known as Seminoles began drifting into north Florida as a result of pressures from the white men. The Seminoles occupied south Florida during and shortly after the second Seminole War of 1835-1842, which drove them into the swamps and everglades. A battle with the Seminoles reportedly took place on January 24, 1838, in a dense hammock bordering the Loxahatchee River near the present Indiantown Road. This is referred to as "Jessup's Battle" after the commanding officer of the force pursuing the Seminoles.

Early in January 1838 General Thomas Jesup marched south with about 1,200 men in search of the Seminoles who had clashed with an amphibious patrol near Jupiter Inlet. On the 24th, Jesup's column encountered about 150 Seminoles and their black allies, at a crossing of the Loxahatchee, some 6 miles above where it discharges through Jupiter Inlet. A brief but savage fight ensued, during which General Jesup was slightly wounded, and 7 of his soldiers killed and 31 wounded. The Indians and their allies fought with the usual skill and determination, and retired with slight losses. The next day, the 25th, the soldiers erected an enclosure, which they named Fort Jupiter, where they remained for a week. They then moved forward a day's march and camped. Both during and following the seven years war, many Seminoles were removed to the Indian Territory, present day Oklahoma.

The name Loxahatchee originated from the two Seminole words, "Lowchow" meaning turtle and "Hatchee" meaning river. The spelling was changed from Lowchowhatchee to Lochahatchee by General Jesup in letters he wrote while serving at Fort Jupiter. In later years the spelling was again revised to Loxahatchee by a workman painting a barge who had difficulty spelling the previous version.

The Florida Master Site File lists Jonathan Dickinson State Park, Jupiter Inlet Midden 1 and Jupiter Inlet Midden 2 as archaeological sites and Jupiter Inlet Lighthouse as an historical site. Jupiter Inlet Middens 1 and 2 are large shell mounds created by the original inhabitants of the area. Midden 1 is irregular in shape because much of it was borrowed for use as road foundations. At one time, it was 600 yards long and 20 feet high. In addition, an indian mound has been identified along the Loxahatchee River between Indiantown Road and the Florida Turnpike.

The site of the Trapper Nelson's zoo also lies within the boundaries of the Jonathan Dickinson State Park. Trapper Nelson was born in New Jersey in 1909. Dislike for the bitter northern winters caused Trapper to move to Florida while still in his teens. Because of disgust with civilization, Trapper abandoned his original beach settlement near Jupiter and moved to a wilderness area on the Northwest Fork of the Loxahatchee River. There he started to develop what was to become a nationally famous zoo after laws restricted him to trapping on a seasonal basis. Trapper Nelson's large land holdings made him a millionaire soon after World War II. Problems associated with wealth and the closing of his zoo by health officials turned Trapper into a recluse. After this, he accepted visitors by appointment only and discouraged trespassers with a shotgun. In 1968, Trapper Nelson was found dead of a shotgun blast and today many people still wonder if he died at his own hands or those of an intruder.

Jupiter Inlet Lighthouse was started on March 3, 1853, when Congress appropriated \$35,000 for the erection of a first class lighthouse near Jupiter Inlet. By the time the light was completed in 1860, nearly twice the original \$35,000 had been spent. This was mainly due to the high cost of transporting construction materials to the area.

Initially, because of the opposition of local Indians it was very difficult to operate the lighthouse. During the Civil War, confederate sympathizers removed the light mechanism and hid it in Jupiter Creek until 1866. During a 1928 hurricane, a magnifying Bullseye lens was blown out. Because the lens was impossible to duplicate the lighthouse keeper, Captain Seabrook, salvaged every piece and had it reconstructed in Charleston.

Population

The Loxahatchee River is located in a two-county area undergoing explosive population growth. Population growth and characteristics found in this area are typical of that found in the coastal regions of Florida. The main component of this growth has been immigration by retirees and others from mid-western and northeastern states.

The State, as a whole, experienced a 41 percent increase during the past decade. However, the two-county study area grew by a staggering 63 percent to a 1980 total of 615,000 people. Growth rates of nearby metropolitan areas are even greater. Ft. Lauderdale-Broward County on the southern boundary of Palm Beach County is the fastest growing SMSA in the entire nation. Most of this population growth has occurred within 5 miles of the coastline and east of Florida's Turnpike. However, as developable coastal lands have become scarce, a westward movement of the population is occurring, especially in the Lake Worth-West Palm Beach area southeast of the Loxahatchee basin.

The major portion of growth in the municipalities of the Loxahatchee River basin has occurred since 1960. Juno Beach doubled its size between 1960 and 1970 and again between 1970 and 1978. Tequesta, the second largest municipality in the planning area, had a 50 percent increase in population in the 1970 to 1978 period. Although not as large in total population, Jupiter Inlet Colony has experienced growth rates higher than that of Palm

Beach County for comparable periods. Jupiter is the largest municipality in the planning area at over 8,000, and has experienced similar growth rates.

There are indications that growth rates in the study area are moderating. Most of the growth in residents occurred during the first half of the 1970's when increases ranged from 5 to 9 percent annually. Growth rates in Palm Beach County during 1977 and 1978 were estimated at 2 to 3 percent annually. This decrease may be attributable to slow growth in the national economy, increasing land costs as prime sites become exhausted, and increasing regulation by local government to insure adequate water, sewer, and drainage services.

Although growth rates are diminishing, migration into the study area can be expected to continue for the foreseeable future (see Population Projections Table 3). Population projections for this region are made more difficult due to the need to estimate seasonal residents and tourists; groups which are substantial population component. Different growth projections have been made for the Loxahatchee River Planning Area by the Area Planning Board and the Loxahatchee Environmental Control District. Both projections indicate that the 72 square-mile area surrounding the river will have 100,000 inhabitants by the year 2000.

TABLE 3

Population Change 1970-80, U.S. and Study Area

	<u>1970</u>	<u>1980</u>	<u>% Change</u>
United States Total	203,302,000	224,478,000	+ 10.9%
Florida Total	6,791,000	9,579,000	+ 41 %
9 County - Southeast Florida (BEA Region 43)	2,372,024	3,456,724	+ 45 %
2 County - Study Area	377,000	615,000	+ 63 %

Source: 1980 U.S. Census of Population and Housing
Preliminary Report

TABLE 4

POPULATION PROJECTIONS

	1985	1990	2000	2020
Florida	10,190,000 ^{1/}	11,114,000	12,682,000	17,238,000
Southeast Florida (BEA Region 43)	3,677,000 ^{1/}	4,023,000	4,611,000	6,233,000
Martin County	77,700 ^{2/}	89,000	110,500	N/A
Palm Beach County	764,000 ^{3/}	967,000	1,297,000	N/A
Loxahatchee River Planning Area (72 sq. mi.)	41,955 ^{3/}	62,709	101,062	N/A

Source: ^{1/} 1978 Bureau of Economic Analysis Projections, U.S. Department of Commerce

^{2/} Martin County Planning Department

^{3/} 1979 Projections, Area Planning Board of Palm Beach County

Economy

The Loxahatchee River flows through two counties--Martin and Palm Beach. Consequently, changes in the management or use of this river would have the greatest impact on the economy of these counties.

The region's economy can be broadly characterized as follows:

1. The area has experienced rapid economic growth due to immigration.
2. Residents are affluent having per capita incomes above the national average.
3. The area economy is dominated by the residential construction industry and the tourist industry--both very cyclical and unpredictable industries.
4. High-technology manufacturing firms are increasing in number and importance.
5. Agriculture is a substantial sector of the economy and is holding steady in employment and production.

The distribution of economic activity and employment generally follows the geographic distribution of population. The cities along the coast, Stuart, Jupiter, Palm Beach Gardens, West Palm Beach and Boca Raton, all serve as centers of primarily service-related economic activity. The only major

exception to this distribution of economic activity is the Pratt and Whitney Aircraft Engine Test Facility located 8 miles west of the river corridor. This facility is the largest single employer in the study area with 5,000 employees.

Income and Employment. The study area has experienced, since 1960, rapid economic growth marked by periods of severe recession. The magnitude of those economic cycles exceeded the experience of the Nation as a whole. This is attributable to a regional economy that relies heavily on construction activity and tourism as basic industries. These sectors are very sensitive to national economic trends.

Personal per capita income is an indicator of living standards and welfare. It can be defined as that part of income to the region that people take home in the form of personal earnings from all sources before taxes. It is in essence, the reward for supplying input, particularly labor, to the production process. Personal or per capita income in the study area has grown rapidly and now exceeds the national average. Estimated 1977 per capita income in Martin County was \$5,882 and in Palm Beach County was \$7,554. These figures represent approximately 100 percent increases over 1970 levels in the two counties. This change is largely the result of massive immigration of affluent residents. Many of these new residents are retirees. Supporting this statement is the fact that many residents receive a significant amount of "unearned" income or transfer payments. In 1975, there were over 114,000 people in Palm Beach County alone receiving social security payments.

Employment in the study area has been generally increasing since the 1960's. Approximately 220,000 people were employed in Palm Beach County and 20,000 in Martin County during 1980. Unemployment rates in early 1981 stood at an average of 5.7 percent in the two counties.

Economic Base. The basic sector of the economy consists of those activities which arise in response to outside forces. Industries composing the economic base of a region are those which serve as suppliers or exporters of goods and services to firms or consumers located outside the region. Presumably, basic economic activities reflect the advantages of the local economy over other regions in the Nation. The non-basic sector consists of firms that provide support services for firms and employees in the basic sector. The most recent and detailed economic base information is for Palm Beach County. Since this county has roughly ten times the population and economic activity of Martin County, data for Palm Beach County will be used to profile the economic structure of the region.

In Palm Beach County, the following classifications can be made: Basic Industries--agriculture, manufacturing, construction, finance, insurance, real estate and tourism; Non-basic Industries--transportation, trade, services (excluding tourism); and government.

In 1980, employment in Palm Beach County was distributed among the various economic sectors as follows:

- 1) Agriculture - 6.3%
- 2) Construction - 7%
- 3) Manufacturing - 11.3%
- 4) Transportation, communication and utilities - 3.7%
- 5) Wholesale and Retail Trade - 25.3%
- 6) Finance, Insurance and Real Estate - 7.5%
- 7) Services - 24.8%
- 8) Government - 14%

Source: U.S. Army Corps of Engineers, Jacksonville District, Economic Base Study for Martin County Study Area and Canal 18 Study Area, Jacksonville, Florida, 1981.

Basic Industries. Agriculture is a major sector of the economy in the two-county study area. Roughly 6 percent of Palm Beach's labor force and 10 percent of Martin County's labor force were employed in agriculture in 1980. This is substantially above the national rate of employment in agriculture. The actual size of the agricultural work force fluctuated from 17,000 to 25,000 between 1967 and 1977 in Palm Beach. Although the work force has increased in number and value of output since 1967, other economic sectors have increased more rapidly. Agriculture has therefore declined in importance in the economy. As urbanization continues, the agricultural sector will probably decline in absolute terms as well as in proportion to other sectors.

Manufacturing is the third largest basic economic sector in terms of personal income generated, trailing behind the service sector and the wholesale and retail trade sector. During the 1960's, a significant number of major manufacturing firms were attracted to the area, locating mainly in Palm Beach County. Industrial growth subsided during the mid-70's economic recession. The manufacturing sector is composed of high-technology firms--aircraft, electronics and communications; and firms producing non-durable goods such as sugar refining and newspaper companies.

The construction industry is a basic economic activity which has had major impacts on the two-county study area since 1960, especially in residential building. Activity in construction has been extremely cyclical with three major advances followed by declines during that period. The most recent and serious collapse in construction activity occurred in 1975 and 1976. Since that collapse, residential construction has substantially recovered toward the historic trend. Preliminary U.S. Census Bureau figures reported 2,377 residential construction permits issued in Martin County and approximately 20,000 permits issued in Palm Beach County during 1980. Demand for residential construction is related to immigration. The construction permit figures indicate that demand for housing is strong enough to sustain new construction even through periods of high interest rates as existed in 1980.

Finance, insurance and real estate have historically been a minor sector of the region's economy. But over the last decade it has experienced fairly steady growth. Growth in this sector is related to growth in construction

and rapid urbanization. This sector can be expected to expand in the future as higher income residents continue to locate in the region and create demand for these services.

Tourism comprises the single largest economic activity in the region. Visitors to Palm Beach County contributed over \$407.5 million to the local economy in 1975. It is somewhat difficult to identify the full extent of the tourist industry because it is expressed in demand for retail goods and services along with locally generated demand that is non-basic in character. In 1980, 24.8 percent of the work force was employed in the service sector and 25.3 percent in the wholesale and retail trade sector. Much of this employment can be attributed to tourist trade. The share of the work force in these sectors has increased historically and should continue to do so.

According to an analysis by the Palm Beach Area Planning Board, service sector employment in actual tourist-related activities has remained stagnant since the mid-70's exhibiting no clear signs of growth. This may be evidence of hesitation on the part of hotels, restaurants, and other firms to expand in the face of uncertainty about tourism due to the energy crisis. Studies by Palm Beach County indicate that 51 percent of the tourists who visit the county obtain lodging in the 326 hotels operating there. The remainder stay with friends or camp or do not stay overnight. About one-third of these hotels are located along the Atlantic Ocean.

Land Use

The existing land use and the types of natural terrain surrounding a river are extremely important factors in assessing its qualifications as a wild and scenic river. Land use needs to be examined at two scale levels: a) within the immediate visual corridor of the river where land use and development intrusion affect the river's wild and scenic qualities; and b) within the larger area defined by the watershed of the river where land use affects the hydrology and water quality of the river.

Watershed Land Use. The U.S. Geological Survey has recently published land use data for the Loxahatchee River's hydrologic basin or watershed. The data was based upon color infrared aerial photos taken in March 1979. The watershed covers about 210-square miles and is defined by both topography and manmade features including canals, levees, and roads (see River Basin map and Table 5). About 50 percent of the basin is wetland. The nonforested freshwater wetlands cover 6-square miles mostly in the Loxahatchee Slough at the southern-most part of the watershed. Mixed forested and nonforested wetlands are by far the dominant category and cover 98.5-square miles. This category includes large areas of slash pine and wet prairies. Urban and built-up land covers about 17 percent of the basin. Areas under development account for 38 percent of the total urban land. An extensive area of approximately 17-square miles located immediately southwest of the river has been subdivided and is currently subject to development.

Most of the existing residential land is clustered near the mouth of the river at Jupiter Inlet. This development can be characterized as single family, low to medium density housing. Residential land in 1979 accounted for only 3 percent of the basin. However, the south Florida region is experiencing explosive population growth on the order of 3 to 8 percent

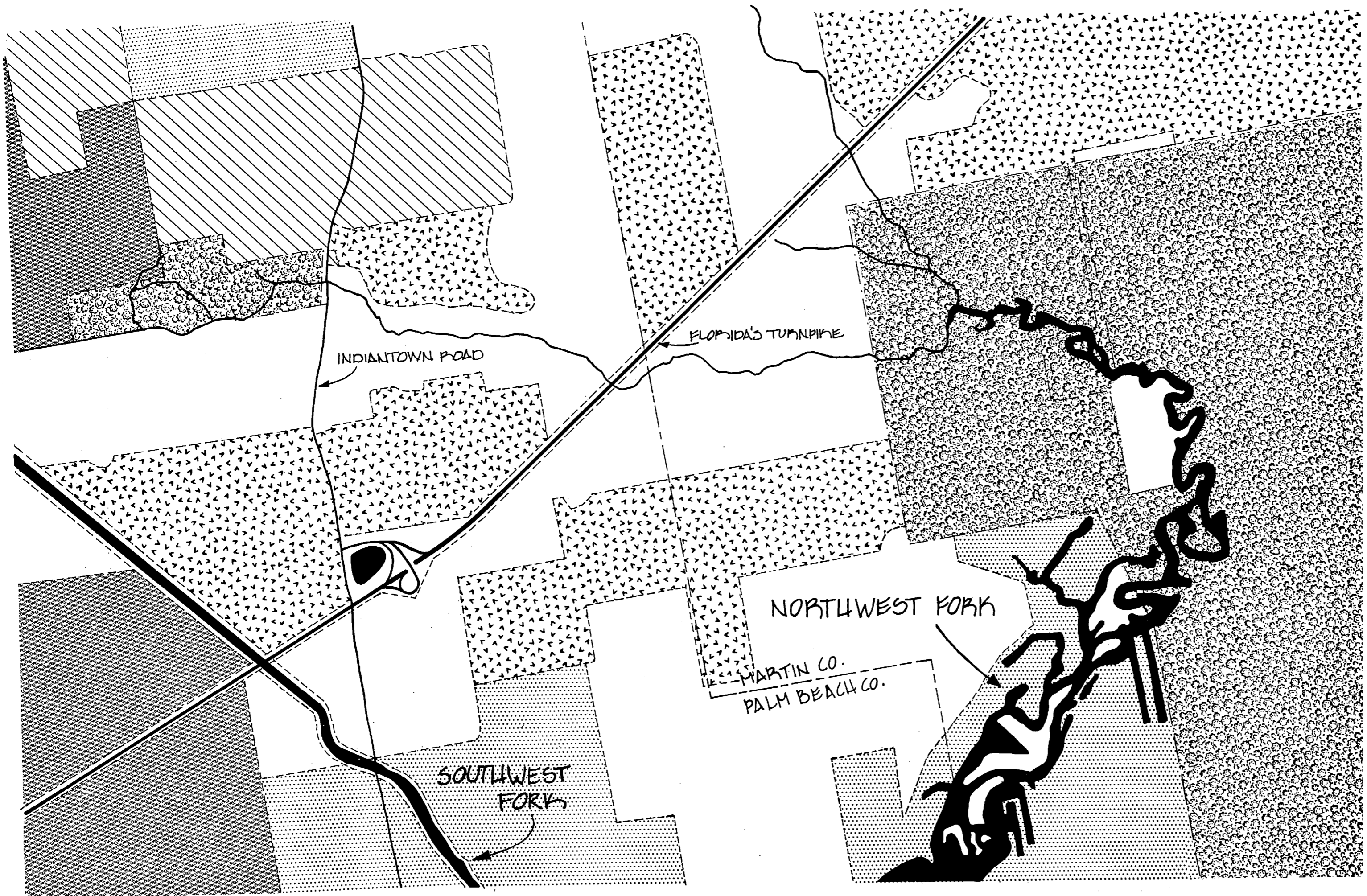
TABLE 5






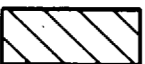
LAND USE AND LAND COVER IN THE LOXAHATCHEE RIVER BASIN, 1979
(Values in square miles)

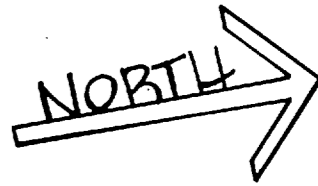
Land use and land cover	Subbasin									TOTAL
	1	2	3	4	5	6	7	8	9	
Urban and built up										
Residential	1.5	0.7	0.7	---	---	0.9	1.0	1.2	0.7	6.7
Commercial	.05	---	.05	---	---	---	.03	---	.2	.3
Industrial	.03	---	.03	---	---	---	.07	---	.7	.8
Institutional	---	---	.02	---	---	---	.1	---	---	.1
Transportation	---	---	---	---	0.5	---	.09	.03	1.1	1.7
Open and others	.6	.7	.3	---	---	.2	2.2	10.4	11.2	25.6
TOTALS	2.2	1.4	1.1	---	.5	1.1	3.5	11.6	13.9	35.3
Agriculture										
Cropland	---	---	.9	1.9	1.7	0.8	---	1.3	1.5	8.1
Pasture	---	---	6.1	1.7	1.4	.4	1.4	1.4	9.3	21.7
Orchards, groves	.01	.02	.6	---	4.3	---	.01	.02	2.7	7.7
Confined feeding	---	---	---	---	---	---	---	---	.1	.1
TOTALS	.01	.02	7.6	3.6	7.4	1.2	1.4	2.7	13.6	37.5
Forested uplands										
Coniferous	2.3	.7	2.9	.2	7.1	2.9	.8	1.8	1.5	20.2
Mixed forest	---	---	.09	---	.6	---	.08	.4	5.6	6.8
TOTALS	2.3	.7	3.0	.2	7.7	2.9	.9	2.2	7.1	27.0
Wetlands										
Forested, freshwater	.5	---	.2	.1	.3	.3	---	.2	.5	2.1
Nonforest, freshwater	.3	---	.4	---	---	---	---	---	5.3	6.0
Forested, saltwater	.06	.04	---	.01	---	.2	---	---	---	.3
Mixed forested and nonforested (pine and wet prairie).	6.9	.8	7.2	---	8.7	---	---	.1	74.8	98.5
TOTALS	7.8	.8	7.8	.1	9.0	.5	---	.3	80.6	106.9
Water, fresh	1.1	.01	.2	.01	---	.5	.3	---	1.0	3.1
Barren land										
Extractive	---	---	.3	---	.1	---	---	.3	.1	.8
Spoil areas	---	---	---	---	---	---	---	---	.3	.3
TOTALS	---	---	.3	---	.1	---	---	.3	.4	1.1
TOTALS	13.4	2.9	20.0	3.9	24.7	6.2	.6.1	17.1	116.6	210.9

LOXAHATCHEE RIVER
wild and scenic river study

EXISTING LAND USE



-  PARK AND RECREATION
-  AGRICULTURE
-  OPEN SPACE
-  PROPOSED RESIDENTIAL
-  RESIDENTIAL
-  COMMERCIAL / INDUSTRIAL / MINING



annually. New housing development will certainly increase over the next decade and increase the amount of residential land in the basin. Agricultural lands cover 18 percent of the basin. Most of this is in improved pasture. There are 7.2-square miles of citrus orchards and 8.1-square miles of cropland devoted exclusively to truck crops.

Forested uplands cover about 13 percent of the basin, most of which is slash pine flatwoods. Mixed forest including overgrown fields and tropical hammocks account for 6.8-square miles of forested uplands.

River Corridor Land Use. Land use in the portion of the river corridor area proposed for designation is displayed in Existing Land Use map. The first 6 miles of the corridor above Jupiter Inlet are heavily urbanized. Single family residential structures line the shore almost without interruption. Extensive bulkhead and riprap construction has occurred to prevent shoreline erosion. From river mile 6 to river mile 10.3, the Loxahatchee flows within the bounds of Jonathan Dickenson State Park. Land cover within the park is almost entirely natural terrain. Thick mangroves are found where water is brackish. Mangroves are gradually replaced by mixed-cypress forest farther upstream near the southern boundary of the park. Two significant recreational facilities are located in sight of the river within Jonathan Dickinson Park. These facilities are the canoe concession, public wharf, and picnic area located near river mile 7.0 and the Trapper Nelson Homestead at river mile 9.9. Upstream of this point, the Loxahatchee channel narrows. It begins a meander pattern through a freshwater river swamp which varies in width from approximately 300 to 1000 feet. Beyond this relatively narrow river swamp are extensive pine flatwoods and scattered open terrain. From the park boundary south to Indiantown Road, a distance of about 2.5 miles, the river is bordered on the east by two large agricultural fields producing tomatoes and other truck crops. The fields lie at an average distance of 0.3 miles from the river channel. At river mile 11.58, the Loxahatchee is traversed by the Florida Turnpike. The highway right-of-way parallels the river for a distance of 1,600 feet where it lies approximately 300 feet west of the channel. The west side of the river from river mile 12 to river mile 13 at Indiantown Road is marked by scattered residential development, small citrus orchards, and pasture for livestock. The residential structures in this area number less than a dozen and include single family houses, mobile homes, and camps. A small community shopping center is located two-tenths of a mile west of the river on Indiantown Road. The road crosses the river channel just above river mile 13. Below the road lies the planned 187-acre Riverbend Park that is being developed by Palm Beach County. A major interchange of the Florida Turnpike is located at Indiantown Road 1.1 mile east of the river.

Land Use Controls. Local land use regulation in the proposed Loxahatchee Wild and Scenic River area is the responsibility of the County of Palm Beach, the Town of Jupiter, and the County of Martin. Land along the river from Indiantown Road to Jonathan Dickinson State Park is currently zoned for low density residential use (1 unit/5 acres) in all three jurisdictions. Local governments have generally expressed a desire to protect the river through local land use regulation. A recent application for a rezoning of land in Jupiter along Indiantown Road was denied by the town council in order to further the goal of preserving the Loxahatchee River. However, under current regulations some 70 homes could be constructed along the river between Indiantown Road and Jonathan Dickinson State Park.

Landownership

Approximately 5.7 miles of land along the banks of the Loxahatchee River is presently in public ownership. The public lands include 4.25 miles of riverfront property in Jonathan Dickinson State Park, and 1.5 miles of riverfront property in a recently acquired 187.5-acre county park south of Indiantown Road.

Privately owned property between Indiantown road and the State park is divided into parcels ranging from 50 to over 600 acres. The major portion of this land is held in trust for the John D. McArthur Foundation. There are also several 10-acre parcels of land adjacent to this segment of the river for a total of 13 separate private landholdings in this reach of the river.

Riverfront property between the State park and Jupiter Inlet makes up approximately 43 percent of the total. This land is held by hundreds of single family lot owners, as is the land adjacent to the North Fork.

Land Values

A survey made in the winter of 1981 indicated a wide variation in the estimated value of land along the Loxahatchee River and in the Loxahatchee Slough. This variation is largely based on development potential and access. In the Loxahatchee Slough area land values are in the range of \$500 to \$2,500 per acre. The comparatively low values reflect the development potential of this low lying, periodically inundated area which has been designated a conservation area by local governments.

Land values in the Jupiter Farms community near Riverbend Park range from \$8,000 to \$12,000 per acre. Between Indiantown Road and the Jonathan Dickinson State Park land in the river corridor is estimated at \$7,000 to \$12,000 per acre.

Below the State park boundary to the Jupiter Inlet there are few waterfront properties which remain undeveloped. Most of the properties in this reach of the river as well as on the North Fork are small single-family residential lots. Improved properties range from \$150,000 to \$400,000. Unimproved lots range from \$25,000 to \$75,000.

Real Property Taxes

The current millage rate on assessed property values in Martin and Palm Beach Counties is 12.5 per thousand dollars. The impact on the tax base of local government of each alternative considered in this report is presented under Environmental Consequences.

Navigability and Riparian Rights

The distinction between a navigable body of water and a non-navigable one is a key issue in the law of water rights and riparian rights. Classification as a navigable water body indicates that the State of Florida holds ownership of the river bottom up to the ordinary high water line. If

the river is not classified as navigable, the riparian owner holds title to the river bed to the center of the stream. Development of detailed meaning and application of the navigability question has been, for the most part, left to the courts operating on a case-by-case basis.

The test of navigability applied by Federal courts has undergone considerable change. Current opinions state that for some purposes, the federal tests look not only to whether the water body is navigable, in fact, in its natural state, but whether it can be made so by manmade improvements. The United States Supreme Court opinion in U.S. vs. Appalachian Electric Power Company 311 U.S. 377 (1940), indicated that suitability for commercial navigability can be proved by personal or private use of boats upon the water. Congress added an amendment to the Rivers and Harbors Act which stated, ". . .commerce shall include the use of waterways by seasonal passenger craft, yachts, houseboats, fishing boats, motor boats, and other similar craft, whether or not operated for hire."

Florida courts, in Baker vs. State ex rel. Jones, 87 So. 2d 497 (1956) and Lopez vs. Smith 145 So. 2d 509 (2d D.C.A. Florida 1962), have equated navigability with the possibility of use for purposes common to the public. The definition of navigability is also tied closely to the use of a water body or at least potential use for commerce at the period of statehood.

There are four basic determinants of the commercial use of a waterbody.

1. The nature and character of waterborne commerce during the statehood period.
2. The nature of the craft used for this purpose.
3. Size, depth, location and other physical characteristics of the water body.
4. Obstructions to navigation.

Florida courts have issued opinions indicating that current potential commercial use rather than commercial history is the test for navigability. Federal courts have traditionally granted State governments the authority to remove any obstructions to navigation.

Evidence indicating that the Loxahatchee River is navigable includes:

1. The extent and manner of commercial use is not an issue. The river only need be capable of being used for commerce, no matter in what mode the commerce may be conducted.
2. The region of Florida in which the Loxahatchee River runs its course was dependent upon waterways for transportation before the advent of the railroads in 1880. In rivers, which could not support large craft, such as the Loxahatchee, pirogues, cypress canoes, and cypress skiffs, were in regular use by the military, Indians, and settlers. A reasonable conclusion may be drawn that canoes and shallow draught skiffs were a customary mode of trade and travel in the region and on the Loxahatchee River during the statehood period.

3. Florida experiences a great deal of pleasure boating by tourists which courts have implied is a commercial activity or use of the water. Recreational and commercial boating are criteria for determining navigability.
4. The Loxahatchee River is on the U.S. Army Corps of Engineers administrative list of navigable rivers.

Recreation Resources

Florida, perhaps more than any other State, is associated with tourism and recreation. The State is endowed with an excellent climate and an extensive coastline featuring some of the world's most scenic beaches. Tourism is Florida's largest industry with over 35 million tourists visiting the State in 1980 generating nearly \$17 billion in expenditures. According to the 1981 Florida State Comprehensive Outdoor Recreation Plan, this figure represents 1.3 percent of the world's market. Tourists generate 64 percent of the total demand for outdoor recreation activities. The resident population is also active in outdoor recreation. The most popular recreation activities are beach activities and outdoor swimming pool use.

Freshwater swimming in natural waters ranks ninth in overall demand among 26 activities surveyed by the State Department of Natural Resources. Sailing, water-skiing, and salt and fresh-water fishing are also popular activities.

Recreation Facilities - Federal. The following recreation facilities are administered by the U.S. Department of Interior's National Park Service within the State.

Big Cypress National Preserve - Adjoining the northwest section of Everglades National Park, this large area provides a freshwater supply crucial to the park's survival. Subtropical plant and animal life abounds in this ancestral home of the Seminole and Miccosukee Indians.
Acreage - 570,000

Biscayne National Park - Most of the park is reef and water, but within its boundaries about 25 keys, or islands, form a north-south chain, with Biscayne Bay on the west and the Atlantic Ocean on the east.
Acreage - 180,127.65

Canaveral National Seashore - Immediately north of the famed Kennedy Space Center, the seashore offers a great variety of wildlife, including many species of birds, on a segment of largely undeveloped wild lands. The area includes a portion of 140,393-acre Merritt Island National Wildlife Refuge, administered by Fish and Wildlife Service, U.S. Department of the Interior.
Acreage - 57,627

Castillo de San Marcos National Monument - Construction of this oldest masonry fort in the continental United States was started in 1672 by the Spanish to protect St. Augustine. It is the first permanent settlement by Europeans in the continental United States (1565).
Acreage - 20.49

De Soto National Memorial - The landing of Spanish explorer Hernando deSoto in Florida in 1539 and the first extensive organized exploration of what is now the southern United States by Europeans are commemorated here. Acreage - 30

Everglades National Park - This largest remaining subtropical wilderness in the coterminous United States has extensive fresh and saltwater areas, open Everglades prairies, and mangrove forests. Abundant wildlife includes rare and colorful birds. Acreage - 1,398,800

Fort Caroline National Memorial - The fort overlooks the site of a French Huguenot colony of 1564 to 1565, the second French attempt at settlement within the present United States. Here, the French and Spanish began two centuries of European colonial rivalry in North America. Acreage - 138.88

Fort Jefferson National Monument - Built in 1856 to help control the Florida Straits, this is the largest all-masonry fortification in the Western World. It served as a federal military prison during and after the Civil War. The bird refuge and marine life here are features. Acreage - 47,125

Fort Matanzas National Monument - This Spanish fort was built between 1740 and 1742 to protect St. Augustine from the British. Acreage - 298.51

Gulf Islands National Seashore - Offshore islands and keys have both sparkling white sand beaches and historic ruins. Mainland features of this unit, which is located near Pensacola, Florida, include the Naval Live Oaks Reservation, beaches, and ruins of military forts. All areas are accessible by car. Acreage - 65,816.64

Three national forests are maintained by the U.S. Forest Service in the State. They are the Apalachicola, Osceola, and Ocala National Forests. All three are located in the northern region of the State over 180 miles from the Loxahatchee River. There are 23 National Wildlife Refuges located in Florida. Those closest to the study area are Pelican Island, Hobe Sound, and the Loxahatchee National Wildlife Refuges. The Loxahatchee Refuge covers an area of 145,000 acres and is located about 20 miles south of the point where the river crosses Indiantown Road. These refuges offer limited recreation opportunities since their primary objective is to preserve essential wildlife habitats.

Recreation Facilities - State. The State of Florida has developed an extensive park and recreation system. This system is managed by the State Department of Natural Resources' Division of Parks and Recreation. There are two State parks and five State recreation areas located within a 50-mile radius of the mouth of the Loxahatchee at Jupiter Inlet. These facilities are described below.

St. Lucie Inlet State Park - Located approximately 20 miles north of Jupiter Inlet; presently under development; fishing, boating, campsites.
Acreage - 927.

Jonathan Dickinson State Park - Eighth largest park in the State system; opened in 1975; 4 miles of the Loxahatchee River lie within the park boundaries; camping - 135 sites, boating, canoe rental, picnic area, extensive habitat for waterfowl observation.
Acreage - 10,284.

Fort Pierce Inlet State Recreation Area - Located 4 miles northeast of Fort Pierce; fishing, swimming, picnicking; historical museum.
Acreage - 340.

John D. MacArthur State Recreation Area - Located 1 mile east of North Palm Beach; presently undeveloped; extensive ocean beach and inland waterway frontage.
Acreage - 225.

Pahokee State Recreation Area - Located on southeastern shore of Lake Okeechobee; picnicking, fishing, swimming; canoe rental and 40 campsites.
Acreage - 30.

Pepper Beach State Recreation Area - Located about 4 miles northeast of Fort Pierce; swimming, fishing, picnicking; extensive habitat for shoreline bird and waterfowl observation.
Acreage - 1,002.

Palm Beach Pines State Recreation Area - Located 8 miles west of Lake Worth; presently undeveloped.
Acreage - 812.

Wild and Scenic Rivers in Florida. As of 1981, there were no national wild and scenic rivers located in the State. One river, the Suwannee, was studied for inclusion into the National Wild and Scenic Rivers System. That study, completed by the Bureau of Outdoor Recreation in 1974, recommended the river be included in the System by State action under Section 2(a) of the Wild and Scenic Rivers Act. To date, there has been no formal State action by Florida or Georgia to designate the river as a national wild and scenic river. The Myakka River, located in southwest Florida near Sarasota is under study by the National Park Service as a possible national wild and scenic river.

Florida has enacted a Scenic and Wild Rivers Program, designed to serve outdoor recreation purposes through the preservation of exceptional river and stream corridors. To date, only a single river - the Wekiva, located near Orlando, has been granted wild river status under the State system. Currently three streams are being reviewed for inclusion in the State system: Blackwater River, Ichetucknee River, and Spruce Creek. None of these streams are located in the vicinity of the Loxahatchee study area. In summary, the majority of streams with wilderness qualities in Florida have not received adequate protection. Consequently, future opportunities for recreation on these streams are not assured.

The Loxahatchee as a Recreation Resource. The Loxahatchee River functions as a major recreation resource for the residents of southeast Florida. Whereas most outdoor recreation activity by tourists is centered around the ocean beaches of the area, residents frequently seek a contrasting recreation experience. The Loxahatchee now serves to meet some of this need. The river is the focal point of two parks: Jonathan Dickinson State Park and Palm Beach County's Riverbend Park.

Jonathan Dickinson State Park includes over 10,000 acres and has averaged 184,000 visitors per year since 1978. The park has 135 campsites and utility hook-ups for recreational vehicles. Canoes and small boats are available at a concession stand in the park. Most of the canoeists are novices who paddle for brief trips within the park boundaries. The park provides extensive opportunities for nature observation especially by canoe or small boat.

Riverbend Park is currently being planned as a 187-acre multiuse facility. The park is located south of Indiantown Road (State Road 706) where it crosses the Loxahatchee. The park is planned to include a 10-acre picnic area, a canoe rental concession, a nature interpretive center, and approximately 150 campsites for tent camping. The park will be oriented primarily toward passive recreation experiences.

The Loxahatchee is designated as an aquatic preserve under the Florida Aquatic Preserve Act of 1975. This statute grants protection to all submerged lands which are State owned and that are deemed to have exceptional aesthetic or ecological values. Private submerged lands within an aquatic preserve area can also be managed as part of the preserve. Although aquatic preserve management programs promote compatible recreation uses, there has been no development of recreational facilities on the Loxahatchee under this program. The Loxahatchee is also a candidate for designation as a State canoe trail under the Florida Recreation Trails System. However, this program has not yet been made operational and no formally designated system of canoe trails has been implemented.

The Loxahatchee serves as a focal point for a substantial amount of recreation activity. These activities take place in a setting not usually found in south Florida. Recreation activities along the river vary according to the width and depth of the stream and the intensity of shore development. Near Jupiter Inlet, the river is suitable for water skiing, sailing, and salt water fishing. Within Jonathan Dickinson State Park, the most suitable activities are freshwater fishing, canoeing, swimming, and nature observation. Upstream and south of the park, the river channel narrows to under 30 feet and riverbank vegetation increases in density. This restricts recreation activities to more passive, nature oriented experiences such as canoeing and nature observation. The amount and intensity of recreation use of the river generally declines as one moves from Jupiter Inlet upstream past Jonathan Dickinson State Park.

Regional Recreation Needs. The Florida Statewide Comprehensive Outdoor Recreation Plan (SCORP) for 1981 contains projections and assessments of recreation demand and the need for new facilities for the next decade. According to that study, Florida's requirements for the type of recreation

activities provided by the Loxahatchee will increase steadily through the 1980's. New facilities or park areas will be needed for freshwater swimming, hiking, nature study, and camping. The SCORP does not project the quantity of additional canoe trails that will be needed. It does indicate that demand for canoeing will increase 27.4 percent statewide by 1990.*

*Outdoor Recreation in Florida, 1981: A Comprehensive Program for Meeting Florida's Outdoor Recreation Needs, State of Florida Department of Natural Resources, Dec. 1980 p.211, infra.



VI

CHAPTER VI

ENVIRONMENTAL CONSEQUENCES

This chapter describes the environmental consequences that would result from implementation of each of the alternatives considered by the National Park Service.

Alternative A - Proposed Action State-Administered Wild and Scenic River Plan

Alternative A is the proposed alternative of the National Park Service. Under this alternative a 7.5-mile segment from Riverbend Park at river mile 13.5 to the southern boundary of the Jonathan Dickinson State Park at river mile 6 would be included as a State-administered component of the National Wild and Scenic Rivers System. The State will be responsible for adopting a program of action which will provide permanent protection for the natural and cultural qualities of the river and adjoining lands.

Choosing this alternative is expected to have the following impacts:

Impacts on Natural Resources

Alternative A provides substantial protection to the Loxahatchee River. Management of the river as a wild and scenic river will preserve a unique ecosystem and allow its use for recreation and as an educational resource.

Specific impacts are discussed below.

Vegetation. Under Alternative A the State of Florida's protective management plan for the river corridor from Indiantown Road to the State park boundary will protect the unique cypress river-swamp community in this reach of the river from encroachment by residential development. Management by the Florida Department of Natural Resources' professional staff will prevent invasion by exotic plants and allow controlled burning and other management practices to maintain the integrity of the existing vegetative community. Education of user groups and patrolling of the river area should help to minimize damage to vegetation due to recreational use.

Fish and Wildlife. Fish and wildlife will benefit due to the preservation of habitat and range. Disturbance of wildlife by river users may occur but will be minimized by limiting use of the river based on a carrying capacity.

Threatened and Endangered Species. The U.S. Fish and Wildlife Service has concurred that Alternative A would not adversely impact threatened and endangered species in the study area (See Appendix C). However, the State-administering agency would reevaluate effects on endangered or threatened species during the development of a management plan if the river is designated. This would ensure maximum protection while considering appropriate management.

Water Quality. Designation of the Loxahatchee River would encourage federal, State, and local governments to improve water quality in the river basin.

Air Quality. Increased visitation will have no significant impact on air quality. Designation will not change the air quality standards or classification of the river area.

Noise. National designation will place the Loxahatchee River corridor into a more noise sensitive land-use category. The National Park Service has consulted with and provided comments to the Florida Department of Transportation concerning noise mitigation measures for the I-95 river crossing.

Impacts on Cultural Resources

Alternative A will provide increased protection for cultural resources in the designated river corridor. An Indian mound near Jonathan Dickinson State park which has been subject to exploration by amateur archeologists will be protected from further damage.

Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations (36 CFR, Part 800), the National Park Service has determined that designation would have no effect on cultural resources that are included in, eligible for inclusion in, or potentially eligible for inclusion in the National Register of Historic Places (See Appendix D). However, if designation is approved the resulting State management plan would be submitted for Section 106 compliance review. Although there has been no cultural resource inventory for the proposed designated river area, should later research identify any, these resources would be protected.

National Register Properties. No National Register sites are found in the study area.

Socioeconomic Impacts

Alternative A will result in the preservation of the Loxahatchee River as a recreational resource. National designation will benefit the local economy by attracting visitors from other regions.

Recreation. Implementation of Alternative A would provide long-term protection of the outstanding resources and values of the river corridor. Inclusion in the National System would ensure the provision of a variety of high quality recreational opportunities based on the preservation of these values including canoeing, rafting, sightseeing, and nature study.

There is an undetermined but finite capacity of the river environment to withstand increasing use without deterioration of resource values. In joint planning and consultation activities to date, the county of Palm Beach, the State of Florida, and the National Park Service have agreed upon the concept and criteria for the establishment of a carrying capacity for the designated segment of the river in an eventual joint management plan.

Public recreation use will increase whether or not the river is added to the National Wild and Scenic Rivers System; however, inclusion of the river in the System would probably increase visitation at a greater rate. Therefore, the visitor-day capacity would likely be reached sooner. Increased visitor use, if not controlled, could cause environmental damage from over use, vandalism, litter, undesirable noise, or deviant behavior. Under the proposed action the area would be patrolled by Florida Park Service rangers.

Water Resource Management and Development. Designation of the river will not preclude any hydropower projects. However, designation will provide additional incentives to water management agencies for protection of environmental quality on the Northwest Fork.

Designation of the river may effect some projects defined as water resource projects as a result of protection under Section 7(a) of the Wild and Scenic Rivers Act. These would include dredging projects and channelization in the designated area as well as outside of the area, if these are found to adversely impact the designated segment of the river and diminish the values for which it was included in the National System.

Private Land. Under Alternative A the State of Florida will adopt a program of action to protect the designated segment of the river. Protective measures may include, but are not limited to, fee acquisition, scenic easements or other than fee acquisition, zoning, construction and set back lines building permits, or other similar land use controls enacted in cooperation with local jurisdictions. The amount of land protected with these measures will total some 350 acres located in the corridor between Indiantown Road and Jonathan Dickinson State Park. Private land adjacent to the river corridor in this segment would be protected from trespass and vandalism by fencing the area and patrol by Florida State Park Rangers.

Economic. Those coming into the region to visit the Loxahatchee River can be expected to add to the income of the local area. This income would be generated by expenditures on motel accomodations, meals at restaurants, gasoline, canoe rentals and the like.

Land Use. Land uses in the river basin are expected to change very rapidly in the future due to the enormous population growth in the study area. Under Alternative B approximately 350 acres along the Northwest Fork from Indiantown Road to Jonathan Dickinson State Park would be protected to prevent land use changes in the river corridor.

The portion of the river from river mile 6 to Jupiter Inlet will see single family residential development in the river corridor continue up to the State Park boundary and increasing multi-family projects near Inlet.

Mining. There are no known oil, gas, or other commercially significant energy or mineral resources in the study area. Designation of the river would, therefore, have no effect on mining activities.

Agriculture. Under Alternative A there would be no additional regulation of adjacent agricultural landholdings. No soil classified as prime farmland or prime forest land by the U.S. Department of Agriculture would be irretrievably or irreversibly committed.

Transportation. The proposed I-95 project consists of completion of the remaining segment of Interstate Route 95 in Florida from the Martin-St. Lucie County line to PGA Boulevard in northern Palm Beach County. The I-95 crossing of the Loxahatchee River has been designed to minimize impacts on the river.

Increased recreation use of the river originating in Riverbend Park will result in increased traffic on Indiantown Road, but according to current plans, the road will be widened in the future.

Impacts on Local and State Government

Under Alternative A, the State of Florida and the County of Palm Beach would share management responsibilities for preservation of the Loxahatchee River. The County of Palm Beach would have management responsibility for the portions of the river within Riverbend Park. The State of Florida would be responsible for the remaining designated segment of the river. The State would be responsible for adopting a program of action which will provide permanent protection for the natural and cultural qualities of the river and adjoining lands. Local governments may have to provide additional land-use controls to assist the State in protecting the river.

Under Alternative A, local government would be adversely affected due to the loss of tax base.

Real Property Taxes. The State of Florida does not compensate local governments for the loss of property taxes when acquiring lands for park purposes. Assuming the State opts to use acquisition as the primary method of preservation a total of 246.96 acres will be removed from county tax rolls. An additional 100-150 acres of less than fee acquisition would be partially removed from county tax rolls. The actual total could be substantially less if land use controls are utilized in lieu of acquisition.

Because of the limited amount of land involved in relation to the overall tax base the adverse impacts are negligible.

Alternative B - State-Administered Wild and Scenic River With Slough Protection

Under Alternative B a 7.5-mile segment of the Loxahatchee River would be designated as a State-administered component of the National Wild and Scenic Rivers System. The river would be managed jointly by the State of Florida and the County of Palm Beach as under Alternative A. The amount of land purchased or otherwise restricted from development to protect the river corridor would be much greater under Alternative B (700 acres) than under Alternative A. In addition, large tracts of land in the Loxahatchee Slough would be protected through the acquisition of easements, acquisition in fee, or through the transfer of development rights. The Loxahatchee Slough would be restored to a more natural condition and managed to ensure adequate water quality and quantity for the Northwest Fork.

Impacts on Natural Resources

Alternative B provides the greatest level of protection for the natural environment. Restoration of the Loxahatchee Slough would restore the natural hydroperiod of the system and improve water quality to the Northwest Fork and to the estuary. Restoration of natural flows to the Northwest Fork would reduce salt water intrusion in this portion of the river. Acquisition of the widest possible corridor along the Northwest Fork would benefit management of the natural resources of the river corridor.

Vegetation. Acquisition of the river corridor from Indiantown Road to the State Park boundary will protect the unique cypress river-swamp community in this reach of the river from encroachment by residential development. Management by the Florida Department of Natural Resources' professional staff will prevent invasion by exotic plants and allow controlled burning and other management practices to maintain the integrity of the existing vegetative community. Acquisition of a maximum width corridor under Alternative B will benefit this management. Controlled access and use as well as patrolling of the river area will minimize damage to vegetation due to recreational use.

Fish and Wildlife. Same as Alternative A.

Threatened and Endangered Species. Same as Alternative A.

Water Quality. Water quality would be improved under Alternative B due to the restoration of the Loxahatchee Slough. Restoration of sheet flow in the slough will increase the contact time of water with vegetation.

Air Quality. Increased visitation will have no significant impact on air quality. Designation will not change standards or air quality classification of the river area.

Impacts on Cultural Resources

Same as Alternative A

National Register Properties. No National Register sites are found in the study area.

Socioeconomic Impacts

This alternative will result in the preservation of the Loxahatchee River as a recreational resource. National designation will benefit the local economy by attracting visitors from other regions. The repair of the Loxahatchee Slough will provide undetermined benefits in improvements to water supply. Alternative B will have major impacts on existing water management practices in the river basin.

Recreation. Same as Alternative A.

Water Resource Management and Development. Alternative B will have major impacts on existing water management practices in the river basin. Further research would be necessary to determine the nature of these changes and their impacts.

Private Land. Alternative B maximizes the width of the protective corridor between Indiantown Road and the State park. The corridor would total some 700 acres and the emphasis would be on acquisition in fee, if possible. Private land adjacent to the river corridor would be protected from trespass and vandalism by fencing the area and patrol by park rangers.

To restore the Loxahatchee Slough some 6,889 acres would need to be protected through transfer of development rights, purchase of easements, or outright purchase of fee title.

Economy. Those coming into the region to visit the Loxahatchee River can be expected to add to the income of the local area. This income would be generated by expenditures on motel accommodations, meals at restaurants, gasoline, canoe rentals, and the like. Short-term benefits to the local economy would be expected during the construction phase of the water resource engineering features of this alternative.

Mining. There are no known oil, gas, or other commercially significant energy or mineral resources in the study area. Designation of the river would, therefore, have no effect on mining activities.

Agriculture. Under Alternative B there would be no additional regulation of adjacent agricultural land holdings. No soils classified as prime farmland or prime forest land by the U.S. Department of Agriculture would be irretrievably or irreversibly committed.

Transportation. The proposed I-95 project consists of completion of the remaining segment of Interstate Route 95 in Florida from the Martin-St. Lucie County Line to PGA Boulevard in northern Palm Beach County. The Loxahatchee River crossing has been designed to minimize impacts on the river.

Impacts on Local and State Government

Under Alternative B the State of Florida and the County of Palm Beach would, as under Alternative A, share management responsibilities for preservation of the Loxahatchee River. The County of Palm Beach would have management responsibility for the portion of the river within Riverbend Park. The State of Florida would be responsible for the remaining designated segment of the river.

Real Property Taxes. Under Alternative B some 700 acres of land in the river corridor between Indiantown Road and the Jonathan Dickinson State Park could be removed from local government tax rolls. In addition, up to 6,889 acres in the Loxahatchee Slough could be removed from local tax rolls, depending on the conservation techniques used in this area.

<u>County or Townships Within Area</u>	<u>Assessed Value (Dollars)</u>	<u>Tax Rate (\$ Per 000)</u>	<u>Taxes (Dollars)</u>	<u>Fraction of Total County or Township Tax Revenue (Decimal)</u>
Martin County	212,200	12.5	2700	Nil
Palm Beach County	274,940	12.5	3500	Nil

Alternative C - No Action/Existing Trends Alternative

Under the no action alternative no segment of the river would be included in the National Wild and Scenic Rivers System. The effects of selecting this alternative are presented both as a standard of reference to which alternatives can be compared, and as a future option which can be chosen. The plan portrays the effects likely to occur in the study area if no action is taken as a result of this study and current management continues; it thus represents the probable future environment in the area.

Choosing this alternative is expected to have the following impacts:

Impacts on Natural Resources

Generally, the no action alternative is expected to result in adverse impacts on the natural environment of the Loxahatchee River, particularly the segment between Indiantown Road (river mile 13) and the Jonathan Dickinson State Park (river mile 10.25). Local land use controls restrict residential development to one unit per 5 acres in the river corridor. Current growth trends in the area indicate that the area may be developed and approximately 70 homes or cottages would be permitted to be built in the corridor. In addition, unrestricted recreational use will increase pressure on the river corridor. Specific impacts are discussed below.

Vegetation. Increased residential development in the Loxahatchee River corridor between Indiantown Road and the State Park may result in the destruction of some of the native cypress river-swamp vegetation community. The creation of panoramic views of the majestic cypress of the river swamp could result in the piecemeal destruction of the ecosystem as a whole.

Unrestricted recreational use of this segment of the river will result in the removal of rare plants and damage to the vegetative community. In addition, exotic species will likely invade and flourish in the river corridor.

The freshwater vegetative community of the Northwest Fork will suffer from continuing saltwater encroachment unless existing water management practices are changed. The no action alternative may, therefore, result in continued stress on the freshwater vegetative community due to saltwater intrusion.

Fish and Wildlife. Increased residential development and activity in the segment from Riverbend to Jonathan Dickinson State Park will result in the destruction of valuable wildlife habitat and the disturbance of wildlife range.

Threatened and Endangered Species. The elimination of wildlife habitat and range by continuing residential development and unrestricted use will likely have adverse impacts on the threatened and endangered species of the area including those within Jonathan Dickinson State Park.

Plants or animals included on the federal list of endangered species and known to occur as residents or migrants to the Loxahatchee River Study area are: bald eagle (*Haliaeetus leucocephalus*), red-cockaded woodpecker (*Picoides borealis*), brown pelican (*Pelecanus*), Florida everglade kite (*Posthrhamus sociabilis plubeus*), eastern indigo snake (*Drymarchon corais couperi*), West Indian manatee (*Trichechus manatus*), and the American alligator (*Alligator mississippiensis*). In addition, the entire Loxahatchee River has been designated as a critical habitat for the West Indian (or Florida) manatee by the U.S. Fish and Wildlife Service.

Future residential development along the Northwest Fork may effect a bald eagle nesting site and disturb the habitat of the American alligator in this segment.

Water Quality. Alternative C may have adverse impact on water quality. As adjacent lands are developed increased sedimentation and urban runoff may degrade water quality.

Air Quality. Alternative C will have no impact on air quality.

Impacts on Cultural Resources

Uncontrolled access and recreation use in the segment of the Loxahatchee River between Riverbend and Jonathan Dickinson State Park could result in damage to an Indian mound as well as other undetermined archeological artifacts in this reach of the river.

National Register Properties. No National Register sites are found in the study area.

Socioeconomic Impacts

Social impacts include the potential loss of a unique scenic resource in the area. There are no adverse economic impacts foreseen.

Recreation. Public recreation use of the river will increase whether or not the river is included in the National Wild and Scenic Rivers System. The establishment of Riverbend Park by Palm Beach County will provide a new access site, adequate parking, and a canoe rental concession. This can be expected to increase the use of the river in the near future. Palm Beach County will not be able to control access and use outside of Riverbend Park. Uncontrolled visitor access and use in the segment of the river between Indiantown Road and Jonathan Dickinson State Park will cause environmental damage from overuse, vandalism, litter, undesirable noise, and deviant behavior.

Jonathan Dickinson State Park will continue to manage the portion of the river within its boundaries to provide a quality recreation experience. Potentially, the State park could acquire additional land to add to the existing river corridor under State management.

Water Resource Management and Development. Alternative C will have no impact on water management in the study area.

Private Land. Increased unrestricted recreation use in the section of the Loxahatchee River between Indiantown Road and Jonthan Dickinson State Park will result in greater problems with trespass and vandalism on private land.

Land Use. Land uses in the river corridor and the overall basin are expected to change very rapidly in the future due to the enormous population growth in the study area. The portion of the river from river mile 6 to Jupiter Inlet will see single family residential development continue up to the State park boundary and increasing multi-family projects near the Inlet.

The river corridor downstream from Indiantown Road as well as the agricultural areas adjacent to the corridor are expected to be developed for residential use. Local land use regulations limit development in the river corridor from Indiantown Road to the Jonthan Dickinson State park to 1 unit per 5 acres. This would permit as many as 70 residences to be built in the river corridor on river frontage property.

Mining. There are no known oil, gas, or other commercially significant mineral deposits in the study area which would be affected by non-designation.

Agricultural. The river corridor is not suited for agricultural development and not designating the river would not open up more land for agricultural development.

Transportation. Non-designation would have no effect on future road construction.

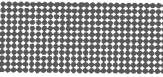
Increased recreation use of the river originating in Riverbend Park will result in increased traffic on Indiantown Road.

Impacts on Local and State Government

State and local governments would continue to carry out present policies to protect the Loxahatchee River.

Real Property Taxes. No effect.

Costs of Proposal. None.



VII

CHAPTER VII


LIST OF PREPARERS

Fred W. van Vonno, Outdoor Recreation Planner, National Park Service, Southeast Regional Office. B.A. (1974), Political Science, University of Florida; M.C.P., (1980), Master of City Planning/Environmental Planning, Georgia Institute of Technology. Study coordinator for wild and scenic river planning effort. Expertise/experience in land use planning, evaluation of riverine environments, public involvement, planning process, and design and coordination of research efforts.

Sharon C. Keene, Chief, Rivers and Trails, National Park Service, Southeast Regional Office. B.S. (1970), Education, Morgan State University; M.L.A. (1976), Master of Landscape Architecture, University of Pennsylvania. Responsible for overall program management. Expertise/experience in outdoor recreation planning and design, identification of environmental impacts, and natural resource management.

Donald J. Broussard, Outdoor Recreation Planning Technician, National Park Service, Southeast Regional Office. B.A. (1975), Political Science, Louisiana State University; M.C.P. (1981), City Planning, Georgia Institute of Technology. Responsible for land use analysis, estimation of recreation use, and regional economic impacts. Previous experience in water resources planning with U.S. Army Corps of Engineers, New Orleans District (1979).

Dennis B. Ragsdale, Outdoor Recreation Planning Technician, National Park Service, Southeast Regional Office. B.A. Political Science, University of South Florida (1979); M.C.P. (1981), Master of City Planning, Georgia Institute of Technology. Expertise/Experience in land use and environmental planning.



VIII

CHAPTER VIII

LIST OF AGENCIES, ORGANIZATIONS, AND PERSONS TO WHOM COPIES OF THE STATEMENT ARE SENT

A. Coordination in the Review of the Draft Environmental Statement

Copies of the draft environmental impact statement were sent to the following agencies, organizations, and persons for their review and comment.

Federal Agencies

Department of Energy
Department of Agriculture
Department of Defense
Environmental Protection Agency
Department of Transportation
Bureau of Reclamation
Department of the Interior
Department of Commerce
Department of Housing and Urban Development

State of Florida

Office of the Governor
South Florida Water Management District
Department of Environmental Regulation
Game and Fresh Water Fish Commission
Department of Natural Resources
Department of Transportation

Local/Regional

Martin County
Palm Beach County
Jupiter Inlet District
Palm Beach Area Planning Board
Loxahatchee River Environmental Control District (ENCON)
Treasure Coast Regional Planning Council
Village of Tequesta
Town of Jupiter

Special Interest Groups and Individuals

Adjacent Landowners
Bankers Land Co.
Mr. Nathaniel B. Reed
Mr. Bill Lund
Mr. James D. Harrison
Mr. Patrick Carnahan
Mr. Steven W. Osborne
Mr. William E. Hoffman

Mr. K. Kelm
Mr. Arthur Marshal
Mr. J.D. Yoder, Jr.
Gee & Jenson, Inc.
Audubon Soceity, Inc.
Florida Wildlife Federation
Florida Defenders of the Environment
The Trust for Public Land
Wildlife Conservation League of Palm Beach County
Florida Nature Conservancy
Sierra Club Southeast Chapter
Palm Beach Pack and Paddle Club, Inc.

B. Consulation and Coordination in the Development of the Proposal and in Preparation of the Draft Environmental Impact Statement

The chronology of major actions is as follows:

November 10, 1978	The Loxahatchee River was authorized for study by the Congress to determine its potential for inclusion in the National Wild and Scenic Rivers System.
January 17, 1979	The National Park Service held a public meeting in the Jupiter-Tequesta area and found strong local support for starting the study.
September 24-28, 1979	The National Park Service met with local, State, and federal officials to discuss planned initiation of study.
February 27, 1980	The National Park Service study team held a meeting in Hobe Sound with representatives of local, State, and federal agencies as well as environmental interests to identify issues of concern as well as potential roles of agencies cooperating in the study. Prior to and following this meeting the entire group conducted a field reconnaissance of the study area.
March 7, 1980	A National Park Service press release announces the formal initiation of the study.
March 31, 1980	The National Park Service hosts a public meeting at the Tequesta Village Hall. Broad public support for designation of the river is expressed by the 90-100 persons attending the meeting.
August 23, 1980	The National Park Service hosts a public planning workshop at the Pine Jog Environmental Sciences Center in West Palm Beach to explore in detail the issues raised by the study. A summary of the workshop is provided in Appendix A of this report.

January 26, 1981

The National Park Service presents a concept plan for joint management of the river to State and Palm Beach County officials. Officials at the State and county levels express their support for the concept and agree to participate in a joint planning process to further develop the concept plan.

February 26, 1981

Meeting with State and county planners to address concerns raised during January meeting.

July 1982

A combined draft study report and draft environmental impact statement is released for a 90 day review and comment period.

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Loxahatchee River Study Update

November, 1980

united states department of the interior / national park service



INTRODUCTION

This is the second National Park Service (NPS) report on the progress of our study of the Loxahatchee River to determine its potential for inclusion in the National Wild and Scenic Rivers System. This report provides a summary of the public planning workshop held recently in West Palm Beach. It also presents, in general terms, the planning alternatives being considered by the NPS study team.

THE PUBLIC PLANNING WORKSHOP

NPS hosted a public planning workshop at the Pine Jog Environmental Sciences Center on Saturday, August 23, 1980. Nearly 100 people attended the workshop and spent the entire afternoon discussing the various issues raised by the NPS study. Workshop participants included local elected officials, representatives of various government agencies, landowners, environmental interests, and other interested citizens. We appreciate the thoughtful contributions of the workshop participants, as well as the comments and suggestions mailed in by many others. We are especially grateful to Mr. Bob Bergen and the Pine Jog Center for making the facility available and assisting in arrangements for the workshop.

The workshop was structured to allow for maximum participation. Five working groups were created to deal with specific questions and were asked to report their opinions back to the group as a whole. The following is a summary of the issues addressed by the workshop:

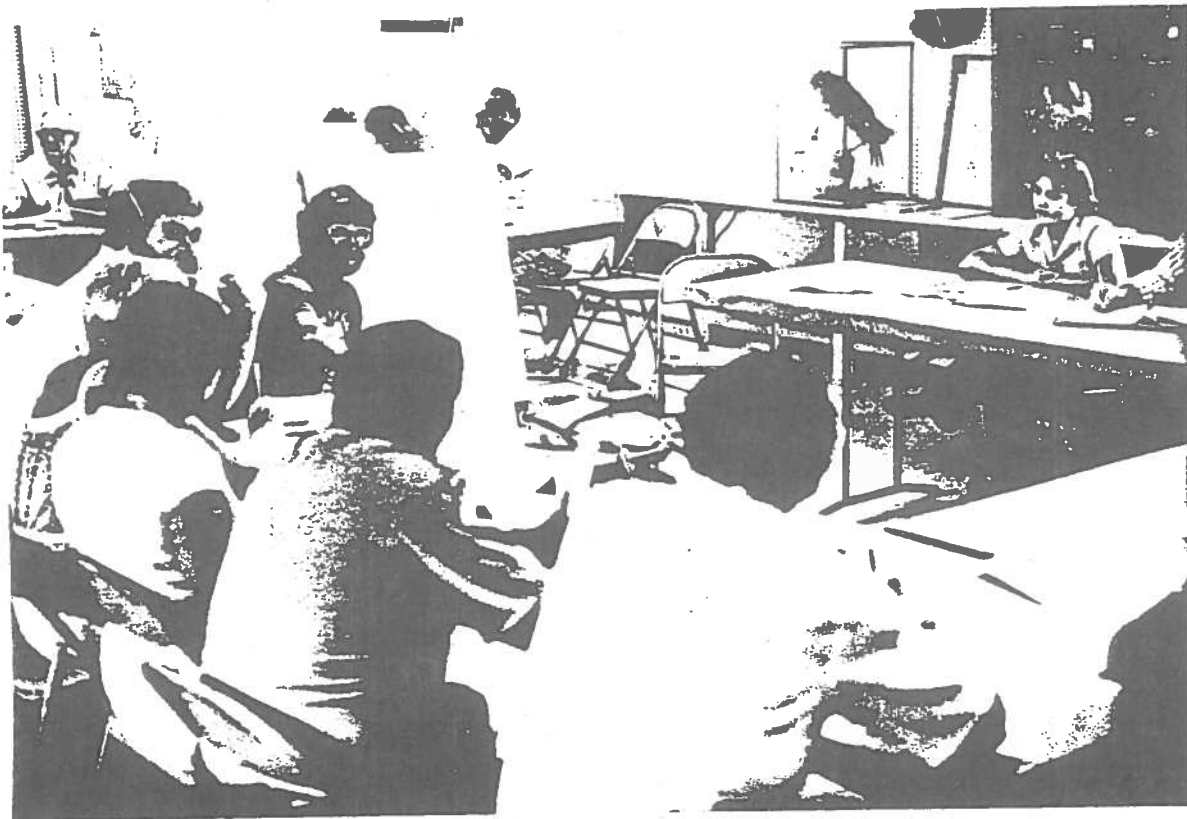
1. What are the outstanding values of the river?

Numerous values were listed by the various workshop groups. Foremost was that the Loxahatchee River, a naturally meandering subtropical river, is unique in southeast Florida because it remains in a largely undeveloped and pristine natural condition. Other values which were noted included:

- The historic and archeological significance of the river and adjacent lands
- The river corridor provides a habitat for at least 30 rare and endangered plant and animal species
- An irreplaceable Cypress canopied river with Cypress trees as old as 300-500 years

- A potential educational resource for environmental education and interpretive purposes
- High plant diversity due to the overlap of tropical and temperate plant communities
- The proximity of the resource to major population centers
- The river is a prime nursery zone for fresh and salt water fish
- Excellent water quality
- The important role of this unique river ecosystem in the region
- The river is a critical habitat for the manatee, an endangered species
- The lack of exotics

These comments were made primarily with reference to the Northwest Fork of the river. Few, if any, outstanding values were attributed to the North Fork of the Loxahatchee.



Workshop participants at Pine Jog Environmental Sciences Center

2. How can these values best be protected?

The general consensus of the workshop participants was that the values of the river could best be protected by the outright purchase of the scenic river areas. There was no suggestion to attempt to buy land in the developed areas along the river. Acquisition was discussed only for the undeveloped portion between Indiantown Road and the Jonathan Dickinson State Park.

Other methods for protecting the river focused on protection of the watershed as a whole to insure adequate water quality and quantity for the Northwest Fork and the estuary.

3. Which, if any, of these values would be considered of national significance?

Most of the outstanding values established in discussion of question one were also thought to be of national significance and worthy of federal protection efforts.

4. Which agencies are likely to best be able to protect the river?

Workshop participants considered various agencies which could take the primary role in protecting the river, as well as, the cooperating roles of other agencies. The general consensus was that the Florida Department of Natural Resources was the most appropriate agency to manage the river provided National Park Service guidelines are followed. The Jonathan Dickinson State Park already has several miles of the river within its boundaries and has a capable staff to manage the river. It was felt that the Florida Department of Natural Resources cannot manage the river without substantial cooperation and assistance from other agencies of government.

5. To effectively protect the river corridor, how wide should this conservation corridor be?

The opinions of the various workshop groups ranged from acquisition of the entire river basin to a cautionary note to compromise and not to ask for too much. Some important factors mentioned in determining the width of the corridor were access considerations, width of the floodplain, tree line, visual corridor, fire protection, and future trail construction. The consensus of one workshop group was that the corridor width should extend at least 150ft. beyond the existing outer tree line.

6. Should land inside of a conservation corridor be purchased in fee or should the purchase of easements be considered?

The workshop groups were unanimous in their opinion that acquisition in fee simple was the best method to protect the conservation corridor. However, most felt that the individual landowners should be consulted as to their preference.

7. Is it feasible to ask local governments to effectively protect the river corridor through techniques such as transfer of development rights, zoning, etc., as a part of the wild and scenic river plan?

Workshop participants, including a number of local officials who were present, felt that local governments could not protect the river corridor on their own. However, local governments were perceived as having many tools for protection and as being a necessary part of any plan to preserve the river.

8. Should a "carrying capacity" be established to limit the number of people using the Loxahatchee River at any given time?

The workshop groups supported the establishment of a carrying capacity for the Northwest Fork. Access to the upper reaches of the Northwest Fork could be controlled by limiting the number of access points to the river. The actual number of people using the river could be controlled by requiring permits to float the river with only a limited number issued per day. It was recognized that it would be difficult to limit use of the lower reaches of the Northwest Fork. However, there were suggestions to limit the horsepower of boats in the State Park to less than five, ban motor boats in the park, and limit ramp access in the park to small boats.

9. Is the continuation of private ownership of land in the conservation corridor compatible with river protection efforts?

There was little general discussion of this question. The group asked to consider this question thought that in the "wild" areas between Indiantown Road and the State Park the river could best be protected by acquisition of private land. The group thought that the values of the more developed areas of the river could be protected without acquiring land.

10. Is it feasible to protect the river relying solely on the efforts of adjacent landowners?

Workshop participants generally felt that the river could not be protected "relying solely on efforts of adjacent landowners". Some thought the question was worded poorly and that an either/or answer would ignore what landowners could do. Many saw the possibility of landowners protecting the river in more developed areas. There are also opportunities for private landowners to assist in an overall management plan by donating easements or title to land to a managing agency. The private landowner could improve his tax situation, as well as the desirability of his remaining land, by donating land or interests in land to a river managing agency.

11. What types of uses of the river and the adjacent land area would be compatible with protection of the outstanding values of the river? Incompatible?

Generally, everyone was in agreement on these issues:

Compatible

--Canoeing

--Fishing

--Camping in authorized campgrounds in Jonathan Dickinson State Park

--Walking

--Low density development and continued private ownership as long as there is no infringement on the river corridor

--Agriculture out of sight and hearing range from the river

--Non-chemical control of aquatic weeds

--Water treatment plants employing tertiary treatment

Incompatible

--Camping along the river

--Hunting

--Commercial uses

--Cattle ranches

--High density residential development

--Point sources of pollutants

--I-95 crossing if it goes outside of the existing Florida Turnpike corridor

--Exotic vegetation types

--Power boats in the segment between Indiantown Road and Trapper Nelson's.

--Unrestricted access to the river.

--Increased noise levels from outside the river corridor.

12. What kind of interpretive program and facilities would be appropriate on the river? Could this be a way to alleviate certain user problems?

Numerous suggestions were made concerning appropriate facilities, activities, and interpretive programs. The various comments can be summarized as follows:

- Palm Beach County's newly acquired Riverbend Park should be a key interpretive center and "the springboard for activities" on the river. It was suggested that canoe rental facilities could be located at Riverbend and that access to the river could be controlled at this point. Trash bags could be distributed at Riverbend to reduce user impacts.
- A hiking trail, possibly connecting with the Florida Trail, could be constructed in the river corridor. However, it was noted that there should be no campsites in the "wild" portion of the river.
- Limit use of daytime activities.
- Establish a carrying capacity for river use based on visitor impact on the resource.
- Provide restroom facilities at the Florida Turnpike crossing.
- Provide shuttle service for canoeist from Jonathan Dickinson State Park to Riverbend.
- Provide guided tours and brochures describing what plants and wildlife may be seen in the river corridor. Another suggestion was to provide a slide show at an existing park facility stressing the fragile nature of the river ecosystem.
- Consider longterm maintenance costs in all programs.
- Collection of plant specimens in the river corridor should be prohibited.
- Restore river canopy and natural vegetation at Riverbend.

Other Considerations

A primary concern of the workshop participants was the effect of the C-18 canal system on the Loxahatchee River. Most people felt that the existing C-18 system is totally unsatisfactory from the standpoint of discharges, water quality and quantity, siltation, and uniformity of flow as these affect the Northwest Fork and the estuary. The Park Service was advised to consider carefully the C-18 system and to coordinate, if possible, with the U.S. Army Corps of Engineers study of C-18. Some advocated the restoration of the Loxahatchee Slough to its original condition.

A related concern was water quality from groves, drainage districts, and developing residential areas in the river basin. These should be considered in any plan to protect the river.

Additional Comments

The summary of the workshop represents the comments of those who attended the workshop. If you have differing ideas or additional

comments, please use the mailback sheet provided on the last page. In this way the National Park Service study will represent an analysis of all points of view.

ALTERNATIVE PLANS

This section presents, in general terms, alternatives being considered by the National Park Service study team. The specifics for each alternative have been left open ended for discussion purposes. For example, under Alternative 2, several possibilities are suggested as a potential managing agency. The National Park Service has no preferred alternative at this point in the study process. We welcome your comments on these alternatives.

ALTERNATIVE 1 - No Action

An "existing trend" plan assumes that growth and development in the river basin will occur as projected in present local and regional plans. The river would not be included in the National Wild and Scenic Rivers System but private citizens, as well as, local, state, and federal agencies could elect to provide substantial protection for the river.

Private landowners along the river could enter into an agreement among themselves to place restrictions on their own use of land along the river. Such an agreement could include restrictive covenants on property which would prohibit clearing of vegetation along the river.

In this way, landowners would maintain the natural character of the river by voluntarily entering into an agreement with each other which would not substantially alter use of their own property. The success of such an approach depends on the number of private landowners willing to enter into such agreements.

Local governments and special districts are presently attempting to protect the Loxahatchee River corridor in number of ways. Palm Beach County is pioneering in the use of Transfer of Development Rights to protect environmentally sensitive areas in the Loxahatchee Slough. Both Martin and Palm Beach Counties have zoning ordinances which limit densities in the river corridor. Martin County is considering an ordinance to protect vegetation along the Northwest Fork of the Loxahatchee. The Jupiter Inlet District is exploring a possible dock ordinance to regulate dock construction.

The State's Department of Parks and Recreation is already managing the portions of the Northwest and North Forks which are located in the Jonathan Dickinson State Park. Possible future land acquisition by the Florida State Park System could increase the extent of the protected segment of the river. Other state agencies such as the South Florida Water Management District and the Game and Freshwater Fish Commission could continue to follow policies which protect the Loxahatchee River.

Federal agencies which may play a role in protecting the Loxahatchee River include the Environmental Protection Agency, Fish and Wildlife Service, and the U.S. Army Corps of Engineers. The Corps of Engineers is considering the environmental integrity of the Loxahatchee River in its present study of the C-18 Canal System. Federal agencies, however, would be required to give greater consideration to protecting the river under provisions of the Wild and Scenic Rivers Act.

ALTERNATIVE 2 - Inclusion of a 7 mile segment of the Loxahatchee River in the National Wild and Scenic River System.

This alternative assumes designation of the 7 miles of the Loxahatchee River between Indiantown Road and the lower boundary of Jonathan Dickinson State Park and implementation of a management plan conserving its existing environmental and cultural values. There are numerous management options possible for protecting the river within the National Wild and Scenic River System. The following listing offers some possibilities for discussion purposes:

Managing Agency

- Federal agency such as the National Park Service or U.S. Forest Service
- State agency such as the Florida Department of Natural Resources Division of Recreation and Parks
- Local government or association of governments such as the Loxahatchee Council of Governments
- River basin council or watershed association possibly serving in an advisory capacity
- Other?

River Recreation Use

- Limit access and establish a carrying capacity to govern the number of visitors
- Establish new access sites to the river and encourage visitation
- Establish an interpretive program to educate the public about the river and its ecology
- Increase picnic facilities along the river
- Other?

Width of Conservation Corridor

- Sufficient to protect visual corridor varying as to the density of vegetation and slope of adjacent land

- A uniform width of 50 or 100 feet
- Sufficient to preserve the ecological integrity of the river and the adjacent river-forest community
- Other?

Methods of Protecting the Conservation Corridor

- Purchase in fee simple
- Purchase of a conservation/scenic easement
- Donation by riparian landowners for tax benefits and as part of private initiative to protect the scenic qualities of the corridor
- Transfer of development rights
- Zoning and other local ordinances (e.g. construction setback ordinances, tree ordinances)
- Combination of some or all of the above
- Other?

ALTERNATIVE 3 - Inclusion of a 13 mile segment of the Loxahatchee River in the National Wild and Scenic River System

This alternative assumes designation of the Loxahatchee River from its mouth at Jupiter Inlet to River Mile 13 at Indiantown Road and implementation of a management plan which conserves the existing environmental and cultural value of the river. The management options would be similar to those listed in Alternative 2.

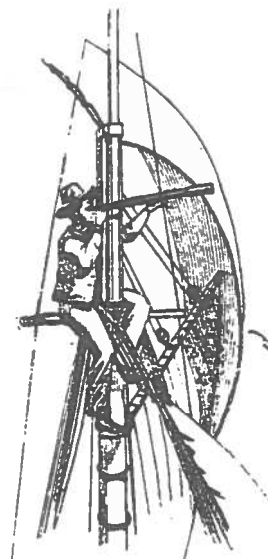
Under this alternative, the segment between Jupiter Inlet and River Mile 6 might be managed as a "recreational" river. The segment between Mile 6 and River Mile 13 might be managed as a combination of "wild" and "scenic".

Environmental Impacts

From the public input to date, most supporters envision National Wild and Scenic River designation as curbing development along the river and as essentially a low-use public recreational and educational resource. Generally, environmental impacts could be expected to be negligible, except, perhaps, at access points to the river. Increased use of the river could also disturb the habitat of certain rare or endangered species. We welcome more specific information which would help to identify potential environmental impacts and suggestions for reducing such impacts. The National Park Service, in accordance with National Environmental Policy Act guidelines, is presently preparing an environmental assesment to identify impacts and to aid our planning process. The environmental assesment will also indicate if an Environmental Impact Statement (EIS) will be required.

Looking Ahead

Following our analysis of the feedback we hope to get from the public, NPS will prepare a draft report on its study of the Loxahatchee River. The report will make a recommendation to the Congress on the eligibility of the Loxahatchee River for inclusion in the National Wild and Scenic Rivers System. If the river is determined to be qualified, the report will indicate the NPS study team's preferred alternative and will set forth a conceptual management plan. This draft report will undergo formal public and inter-governmental review beginning in April of next year. Because of decreasing funds, we can print and distribute only a limited number of copies of the complete draft report. However, we will mail a summary of the findings and recommendations contained in that report to everyone on our mailing list. A limited number of copies of the draft report will be available upon request to our Atlanta Office. If we receive sufficient public interest NPS could hold additional public meetings in the Jupiter-Tequesta area on the findings and recommendations of the report.



Feedback to NPS

We sincerely welcome your continuing involvement in developing planning alternatives for the Loxahatchee River Study. Please use the addressed, postage paid mail-back sheet if it is convenient for what you want to tell us. To help us be more responsive to you, we need your comments by December 22. Because of the large number of individuals and organizations participating in this study, we will be unable to acknowledge responses. However, we will consider carefully all comments and points of view in preparing our draft report.

Feedback to NPS

Dear NPS:

Re: The Loxahatchee River Study

Please fold, staple, and mail back to NPS. Postage paid.

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
SOUTHEAST REGION
75 SPRING STREET, S.W.
ATLANTA, GEORGIA 30303

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National Park Service
Resource Area Studies
75 Spring Street SW Suite 1046
Atlanta, Georgia 30303
Attention: Fred van Vonno

(FOLD HERE)

Public Law 90-542
(16 U.S.C. 1271 et seq.)
WILD AND SCENIC RIVERS ACT
as amended
through P.L. 96-580, December 23, 1980

AN ACT

To provide for a National Wild and Scenic Rivers System, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That (a) this Act may be cited as the "Wild and Scenic Rivers Act".

(b) It is hereby declared 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.

(c) The purpose of this Act is to implement this policy by instituting a national wild and scenic rivers system, by designating the initial components of that system, and by prescribing the methods by which and standards according to which additional components may be added to the system from time to time.

SEC. 2. (a) The national wild and scenic rivers system shall comprise rivers (i) that are authorized for inclusion therein by Act of Congress, or (ii) that are designated as wild, scenic or recreational rivers by or pursuant to an act of the legislature of the State or States through which they flow, that are to be permanently administered as wild, scenic or recreational rivers by an agency or political subdivision of the State or States concerned, that are found by the Secretary of the Interior, upon application of the Governor of the State or the Governors of the States concerned, or a person or persons thereunto duly appointed by him or them, to meet the criteria established in this Act and such criteria supplementary thereto as he may prescribe, and that are approved by him for inclusion in the system, including, upon application of the Governor of the State concerned, the Allagash Wilderness Waterway, Maine; that segment of the Wolf River, Wisconsin, which flows through Langlade County; and that segment of the New River in North Carolina extending from its confluence with Dog Creek downstream approximately 26.5 miles to the Virginia State line. Upon receipt of an application under clause (ii) of this subsection, the Secretary shall notify the Federal Energy Regulatory Commission and publish such application in the Federal Register. Each river designated

under clause (ii) shall be administered by the State or political subdivision thereof without expense to the United States other than for administration and management of federally owned lands. For purposes of the preceding sentence, amounts made available to any State or political subdivision under the Land and Water Conservation^{Fund} Act of 1965 or any other provision of law shall not be treated as an expense to the United States. Nothing in this subsection shall be construed to provide for the transfer to, or administration by, a State or local authority of any federally owned lands which are within the boundaries of any river included within the system under clause (ii).

(b) A wild, scenic or recreational river area eligible to be included in the system is a free-flowing stream and the related adjacent land area that possesses one or more of the values referred to in section 1, subsection (b) of this Act. Every wild, scenic or recreational river in its free-flowing condition, or upon restoration to this condition, shall be considered eligible for inclusion in the national wild and scenic rivers system and, if included, shall be classified, designated, and administered as one of the following:

(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 areas--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.

(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.

SEC. 3. (a) The following rivers and the land adjacent thereto are hereby designated as components of the national wild and scenic rivers system:

(1) CLEARWATER, MIDDLE FORK, IDAHO.--The Middle Fork from the town of Kooskia upstream to the town of Lowell; the Lochsa River from its junction with the Selway at Lowell forming the Middle Fork, upstream to the Powell Ranger Station; and the Selway River from Lowell upstream to its origin; to be administered by the Secretary of Agriculture.

(2) ELEVEN POINT, MISSOURI.--The segment of the river extending downstream from Thomasville to State Highway 142; to be administered by the Secretary of Agriculture.

(3) FEATHER, CALIFORNIA.--The entire Middle Fork downstream from the confluence of its tributary streams one kilometer south of Beckwourth, California; to be administered by the Secretary of Agriculture.

(4) RIO GRANDE, NEW MEXICO.--The segment extending from the Colorado State line downstream to the State Highway 96 crossing, and the lower four miles of the Red River; to be administered by the Secretary of the Interior.

(5) ROGUE, OREGON.--The segment of the river extending from the mouth of the Applegate River downstream to the Lobster Creek Bridge; to be administered by agencies of the Departments of the Interior or Agriculture as agreed upon by the Secretaries of said Departments or as directed by the President.

(6) SAINT CROIX, MINNESOTA AND WISCONSIN.--The segment between the dam near Taylors Falls, Minnesota, and the dam near Gordon, Wisconsin, and its tributary, the Namekagon, from Lake Namekagon downstream to its confluence with the Saint Croix; to be administered by the Secretary of the Interior: Provided, That except as may be required in connection with items (a) and (b) of this paragraph, no funds available to carry out the provisions of this Act may be expended for the acquisition or development of lands in connection with, or for administration under this Act of, that portion of the Saint Croix River between the dam near Taylors Falls, Minnesota, and the upstream end of Big Island in Wisconsin, until sixty days after the date on which the Secretary has transmitted to the President of the Senate and Speaker of the House of Representatives a proposed cooperative agreement between the Northern States Power Company and the United States (a) whereby the company agrees to convey to the United States, without charge, appropriate interests in certain of its lands between the dam near Taylors Falls, Minnesota, and the upstream end of Big Island in Wisconsin, including the company's right, title, and interest to approximately one hundred acres per mile, and (b) providing for the use and development of other lands and interests in land retained by the company between said points adjacent to the river in a manner which shall complement and not be inconsistent with the purposes for which the lands and interests in land donated by the company are administered under this Act. Said agreement may also include provision for State or local governmental participation as authorized under subsection (e) of section 10 of this Act. A one-thousand-three-hundred-and eighty-acre portion of the area commonly known as the Velie Estate, located adjacent to the Saint Croix River in Douglas County, Wisconsin, as depicted on the map entitled "Boundary Map/Velie Estate--Saint Croix National Scenic Riverway", dated September 1980, and numbered 630-90,001, may be acquired by the Secretary without regard to any acreage limitation set forth in subsection (b) of this section or subsection (a) or (b) of section 6 of this Act.

(7) SALMON, MIDDLE FORK, IDAHO.--From its origin to its confluence with the main Salmon River; to be administered by the Secretary of Agriculture.

(8) WOLF, WISCONSIN.--From the Langlade-Menominee County line downstream to Keshena Falls; to be administered by the Secretary of the Interior.

(9) LOWER SAINT CROIX, MINNESOTA AND WISCONSIN.--The segment between the dam near Taylors Falls and its confluence with the Mississippi River: Provided, (i) That the upper twenty-seven miles of this river segment shall be administered by the Secretary of the Interior; and (ii) That the lower twenty-five miles shall be designated by the Secretary upon his approval of

an application for such designation made by the Governors of the States of Minnesota and Wisconsin.

(NOTE: The indented portion that follows was included in the legislation adding the Lower Saint Croix River to the System (P.L. 92-560), but not as an amendment to P.L. 90-542.)

SEC. 3. The Secretary of the Interior shall, within one year following the date of enactment of this Act, take, with respect to the Lower Saint Croix River segment, such action as is provided for under section 3(b) of the Wild and Scenic Rivers Act: Provided, That (a) the action required by such section shall be undertaken jointly by the Secretary and the appropriate agencies of the affected States; (b) the development plan required by such section shall be construed to be a comprehensive master plan which shall include, but not be limited to, a determination of the lands, waters, and interests therein to be acquired, developed, and administered by the agencies or political subdivisions of the affected States; and (c) such development plan shall provide for State administration of the lower twenty-five miles of the Lower Saint Croix River segment and for continued administration by the States of Minnesota and Wisconsin of such State parks and fish hatcheries as now lie within the twenty-seven-mile segment to be administered by the Secretary of the Interior.

SEC. 4. Notwithstanding any provision of the Wild and Scenic Rivers Act which limits acquisition authority within a river segment to be administered by a Federal agency, the States of Minnesota and Wisconsin may acquire within the twenty-seven-mile segment of the Lower Saint Croix River segment to be administered by the Secretary of the Interior such lands as may be proposed for their acquisition, development, operation, and maintenance pursuant to the development plan required by section 3 of this Act.

SEC. 5. Nothing in this Act shall be deemed to impair or otherwise affect such statutory authority as may be vested in the Secretary of the Department in which the Coast Guard is operating or the Secretary of the Army for the maintenance of navigation aids and navigation improvements.

SEC. 6. (a) There are authorized to be appropriated such sums as may be necessary to carry out the provisions of this Act, but not to exceed \$7,275,000 for the acquisition and development of lands and interests therein within the boundaries of the twenty-seven-mile segment of the Lower Saint Croix River segment to be administered by the Secretary of the Interior.

(b) No funds otherwise authorized to be appropriated by this section shall be expended by the Secretary of the Interior until he has determined that the States of Minnesota and Wisconsin have

initiated such land acquisition and development as may be proposed pursuant to the development plan required by section 3 of this Act, and in no event shall the Secretary of the Interior expend more than \$2,550,000 of the funds authorized to be appropriated by this section in the first fiscal year following completion of the development plan required by section 3 of this Act. The balance of funds authorized to be appropriated by this section shall be expended by the Secretary of the Interior at such times as he finds that the States of Minnesota and Wisconsin have made satisfactory progress in their implementation of the development plan required by section 3 of this Act.

(10) CHATTOOGA, NORTH CAROLINA, SOUTH CAROLINA, GEORGIA.--The segment from 0.8 mile below Cashiers Lake in North Carolina to Tugaloo Reservoir, and the West Fork Chattooga River from its junction with Chattooga upstream 7.3 miles, as generally depicted on the boundary map entitled "Proposed Wild and Scenic Chattooga River and Corridor Boundary", dated August 1973; to be administered by the Secretary of Agriculture: Provided, That the Secretary of Agriculture shall take such action as is provided for under subsection (b) of this section within one year from the date of enactment of this paragraph (10): Provided further, That for the purposes of this river, there are authorized to be appropriated not more than \$5,200,000 for the acquisition of lands and interests in lands and not more than \$809,000 for development.

(11) RAPID RIVER, IDAHO.--The segment from the headwaters of the main stem to the national forest boundary and the segment of the West Fork from the wilderness boundary downstream to the confluence with the main stem, as a wild river.

(12) SNAKE, IDAHO AND OREGON.--The segment from Hells Canyon Dam downstream to Pittsburgh Landing, as a wild river; and the segment from Pittsburgh Landing downstream to an eastward extension of the north boundary of section 1, township 5 north, range 47 east, Willamette meridian, as a scenic river.

(13) FLATHEAD, MONTANA.--The North Fork from the Canadian border downstream to its confluence with the Middle Fork; the Middle Fork from its headwaters to its confluence to the South Fork; and the South Fork from its origin to the Hungry Horse Reservoir, as generally depicted on the map entitled "Proposed Flathead Wild and Scenic River Boundary Location" dated February 1976; to be administered by agencies of the Departments of the Interior and Agriculture as agreed upon by the Secretaries of such Departments or as directed by the President. Action required to be taken under subsection (b) of this section shall be taken within one year from the date of enactment of this paragraph. For the purposes of this river, there are authorized to be appropriated not more than \$6,719,000 for the acquisition of lands and interests in lands. No funds authorized to be appropriated pursuant to this paragraph shall be available prior to October 1, 1977.

(14) MISSOURI, MONTANA.--The segment from Fort Benton one hundred and forty-nine miles downstream to Robinson Bridge, as generally depicted on the boundary map entitled "Missouri Breaks Freeflowing River Proposal", dated October 1975, to be administered by the Secretary of the Interior. For the

purposes of this river, there are authorized to be appropriated not more than \$1,800,000 for the acquisition of lands and interests in lands. No funds authorized to be appropriated pursuant to this paragraph shall be available prior to October 1, 1977.

(NOTE: The indented portion that follows was included in the legislation adding the Missouri River to the System (P.L. 94-486), but not as an amendment to P.L. 90-542.)

SEC. 202. After consultation with the State and local governments and the interested public, the Secretary shall, pursuant to section 3(b) of the Wild and Scenic Rivers Act and within one year of enactment of this Act--

(1) establish detailed boundaries of the river segment designated as a component of the National Wild and Scenic Rivers System pursuant to section 1 of this Act (hereinafter referred to as the "river area"): Provided, That the boundaries of the portion of the river area from Fort Benton to Coal Banks Landing and the portion of the river area within the boundaries of the Charles M. Russell National Wildlife Range shall be drawn to include only the river and its bed and exclude all adjacent land except significant historic sites and such campsites and access points as are deemed necessary by the Secretary, and to which the Secretary finds no reasonable alternative, as set forth in the management plan required pursuant to clause (2) of this section; and

(2) determine, in accordance with the guidelines in section 2(b) of the Wild and Scenic Rivers Act, which of the three classes--wild river, scenic river, or recreation river--best fit portions of the river segment, designate such portions in such classes, and prepare a management plan for the river area in accordance with such designation.

SEC. 203. (a) The Secretary of the Interior (hereinafter referred to as the "Secretary") shall manage the river area pursuant to the provisions of this Act and the Wild and Scenic Rivers Act, and in accordance with the provisions of the Taylor Grazing Act (48 Stat. 1269), as amended (43 U.S.C. 315), under principles of multiple use and sustained yield, and with any other authorities available to him for the management and conservation of natural resources and the protection and enhancement of the environment, where such Act, principles, and authorities are consistent with the purposes and provisions of this Act and the Wild and Scenic Rivers Act.

(b)(1) The Secretary may acquire land and interests in land only in accordance with the provisions of this Act and the Wild and Scenic Rivers Act and the limitations contained in section 6 of that Act and only: (A) at Fort Benton for the visitor facility as provided in subsection (g)(2) of this section; (B) at the site of Fort McKenzie; (C) in that portion of the river area downstream

from Fort Benton to Coal Banks Landing for historic sites, campsites, and access points in accordance with section 202(1) of this Act; and (D) in that portion of the river area downstream from Coal Banks Landing so as to provide, wherever practicable and necessary for the purposes of this Act and the Wild and Scenic Rivers Act, rim-to-rim protection for such portion.

(2) In accordance with section 6(b) of the Wild and Scenic Rivers Act, the Secretary shall not acquire fee title to any lands by condemnation under the authority of that Act or this Act, except that the Secretary may use condemnation when necessary and within the limitations on acquisition set forth in clause (1) of this subsection to clear title, acquire scenic easements, or acquire such other easements as are reasonably necessary to give the public access to the river segment within the river area and to permit its members to traverse the length of said river area or of selected portions thereof.

(3) The Secretary shall, to the extent feasible, give priority in expenditure of funds pursuant to this Act for the acquisition and development of campsites and historic sites, including the site of the visitor center at Fort Benton and the site of Fort McKenzie.

(c) Consistent with the provisions of this Act and the Wild and Scenic Rivers Act, the Secretary may issue easements, licenses, or permits for rights-of-way through, over, or under the lands in Federal ownership within the river area, or for the use of such lands on such terms and conditions as are in accordance with the provisions of this Act, the Wild and Scenic Rivers Act, and other applicable law.

(d) The Secretary is authorized to permit the construction of a bridge across the river in the general vicinity of the community of Winifred, Montana, in order to accommodate the flow of north-south traffic. Such construction shall be in accordance with a plan which is mutually acceptable to the Secretary and State and local highway officials, and which is consistent with the purposes of this Act and the Wild and Scenic Rivers Act.

(e) To the extent and in a manner consistent with the purposes of the Wild and Scenic Rivers Act the Secretary shall permit such pumping facilities and associated pipelines as may be necessary to assure the continuation of an adequate supply of water from the Missouri River to the owners of lands adjacent to the river and for future agricultural use outside the river corridor. The Secretary is authorized to permit such pumping facilities and associated pipelines for use for fish, wildlife, and recreational uses outside the river corridor.

(f) The Secretary shall permit hunting and fishing in the river area in accordance with applicable Federal and State laws, except that he may designate zones where, and periods when, no

hunting or fishing shall be permitted for reasons of public safety or administration.

(g)(1) The Secretary, acting through the Bureau of Land Management, shall exercise management responsibilities in the river area for:

(A) the grazing of livestock;

(B) the application of the United States mining and mineral leasing laws;

(C) the management of fish and wildlife habitat;

(D) the diversion and use of water for agricultural and domestic purposes;

(E) the acquisition of lands and interests therein;

(F) the administration of public recreational uses of, and any historic sites and campsites in, the river area; and

(G) all other management responsibilities except those set forth in paragraph (2) of this subsection.

(2) The Secretary, acting through the National Park Service, shall be responsible for the construction, operation, and management of any visitor facility in or near Fort Benton which is found necessary in accordance with the management plan developed pursuant to section 202 and the provision, at such facility, of interpretive services for the historic, archeological, scenic, natural, and fish and wildlife resources of the area.

(15) OBED, TENNESSEE.--The segment from the western edge of the Catoosa Wildlife Management Area to the confluence with the Emory River; Clear Creek from the Morgan County line to the confluence with the Obed River, Daddys Creek from the Morgan County line to the confluence with the Obed River; and the Emory River from the confluence with the Obed River to the Nemo bridge as generally depicted and classified on the stream classification map dated December 1973. The Secretary of the Interior shall take such action, with the participation of the State of Tennessee as is provided for under subsection (b) within one year following the date of enactment of this paragraph. The development plan required by such subsection (b) shall include cooperative agreements between the State of Tennessee acting through the Wildlife Resources Agency and the Secretary of the Interior. Lands within the Wild and Scenic River boundaries that are currently part of the Catoosa Wildlife Management Area shall continue to be owned and managed by the Tennessee Wildlife Resources Agency in such a way as to protect the wildlife resources and primitive character of the area, and without further development of roads, campsites, or associated recreational facilities unless deemed necessary by that agency for wildlife management practices. The Obed Wild and Scenic River shall be managed

by the Secretary of the Interior. For the purposes of carrying out the provisions of this Act with respect to this river, there are authorized to be appropriated such sums as may be necessary, but not to exceed \$2,000,000 for the acquisition of lands or interests in lands and not to exceed \$400,000 for development. No funds authorized to be appropriated pursuant to this paragraph shall be available prior to October 1, 1977.

(16) PERE MARQUETTE, MICHIGAN.--The segment downstream from the junction of the Middle and Little South Branches to its junction with United States Highway 31 as generally depicted on the boundary map entitled "Proposed Boundary Location, Pere Marquette Wild and Scenic River,"; to be administered by the Secretary of Agriculture. After consultation with State and local governments and the interested public, the Secretary shall take such action as is provided for under subsection (b) with respect to the segment referred to in this paragraph within one year from the date of enactment of this paragraph. Any development or management plan prepared pursuant to subsection (b) shall include (a) provisions for the dissemination of information to river users and (b) such regulations relating to the recreational and other uses of the river as may be necessary in order to protect the area comprising such river (including lands contiguous or adjacent thereto) from damage or destruction by reason of overuse and to protect its scenic, historic, esthetic and scientific values. Such regulations shall further contain procedures and means which shall be utilized in the enforcement of such development and management plan. For the purposes of carrying out the provisions of this Act with respect to the river designated by this paragraph, there are authorized to be appropriated not more than \$8,125,000 for the acquisition of lands or interests in lands and \$402,000 for development.

(17) RIO GRANDE, TEXAS.--The segment on the United States side of the river from river mile 842.3 above Mariscal Canyon downstream to river mile 651.1 at the Terrell-Val Verde County line; to be administered by the Secretary of the Interior. The Secretary shall, within two years after the date of enactment of this paragraph, take such action with respect to the segment referred to in this paragraph as is provided for under subsection (b). The action required by such subsection (b) shall be undertaken by the Secretary, after consultation with the United States Commissioner, International Boundary and Water Commission, United States and Mexico, and appropriate officials of the State of Texas and its political subdivisions. The development plan required by subsection (b) shall be construed to be a general management plan only for the United States side of the river and such plan shall include, but not be limited to, the establishment of a detailed boundary which shall include an average of not more than 160 acres per mile. Nothing in this Act shall be construed to be in conflict with--

(A) The commitments or agreements of the United States made by or in pursuance of the treaty between the United States and Mexico regarding the utilization of the Colorado and Tijuana Rivers and of the Rio Grande, signed at Washington, February 1944 (59 Stat. 1219), or

(B) the treaty between the United States and Mexico regarding maintenance of the Rio Grande and Colorado River as the international boundary between the United States and Mexico, signed November 23, 1970.

For purposes of carrying out the provisions of this Act with respect to the river designated by this paragraph, there are authorized to be appropriated such sums as may be necessary, but not more than \$1,650,000 for the acquisition of lands and interests in lands and not more than \$1,800,000 for development.

(18) SKAGIT, WASHINGTON.--The segment from the pipeline crossing at Sedro-Woolley upstream to and including the mouth of Bacon Creek; the Cascade River from its mouth to the junction of its North and South Forks; the South Fork to the boundary of the Glacier Peak Wilderness Area; the Suiattle River from its mouth to the boundary of the Glacier Peak Wilderness Area at Milk Creek; the Sauk River from its mouth to its junction with Elliott Creek; the North Fork of the Sauk River from its junction with the South Fork of the Sauk to the boundary of the Glacier Peak Wilderness Area; as generally depicted on the boundary map entitled "Skagit River--River Area Boundary"; all segments to be administered by the Secretary of Agriculture. Riprapping related to natural channels with natural rock along the shorelines of the Skagit segment to preserve and protect agricultural land shall not be considered inconsistent with the values for which such segment is designated. After consultation with affected Federal agencies, State and local government and the interested public, the Secretary shall take such action as is provided for under subsection (b) with respect to the segments referred to in this paragraph within one year from the date of enactment of this paragraph; as part of such action, the Secretary of Agriculture shall investigate that portion of the North Fork of the Cascade River from its confluence with the South Fork to the boundary of the North Cascades National Park and if such portion is found to qualify for inclusion, it shall be treated as a component of the Wild and Scenic Rivers System designated under this section upon publication by the Secretary of notification to that effect in the Federal Register. For the purposes of carrying out the provisions of this Act with respect to the river designated by this paragraph there are authorized to be appropriated not more than \$11,734,000 for the acquisition of lands or interest in lands and not more than \$332,000 for development.

(19) UPPER DELAWARE RIVER, NEW YORK AND PENNSYLVANIA.--The segment of the Upper Delaware River from the confluence of the East and West branches below Hancock, New York, to the existing railroad bridge immediately downstream of Cherry Island in the vicinity of Sparrow Bush, New York, as depicted on the boundary map entitled "The Upper Delaware Scenic and Recreational River", dated April 1978; to be administered by the Secretary of the Interior. Subsection (b) of this section shall not apply, and the boundaries and classifications of the river shall be as specified on the map referred to in the preceding sentence, except to the extent that such boundaries or classifications are modified pursuant to section 704(c) of the National Parks and Recreation Act of 1978. Such boundaries and classifications shall be published in the Federal Register and shall not become effective until ninety days after they have been forwarded to the Committee on Interior and Insular Affairs of the United States House of Representatives and the Committee on Energy and Natural Resources of the United States Senate. For purposes of carrying out the provisions of this Act with respect to the river designated by this paragraph there are authorized to be appropriated such sums as may be necessary.

(NOTE: The indented portion that follows was included in the legislation adding the Upper Delaware River to the System (P.L. 95-625), but not as an amendment to P.L. 90-542.)

(b)(1) Notwithstanding any requirement to the contrary contained in section 6(c) of the Wild and Scenic Rivers Act, within one hundred and eighty days after the date of enactment of this Act, the Secretary shall publish in the Federal Register general guidelines for land and water use control measures to be developed and implemented by the appropriate officials of the States of New York and Pennsylvania (hereinafter referred to as the "directly affected States"), by the local political subdivisions, and by the Delaware River Basin Commission (hereinafter referred to as the "Commission"). The Secretary shall provide for participation in the development of the said general guidelines by all levels of State, county, and local government, and concerned private individuals and organizations, and also shall seek the advice of the Upper Delaware Citizens Advisory Council established in subsection (f) (hereinafter referred to as the "Advisory Council"). In each of the directly affected States, prior to publication of such general guidelines, public hearings shall be conducted by the Secretary or his designee, in the region of the Upper Delaware River designated by subsection (a) (hereinafter in this section referred to as the "Upper Delaware River").

(2) The Secretary may from time to time adopt amended or revised guidelines and shall do so in accordance with the provisions of paragraph (1) hereof.

(c)(1) Within three years from the date of the enactment of this Act, the Secretary, in cooperation with the Commission, the Advisory Council, the directly affected States and their concerned political subdivisions and other concerned Federal agencies, shall develop, approve, and submit to the Governors of the directly affected States a management plan (hereinafter in this section referred to as the "management plan" or "the plan") for the Upper Delaware River which shall provide for as broad a range of land and water uses and scenic and recreational activities as shall be compatible with the provisions of this section, the Wild and Scenic Rivers Act, and the general guidelines for land and water use controls promulgated by the Secretary under the provisions of subsection (b).

(2) The plan shall apply to the Upper Delaware River and shall set forth--

(A) a map showing detailed final landward boundaries, and upper and lower termini of the area and the specific segments of the river classified as scenic and recreational, to be administered in accordance with such classifications;

(B) a program for management of existing and future land and water use, including the application of available management techniques;

(C) an analysis of the economic and environmental costs and benefits of implementing the management plan including any impact of the plan upon revenues and costs of local government;

(D) a program providing for coordinated implementation and administration of the plan with proposed assignment of responsibilities to the appropriate governmental unit at the Federal, regional, State, and local levels; and

(E) such other recommendations or provisions as shall be deemed appropriate to carry out the purposes of this section.

(3) Immediately following enactment of this Act, the Secretary, through the National Park Service or such other designee, shall develop and implement such interim programs as he shall deem necessary and appropriate to protect the Upper Delaware River and its environs and to protect the public health and safety. Such interim programs shall include provisions for information to river users, education and interpretation activities, and regulation of recreational use of the river.

(4) To enable the directly affected States and their political subdivisions to develop and implement programs compatible with the management plan, the Secretary shall provide such technical assistance to the said States and their political subdivisions as he deems appropriate.

(5) The Secretary shall promote public awareness of and participation in the development of the management plan, and shall develop and conduct a concerted program to this end. Prior to final approval of the management plan, the Secretary shall hold two or more public hearings in the Upper Delaware River region of each directly affected State.

(6) Upon approval of the management plan by the Secretary, it shall be published in the Federal Register and shall not become effective until ninety days after it shall have been forwarded to the Committee on Interior and Insular Affairs of the United States House of Representatives and the Committee on Energy and Natural Resources of the United States Senate. The plan shall be administered by the Secretary in accordance with the provisions of this section and the Wild and Scenic Rivers Act. The Secretary is hereby granted such authority as may be required to implement and administer said plan.

(d) Notwithstanding any provision of the Wild and Scenic Rivers Act, the Secretary may not acquire more than a total of

four hundred and fifty acres of land and interests in land for access, development sites, the preservation of scenic qualities, or for any other purposes: Provided, That the Secretary may acquire additional land and interests in land for such purposes not in excess of one thousand acres if such additional acquisition is recommended and provided for in the management plan as finally approved by the Secretary. The limitations contained in this section shall not apply under the circumstances set forth in subsection (e)(4) of this section. Prior to acquisition of any land or interests in land which has been used for business purposes during the annual period immediately preceding the date of the enactment of this Act, the Secretary shall first make such efforts as he deems reasonable to acquire easements or restrictive covenants, or to enter into any other appropriate agreements or arrangements with the owners of said land, consistent with the purposes of this section.

(e)(1) For the purpose of protecting the integrity of the Upper Delaware River, the Secretary shall review all relevant local plans, laws, and ordinances to determine whether they substantially conform to the approved management plan provided for in subsection (c) and to the general guidelines promulgated by the Secretary pursuant to subsection (b). Additionally, the Secretary shall determine the adequacy of enforcement of such plans, laws, and ordinances, including but not limited to review of building permits and zoning variances granted by local governments, and amendments to local laws and ordinances.

(2) The purpose of such reviews shall be to determine the degree to which actions by local governments are compatible with the purposes of this section. Following the approval of the management plan and after a reasonable period of time has elapsed, but not less than two years, upon a finding by the Secretary that such plans, laws, and ordinances are nonexistent, are otherwise not in conformance with the management plan or guidelines, or are not being enforced in such manner as will carry out the purposes of this section (as determined by the Secretary), the Secretary may exercise the authority available to him under the provisions of paragraph (4) hereof.

(3) To facilitate administration of this section, the Secretary may contract with the directly affected States or their political subdivisions to provide, on behalf of the Secretary, professional services necessary for the review of relevant local plans, laws, and ordinances, and of amendments thereto and variances therefrom, and for the monitoring of the enforcement thereof by local governments having jurisdiction over any area in the region to which the management plan applies. The Secretary shall notify the appropriate State or local officials as to the results of his review under

this section within forty-five days from the date he receives notice of the local government action.

(4) In those sections of the Upper Delaware River where such local plans, laws, and ordinances, or amendments thereto or variances therefrom, are found by the Secretary not to be in conformance with the guidelines or the management plan promulgated pursuant to subsections (b) and (c) of this section, respectively, or are not being enforced in such manner as will carry out the purposes of this section (as determined by the Secretary), the Secretary is hereby authorized to acquire land or interests in land in excess of the acreage provided for in subsection (d) of this section. Land and interests in land acquired pursuant to this subsection shall be restricted to the geographical area of the local governmental unit failing to conform with the said guidelines or management plan, and shall be limited to those lands clearly and directly required, in the judgment of the Secretary, for protection of the objectives of this Act. The total acreage of land and interests in land acquired pursuant to this subsection shall not in any event exceed the limitations contained in section 6(a) of the Wild and Scenic Rivers Act. This subsection shall apply notwithstanding the first sentence of section 6(c) of the Wild and Scenic Rivers Act. Notwithstanding any limitation on amounts authorized to be appropriated for acquisition of land and interests in land which is contained in section 3(a)(21) of the Wild and Scenic Rivers Act or in any other provision of law, there are authorized to be appropriated such sums as may be necessary to carry out this subsection.

(f)(1) At the earliest practicable date following enactment of this Act, but no later than one hundred and twenty days thereafter, there shall be established an Upper Delaware Citizens Advisory Council. The Advisory Council shall encourage maximum public involvement in the development and implementation of the plans and programs authorized by this section. It shall report to the Commission and the Secretary from time to time during preparation of the management plan. Following completion of the management plan, it shall report to the Secretary and the Governors of the directly affected States no less frequently than once each year its recommendations, if any, for improvement in the programs authorized by this Act, or in the programs of other agencies which may relate to land or water use in the Upper Delaware River region.

(2) Membership on the Advisory Council shall consist of seventeen members appointed as follows: there shall be--

(A) six members from each of the directly affected States appointed by the Secretary from nominations submitted by the legislatures of the respective counties and appointed such that two members shall be from each of Orange, Delaware, and Sullivan Counties, New York, and

three members shall be from each of Wayne and Pike Counties, Pennsylvania (at least one appointee from each county shall be a permanent resident of a municipality abutting the Upper Delaware River);

(B) two members appointed at large by each Governor of a directly affected State; and

(C) one member appointed by the Secretary.

The Secretary shall designate one of the aforesaid members to serve as Chairperson of the Advisory Council who shall be a permanent resident of one of the aforementioned counties. Vacancies on the Advisory Council shall be filled in the same manner in which the original appointment was made. Members of the Advisory Council shall serve without compensation as such, but the Secretary is authorized to pay expenses reasonably incurred by the Advisory Council in carrying out its responsibilities under this Act on vouchers signed by the Chairman.

(g) With respect to the land and water in areas which are not owned by the United States but which are within the boundaries of the segment of the Delaware River designated as a wild and scenic river under subsection (a), the Secretary is authorized to enter into contracts with the appropriate State or political subdivisions thereof pursuant to which the Secretary may provide financial assistance to such State or political subdivision for purposes of--

(1) enforcing State and local laws in such areas, and

(2) removing solid waste from such areas and disposing of such waste.

(h) Nothing in this section shall be construed as limiting the right to fish and hunt on any of the lands or waters within the boundaries of the Upper Delaware River in the manner provided in section 13 of the Wild and Scenic Rivers Act.

(i) There are hereby authorized to be appropriated to carry out the purposes of this section such sums as may be necessary.

(j) Where any provision of the Wild and Scenic Rivers Act is inconsistent with any provisions of this section, the provision of this section shall govern. In applying the provisions of section 6(g)(3) of the Wild and Scenic Rivers Act, with regard to "improved property", the date specified therein, shall, for purposes of the river designated in this Act, be the date of enactment of this Act (rather than January 1, 1967).

(20) DELAWARE, NEW YORK, PENNSYLVANIA, AND NEW JERSEY.--The segment from the point where the river crosses the northern boundary of the Delaware Water

Gap National Recreation Area to the point where the river crosses the southern boundary of such recreation area; to be administered by the Secretary of the Interior. For purposes of carrying out this Act with respect to the river designated by this paragraph, there are authorized to be appropriated such sums as may be necessary. Action required to be taken under subsection (b) of this section with respect to such segment shall be taken within one year from the date of enactment of this paragraph, except that, with respect to such segment, in lieu of the boundaries provided for in such subsection (b), the boundaries shall be the banks of the river. Any visitors facilities established for purposes of use and enjoyment of the river under the authority of the Act establishing the Delaware Water Gap National Recreation Area shall be compatible with the purposes of this Act and shall be located at an appropriate distance from the river.

(21) AMERICAN, CALIFORNIA.--The North Fork from a point 0.3 mile above Heath Springs downstream to a point approximately 1,000 feet upstream of the Colfax-Iowa Hill Bridge, including the Gold Run Addition Area, as generally depicted on the map entitled "Proposed Boundary Maps" contained in Appendix I of the document dated January 1978 and entitled "A Proposal: North Fork American Wild and Scenic River" published by the United States Forest Service, Department of Agriculture; to be designated as a wild river and to be administered by agencies of the Departments of Interior and Agriculture as agreed upon by the Secretaries of such Departments or as directed by the President. Action required to be taken under subsection (b) shall be taken within one year after the date of the enactment of this paragraph; in applying such subsection (b) in the case of the Gold Run Addition Area, the acreage limitation specified therein shall not apply and in applying section 6(g)(3), January 1 of the calendar year preceding the calendar year in which this paragraph is enacted shall be substituted for January 1, 1967. For purposes of carrying out the provisions of this Act with respect to the river designated by this paragraph, there are authorized to be appropriated not more than \$850,000 for the acquisition of lands and interests in land and not more than \$765,000 for development.

(22) MISSOURI RIVER, NEBRASKA, SOUTH DAKOTA.--The segment from Gavins Point Dam, South Dakota, fifty-nine miles downstream to Ponca State Park, Nebraska, as generally depicted in the document entitled "Review Report for Water Resources Development, South Dakota, Nebraska, North Dakota, Montana", prepared by the Division Engineer, Missouri River Division, Corps of Engineers, dated August 1977 (hereinafter in this paragraph referred to as the "August 1977 Report"). Such segment shall be administered as a recreational river by the Secretary. The Secretary shall enter into a written cooperative agreement with the Secretary of the Army (acting through the Chief of Engineers) for construction and maintenance of bank stabilization work and appropriate recreational development. After public notice and consultation with the State and local governments, other interested organizations and associations, and the interested public, the Secretary shall take such action as is required pursuant to subsection (b) within one year from the date of enactment of this section. In administering such river, the Secretary shall, to the extent, and in a manner, consistent with this section--

(A) provide (i) for the construction by the United States of such recreation river features and streambank stabilization structures as the

Secretary of the Army (acting through the Chief of Engineers) deems necessary and advisable in connection with the segment designated by this paragraph, and (ii) for the operation and maintenance of all streambank stabilization structures constructed in connection with such segment (including both structures constructed before the date of enactment of this paragraph and structures constructed after such date, and including both structures constructed under the authority of this section and structures constructed under the authority of any other Act); and

(b) permit access for such pumping and associated pipelines as may be necessary to assure an adequate supply of water for owners of land adjacent to such segment and for fish, wildlife, and recreational uses outside the river corridor established pursuant to this paragraph.

The streambank structures to be constructed and maintained under subparagraph (A) shall include, but not be limited to, structures at such sites as are specified with respect to such segment on pages 62 and 63 of the August 1977 Report, except that sites for such structures may be relocated to the extent deemed necessary by the Secretary of the Army (acting through the Chief of Engineers) by reason of physical changes in the river or river area. The Secretary of the Army (acting through the Chief of Engineers) shall condition the construction or maintenance of any streambank stabilization structure or of any recreational river feature at any site under subparagraph (A)(i) upon the availability to the United States of such land and interests in land in such ownership as he deems necessary to carry out such construction or maintenance and to protect and enhance the river in accordance with the purposes of this Act. Administration of the river segment designated by this paragraph shall be in coordination with, and pursuant to the advice of a Recreational River Advisory Group which shall be established by the Secretary. Such Group may include in its membership, representatives of the affected States and political subdivisions thereof, affected Federal agencies, and such organized private groups as the Secretary deems desirable. Notwithstanding the authority to the contrary contained in subsection 6(a) of this Act, no land or interests in land may be acquired without the consent of the owner: Provided, That not to exceed 5 per centum of the acreage within the designated river boundaries may be acquired in less than fee title without the consent of the owner, in such instance of the Secretary's determination that activities are occurring, or threatening to occur thereon which constitute serious damage or threat to the integrity of the river corridor, in accordance with the values for which this river was designated. For purposes of carrying out the provisions of this Act with respect to the river designated by this paragraph, there are authorized to be appropriated not to exceed \$21,000,000, for acquisition of lands and interests in lands and for development.

(23) SAINT JOE, IDAHO.--The segment above the confluence of the North Fork of the Saint Joe River to Spruce Tree Campground, as a recreational river; the segment above Spruce Tree Campground to Saint Joe Lake, as a wild river, as generally depicted on the map entitled "Saint Joe River Corridor Map" on file with the Chief of the Forest Service and dated September 1978; to be administered by the Secretary of Agriculture. Notwithstanding any other provision of law, the classification of the Saint Joe River under this paragraph and the subsequent development plan for the river prepared by the Secretary

of Agriculture shall at no time interfere with or restrict the maintenance, use, or access to existing or future roads within the adjacent lands nor interfere with or restrict present use of or future construction of bridges across that portion of the Saint Joe designated as a 'recreational river' under this paragraph. Dredge or placer mining shall be prohibited within the banks or beds of the main stem of the Saint Joe and its tributary streams in their entirety above the confluence of the main stem with the North Fork of the river. Nothing in this Act shall be deemed to prohibit the removal of sand and gravel above the high water mark of the Saint Joe River and its tributaries within the river corridor by or under the authority of any public body or its agents for the purposes of construction or maintenance of roads. The Secretary shall take such action as is required under subsection (b) of this section within one year from the date of enactment of this paragraph. For the purposes of this river, there are authorized to be appropriated not more than \$1,000,000 for the acquisition of lands or interest in lands.

(24)(A) SALMON, IDAHO.--The segment of the main river from the mouth of the North Fork of the Salmon River downstream to Long Tom Bar in the following classes:

(i) the forty-six-mile segment from the mouth of the North Fork of the Salmon River to Corn Creek as a recreational river; and

(ii) the seventy-nine-mile segment from Corn Creek to Long Tom Bar as a wild river; all as generally depicted on a map entitled "Salmon River" dated November 1979, which is on file and available for public inspection in the Office of the Chief, Forest Service, United States Department of Agriculture.

(B) This segment shall be administered by the Secretary of Agriculture: Provided, That after consultation with State and local governments and the interested public, the Secretary shall take such action as is required by subsection (b) of this section within one year from the date of enactment of this paragraph.

(C) The use of motorboats (including motorized jetboats) within this segment of the Salmon River shall be permitted to continue at a level not less than the level of use which occurred during calendar year 1978.

(D) Subject to existing rights of the State of Idaho, including the right of access, with respect to the beds of navigable streams, tributaries or rivers, dredge and placer mining in any form including any use of machinery for the removal of sand and gravel for mining purposes shall be prohibited within the segment of the Salmon River designated as a component of the Wild and Scenic Rivers System by this paragraph; within the fifty-three-mile segment of the Salmon River from Hammer Creek downstream to the confluence of the Snake River; and within the Middle Fork of the Salmon River; and its tributary streams in their entirety: Provided, That nothing in this paragraph shall be deemed to prohibit the removal of sand and gravel, outside the boundaries of the River of No Return Wilderness or the Gospel-Hump Wilderness, above the high water mark of the Salmon River or the Middle Fork and its tributaries for the purposes of construction or maintenance of public roads: Provided further, That this paragraph shall not apply to

any written mineral leases approved by the Board of Land Commissioners of the State of Idaho prior to January 1, 1980.

(E) The provisions of section 7(a) of this Act with respect to the licensing of dams, water conduits, reservoirs, powerhouses, transmission lines or other project works, shall apply to the fifty-three-mile segment of the Salmon River from Hammer Creek downstream to the confluence of the Snake River.

(F) For the purposes of the segment of the Salmon River designated as a component of the Wild and Scenic Rivers System by this paragraph, there is hereby authorized to be appropriated from the Land and Water Conservation Fund, after October 1, 1980, not more than \$6,200,000 for the acquisition of lands and interests in lands.

(25) ALAGNAK, ALASKA.--That segment of the main stem and the major tributary to the Alagnak, the Nonvianuk River, within Katmai National Preserve; to be administered by the Secretary of the Interior.

(26) ALATNA, ALASKA.--The main stem within the Gates of the Arctic National Park; to be administered by the Secretary of the Interior.

(27) ANIAKCHAK, ALASKA.--That portion of the river, including its major tributaries, Hidden Creek, Mystery Creek, Albert Johnson Creek, and North Fork Aniakchak River, within the Aniakchak National Monument and National Preserve; to be administered by the Secretary of the Interior.

(28) CHARLEY, ALASKA.--The entire river, including its major tributaries, Copper Creek, Bonanza Creek, Hosford Creek, Derwent Creek, Flat-Orthmer Creek, Crescent Creek, and Moraine Creek, within the Yukon-Charley Rivers National Preserve; to be administered by the Secretary of the Interior.

(29) CHILIKADROTNA, ALASKA.--That portion of the river within the Lake Clark National Park and Preserve; to be administered by the Secretary of the Interior.

(30) JOHN, ALASKA.--That portion of the river within the Gates of the Arctic National Park; to be administered by the Secretary of the Interior.

(31) KOBUK, ALASKA.--That portion within the Gates of the Arctic National Park and Preserve; to be administered by the Secretary of the Interior.

(32) MULCHATNA, ALASKA.--That portion within the Lake Clark National Park and Preserve; to be administered by the Secretary of the Interior.

(33) NOATAK, ALASKA.--The river from its source in the Gates of the Arctic National Park to its confluence with the Kelly River in the Noatak National Preserve; to be administered by the Secretary of the Interior.

(34) NORTH FORK OF THE KOYUKUK, ALASKA.--That portion within the Gates of the Arctic National Park; to be administered by the Secretary of the Interior.

(35) SALMON, ALASKA.--That portion within the Kobuk Valley National Park; to be administered by the Secretary of the Interior.

(36) TINAYGUK, ALASKA.--That portion within the Gates of the Arctic National Park; to be administered by the Secretary of the Interior.

(37) TLIKAKILA, ALASKA.--That portion within the Lake Clark National Park; to be administered by the Secretary of the Interior.

(38) ANDREAFSKY, ALASKA.--That portion from its source, including all headwaters, and the East Fork, within the boundary of the Yukon Delta National Wildlife Refuge; to be administered by the Secretary of the Interior.

(39) IVISHAK, ALASKA.--That portion from its source, including all headwaters and an unnamed tributary from Porcupine Lake within the boundary of the Arctic National Wildlife Range; to be administered by the Secretary of the Interior.

(40) NOWITNA, ALASKA.--That portion from the point where the river crosses the west limit of township 18 south, range 22 east, Kateel River meridian, to its confluence with the Yukon River within the boundaries of the Nowitna National Wildlife Refuge; to be administered by the Secretary of the Interior.

(41) SELAWIK, ALASKA.--That portion from a fork of the headwaters in township 12 north, range 10 east, Kateel River meridian to the confluence of the Kugarak River; within the Selawik National Wildlife Refuge to be administered by the Secretary of the Interior.

(42) SHEENJEK, ALASKA.--The segment within the Arctic National Wildlife Refuge; to be administered by the Secretary of the Interior.

(43) WIND, ALASKA.--That portion from its source, including all headwaters and one unnamed tributary in township 13 south, within the boundaries of the Arctic National Wildlife Refuge; to be administered by the Secretary of the Interior.

(44) ALAGNAK, ALASKA.--Those segments or portions of the main stem and Nonvianuk tributary lying outside and westward of the Katmai National Park/Preserve and running to the west boundary of township 13 south, range 43 west; to be administered by the Secretary of the Interior.

(45) BEAVER CREEK, ALASKA.--The segment of the main stem from the vicinity of the confluence of the Bear and Champion Creeks downstream to its exit from the northeast corner of township 12 north, range 6 east, Fairbanks meridian within the White Mountains National Recreation Area, and the Yukon Flats National Wildlife Refuge, to be administered by the Secretary of the Interior.

(46) BIRCH CREEK, ALASKA.--The segment of the main stem from the south side of Steese Highway in township 7 north, range 10 east, Fairbanks meridian, downstream to the south side of the Steese Highway in township 10 north, range 16 east; to be administered by the Secretary of the Interior.

(47) DELTA, ALASKA.--The segment from and including all of the Tangle Lakes to a point one-half mile north of Black Rapids; to be administered by the Secretary of the Interior.

(48) FORTYMILE, ALASKA.--The main stem within the State of Alaska; O'Brien Creek; South Fork; Napoleon Creek, Franklin Creek, Uhler Creek, Walker Fork downstream from the confluence of Liberty Creek; Wade Creek; Mosquito Fork downstream from the vicinity of Kechumstuk; West Fork Dennison Fork downstream from the confluence of Logging Cabin Creek; Dennison Fork downstream from the confluence of West Fork Dennison Fork; Logging Cabin Creek; North Fork; Hutchinson Creek; Champion Creek; the Middle Fork downstream from the confluence of Joseph Creek; and Joseph Creek; to be administered by the Secretary of the Interior.

(49) GULKANA, ALASKA.--The main stem from the outlet of Paxson Lake in township 12 north, range 2 west, Copper River meridian to the confluence with Sourdough Creek; the south branch of the west fork from the outlet of an unnamed lake in sections 10 and 15, township 10 north, range 7 west, Copper River meridian to the confluence with the west fork; the north branch from the outlet of two unnamed lakes, one in sections 24 and 25, the second in sections 9 and 10, township 11 north, range 8 west, Copper River meridian to the confluence with the west fork; the west fork from its confluence with the north and south branches downstream to its confluence with the main stem; the middle fork from the outlet of Dickey Lake in township 13 north, range 5 west, Copper River meridian to the confluence with the main stem; to be classified as a wild river area and to be administered by the Secretary of the Interior.

(50) UNALAKLEET, ALASKA.--The segment of the main stem from the headwaters in township 12 south, range 3 west, Kateel River meridian extending downstream approximately 65 miles to the western boundary of township 18 south, range 8 west; to be administered by the Secretary of the Interior.

(b) The agency charged with the administration of each component of the national wild and scenic rivers system designated by subsection (a) of this section shall, within one year from the date of this Act, (except where a different date is provided in subsection (a)) establish detailed boundaries therefor (which boundaries shall include an average of not more than three hundred and twenty acres per mile on both sides of the river); determine which of the classes outlined in section 2, subsection (b), of this Act best fit the river or its various segments; and prepare a plan for necessary developments in connection with its administration in accordance with such classification. Said boundaries, classification, and development plans shall be published in the Federal Register and shall not become effective until ninety days after they have been forwarded to the President of the Senate and the Speaker of the House of Representatives.

SEC. 4.(a) The Secretary of the Interior or, where national forest lands are involved, the Secretary of Agriculture or, in appropriate cases, the two Secretaries jointly shall study and submit to the President reports on the suitability or unsuitability for addition to the national wild and scenic rivers system of rivers which are designated herein or hereafter by the Congress as potential additions to such system. The President shall report to the Congress his recommendations and proposals with respect to the designation of each such river or section thereof under this Act. Such studies shall be completed and such reports shall be made to the Congress with respect to all rivers named in subparagraphs 5(a)(1) through (27) of this Act no later

than October 2, 1978. In conducting these studies the Secretary of the Interior and the Secretary of Agriculture shall give priority to those rivers (i) with respect to which there is the greatest likelihood of developments which, if undertaken, would render the rivers unsuitable for inclusion in the national wild and scenic rivers system, and (ii) which possess the greatest proportion of private lands within their areas. Every such study and plan shall be coordinated with any water resources planning involving the same river which is being conducted pursuant to the Water Resources Planning Act (79 Stat. 244; 42 U.S.C. 1962 et seq.).

Each report, including maps and illustrations, shall show among other things the area included within the report; the characteristics which do or do not make the area a worthy addition to the system; the current status of land ownership and use in the area; the reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed, or curtailed if the area were included in the national wild and scenic rivers system; the Federal agency (which in the case of a river which is wholly or substantially within a national forest, shall be the Department of Agriculture) by which it is proposed the area, should it be added to the system, be administered; the extent to which it is proposed that such administration, including the costs thereof, be shared by State and local agencies; and the estimated cost to the United States of acquiring necessary lands and interests in land and of administering the area, should it be added to the system. Each such report shall be printed as a Senate or House document.

(b) Before submitting any such report to the President and the Congress, copies of the proposed report shall, unless it was prepared jointly by the Secretary of the Interior and the Secretary of Agriculture, be submitted by the Secretary of the Interior to the Secretary of Agriculture or by the Secretary of Agriculture to the Secretary of the Interior, as the case may be, and to the Secretary of the Army, the Chairman of the Federal Power Commission, the head of any other affected Federal department or agency and, unless the lands proposed to be included in the area are already owned by the United States or have already been authorized for acquisition by Act of Congress, the Governor of the State or States in which they are located or an officer designated by the Governor to receive the same. Any recommendations or comments on the proposal which the said officials furnish the Secretary or Secretaries who prepared the report within ninety days of the date on which the report is submitted to them, together with the Secretary's or Secretaries' comments thereon, shall be included with the transmittal to the President and the Congress.

(c) Before approving or disapproving for inclusion in the national wild and scenic rivers system any river designated as a wild, scenic or recreational river by or pursuant to an act of a State legislature, the Secretary of the Interior shall submit the proposal to the Secretary of Agriculture, the Secretary of the Army, the Chairman of the Federal Power Commission, and the head of any other affected Federal department or agency and shall evaluate and give due weight to any recommendations or comments which the said officials furnish him within ninety days of the date on which it is submitted to them. If he approves the proposed inclusion, he shall publish notice thereof in the Federal Register.

SEC. 5.(a) The following rivers are hereby designated for potential addition to the national wild and scenic rivers system:

- (1) Allegheny, Pennsylvania: The segment from its mouth to the town of East Brady, Pennsylvania.
- (2) Bruneau, Idaho: The entire main stem.
- (3) Buffalo, Tennessee: The entire river.
- (4) Chattooga, North Carolina, South Carolina, and Georgia: The entire river.
- (5) Clarion, Pennsylvania: The segment between Ridgway and its confluence with the Allegheny River.
- (6) Delaware, Pennsylvania and New York: The segment from Hancock, New York, to Matamoras, Pennsylvania.
- (7) Flathead, Montana: The North Fork from the Canadian border downstream to its confluence with the Middle Fork; the Middle Fork from its headwaters to its confluence with the South Fork; and the South Fork from its origin to Hungry Horse Reservoir.
- (8) Gasconade, Missouri: The entire river.
- (9) Illinois, Oregon: The entire river.
- (10) Little Beaver, Ohio: The segment of the North and Middle Forks of the Little Beaver River in Columbiana County from a point in the vicinity of Negly and Elkton, Ohio, downstream to a point in the vicinity of East Liverpool, Ohio.
- (11) Little Miami, Ohio: That segment of the main stem of the river, exclusive of its tributaries, from a point at the Warren-Clermont County line at Loveland, Ohio, upstream to the sources of Little Miami including North Fork.
- (12) Maumee, Ohio and Indiana: The main stem from Perrysburg, Ohio, to Fort Wayne, Indiana, exclusive of its tributaries in Ohio and inclusive of its tributaries in Indiana.
- (13) Missouri, Montana: The segment between Fort Benton and Ryan Island.
- (14) Moyie, Idaho: The segment from the Canadian border to its confluence with the Kootenai River.
- (15) Obed, Tennessee: The entire river and its tributaries, Clear Creek and Daddys Creek.
- (16) Penobscot, Maine: Its east and west branches.
- (17) Pere Marquette, Michigan: The entire river.

(18) Pine Creek, Pennsylvania: The segment from Ansonia to Waterville.

(19) Priest, Idaho: The entire main stem.

(20) Rio Grande, Texas: The portion of the river between the west boundary of Hudspeth County and the east boundary of Terrell County on the United States side of the river: Provided, That before undertaking any study of this potential scenic river, the Secretary of the Interior shall determine, through the channels of appropriate executive agencies, that Mexico has no objection to its being included among the studies authorized by this Act.

(21) Saint Croix, Minnesota and Wisconsin: The segment between the dam near Taylors Falls and its confluence with the Mississippi River.

(22) Saint Joe, Idaho: The entire main stem.

(23) Salmon, Idaho: The segment from the town of North Fork to its confluence with the Snake River.

(24) Skagit, Washington: The segment from the town of Mount Vernon to and including the mouth of Bacon Creek; the Cascade River between its mouth and the junction of its North and South Forks; the South Fork to the boundary of the Glacier Peak Wilderness Area; the Suiattle River from its mouth to the Glacier Peak Wilderness Area boundary at Milk Creek; the Sauk River from its mouth to its junction with Elliott Creek; the North Fork of the Sauk River from its junction with the South Fork of the Sauk to the Glacier Peak Wilderness Area boundary.

(25) 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.

(26) Upper Iowa, Iowa: The entire river.

(27) Youghiogheny, Maryland and Pennsylvania: The segment from Oakland, Maryland, to the Youghiogheny Reservoir, and from the Youghiogheny Dam downstream to the town of Connellsville, Pennsylvania.

(28) American, California: The North Fork from the Cedars to the Auburn Reservoir.

(29) Au Sable, Michigan: The segment downstream from Foot Dam to Oscoda and upstream from Loud Reservoir to its source, including its principal tributaries and excluding Mio and Bamfield Reservoirs.

(30) Big Thompson, Colorado: The segment from its source to the boundary of Rocky Mountain National Park.

(31) Cache la Poudre, Colorado: Both forks from their sources to their confluence, thence the Cache la Poudre to the eastern boundary of Roosevelt National Forest.

(32) Cahaba, Alabama: The segment from its junction with United States Highway 31 south of Birmingham downstream to its junction with United States Highway 80 west of Selma.

(33) Clarks Fork, Wyoming: The segment from the Clark's Fork Canyon to the Crandall Creek Bridge.

(34) Colorado, Colorado and Utah: The segment from its confluence with the Dolores River, Utah, upstream to a point 19.5 miles from the Utah-Colorado border in Colorado.

(35) Conejos, Colorado: The three forks from their sources to their confluence, thence the Conejos to its first junction with State Highway 17, excluding Platoro Reservoir.

(36) Elk, Colorado: The segment from its source to Clark.

(37) Encampment, Colorado: The Main Fork and West Fork to their confluence, thence the Encampment to the Colorado-Wyoming border, including the tributaries and headwaters.

(38) Green, Colorado: The entire segment within the State of Colorado.

(39) Gunnison, Colorado: The segment from the upstream (southern) boundary of the Black Canyon of the Gunnison National Monument to its confluence with the North Fork.

(40) Illinois, Oklahoma: The segment from Tenkiller Ferry Reservoir upstream to the Arkansas-Oklahoma border, including the Flint and Barren Fork Creeks.

(41) John Day, Oregon: The main stem from Service Creek Bridge (at river mile 157) downstream to Tumwater Falls (at river mile 10).

(42) Kettle, Minnesota: The entire segment within the State of Minnesota.

(43) Los Pinos, Colorado: The segment from its source, including the tributaries and headwaters within the San Juan Primitive Area, to the northern boundary of the Granite Peak Ranch.

(44) Manistee, Michigan: The entire river from its source to Manistee Lake, including its principal tributaries and excluding Tippy and Hodenpyl Reservoirs.

(45) Nolichucky, Tennessee and North Carolina: The entire main stem.

(46) Owyhee, South Fork, Oregon: The main stem from the Oregon-Idaho border downstream to the Owyhee Reservoir.

(47) Piedra, Colorado: The Middle Fork and East Fork from their sources to their confluence, thence the Piedra to its junction with Colorado Highway 160.

- (48) Shepaug, Connecticut: The entire river.
- (49) Sipsy Fork, West Fork, Alabama: The segment, including its tributaries, from the impoundment formed by the Lewis M. Smith Dam upstream to its source in the William B. Bankhead National Forest.
- (50) Snake, Wyoming: The segment from the southern boundaries of Teton National Park to the entrance to Palisades Reservoir.
- (51) Sweetwater, Wyoming: The segment from Wilson Bar downstream to Spring Creek.
- (52) Tuolumne, California: The main river from its source on Mount Dana and Mount Lyell in Yosemite National Park to Don Pedro Reservoir.
- (53) Upper Mississippi, Minnesota: The segment from its source at the outlet of Itasca Lake to its junction with the northwestern boundary of the city of Anoka.
- (54) Wisconsin, Wisconsin: The segment from Prairie de Sac to its confluence with the Mississippi River at Prairie du Chien.
- (55) Yampa, Colorado: The segment within the boundaries of the Dinosaur National Monument.
- (56) Dolores, Colorado: The segment of the main stem from Rico upstream to its source, including its headwaters; the West Dolores from its source, including its headwaters, downstream to its confluence with the main stem; and the segment from the west boundary, section 2 township 38 north, range 16 west, NMPM, below the proposed McPhee Dam, downstream to the Colorado-Utah border, excluding the segment from one mile above Highway 90 to the confluence of the San Miguel River.
- (57) Snake, Washington, Oregon, and Idaho: The segment from an eastward extension of the north boundary of section 1, township 5 north, range 47 east, Willamette meridian, downstream to the town of Asotin, Washington.
- (58) Housatonic, Connecticut: The segment from the Massachusetts-Connecticut boundary downstream to its confluence with the Shepaug River.
- (59) Kern, California.--The main stem of the North Fork from its source to Isabella Reservoir excluding its tributaries.
- (60) Loxahatchee, Florida.--The entire river including its tributary, North Fork.
- (61) Ogeechee, Georgia.--The entire river.
- (62) Salt, Arizona.--The main stem from a point on the north side of the river intersected by the Fort Apache Indian Reservation boundary (north of Buck Mountain) downstream to Arizona State Highway 288.

(63) Verde, Arizona.--The main stem from the Prescott National Forest boundary near Paulden to the vicinity of Table Mountain, approximately 14 miles above Horseshoe Reservoir, except for the segment not included in the national forest between Clarkdale and Camp Verde, North segment.

(64) San Francisco, Arizona.--The main stem from confluence with the Gila upstream to the Arizona-New Mexico border, except for the segment between Clifton and the Apache National Forest.

(65) Fish Creek, New York.--The entire East Branch.

(66) Black Creek, Mississippi.--The segment from Big Creek Landing in Forrest County downstream to Old Alexander Bridge Landing in Stone County.

(67) Allegheny, Pennsylvania.--The main stem from Kinzua Dam downstream to East Brady.

(68) Cacapon, West Virginia.--The entire river.

(69) Escatawpa, Alabama and Mississippi.--The segment upstream from a point approximately one mile downstream from the confluence of the Escatawpa River and Jackson Creek to a point where the Escatawpa River is joined by the Yellowhouse Branch in Washington County, Alabama, near the town of Deer Park, Alabama; and the segment of Brushy Creek upstream from its confluence with the Escatawpa to its confluence with Scarsborough Creek.

(70) Myakka, Florida.--The segment south of the southern boundary of the Myakka River State Park.

(71) Soldier Creek, Alabama.--The segment beginning at the point where Soldier Creek intersects the south line of section 31, township 7 south, range 6 east, downstream to a point on the south line of section 6, township 8 south, range 6 east, which point is 1,322 feet west of the south line of section 5, township 8 south, range 6 east in the county of Baldwin, State of Alabama.

(72) Red, Kentucky.--The segment from Highway numbered 746 (also known as Spradlin Bridge) in Wolf County, Kentucky, downstream to the point where the river descends below seven hundred feet above sea level (in its normal flow) which point is at the Menifee and Powell County line just downstream of the iron bridge where Kentucky Highway numbered 77 passes over the river.

(73) Bluestone, West Virginia.--From its headwaters to its confluence with the New.

(74) Gauley, West Virginia.--Including the tributaries of the Meadow and the Cranberry, from the headwaters to its confluence with the New.

(75) Greenbrier, West Virginia.--From its headwaters to its confluence with the New.

(76) Birch, West Virginia: The main stem from the Cora Brown Bridge in Nicholas County to the confluence of the river with the Elk River in Braxton County.

- (77) Colville, Alaska.
- (78) Etivluk-Nigu, Alaska.
- (79) Utukok, Alaska.
- (80) Kanektok, Alaska.
- (81) Kisaralik, Alaska.
- (82) Melozitna, Alaska.
- (83) Sheenjok (lower segment), Alaska.
- (84) Situk, Alaska.
- (85) Porcupine, Alaska.
- (86) Yukon (Ramparts section), Alaska.
- (87) Squirrel, Alaska.
- (88) Koyuk, Alaska.

(b)(1) The studies of rivers named in subparagraphs (28) through (55) of subsection (a) of this section shall be completed and reports thereon submitted by not later than October 2, 1979: Provided, That with respect to the rivers named in subparagraphs (33), (50), and (51), the Secretaries shall not commence any studies until (i) the State legislature has acted with respect to such rivers or (ii) one year from the date of enactment of this Act, whichever is earlier.

(2) The study of the river named in subparagraph (56) of subsection (a) of this section shall be completed and the report thereon submitted by not later than January 3, 1976.

(3) The studies of the rivers named in paragraphs (59) through (76) of subsection (a) shall be completed and reports submitted thereon not later than five full fiscal years after the date of the enactment of this paragraph. The study of rivers named in paragraphs (62) and (64) of subsection (a) shall be completed and the report thereon submitted by not later than April 1981.

(4) There are authorized to be appropriated for the purpose of conducting the studies of the rivers named in subparagraphs (28) through (56) such sums as may be necessary, but not more than \$4,060,000. There are authorized to be appropriated for the purpose of conducting the studies of the rivers named in subparagraphs (59) through (76) such sums as may be necessary.

(4) The studies of the rivers in paragraph (77) through (88) shall be completed and reports transmitted thereon not later than three full fiscal years from date of enactment of this paragraph. For the rivers listed in paragraphs (77), (78), and (79) the studies prepared and transmitted to the Congress pursuant to section 105(c) of the Naval Petroleum Reserves Production

Act of 1976 (Public Law 94-258) shall satisfy the requirements of this section.

(5) Studies of rivers listed in paragraphs (80) and (81) shall be completed, and reports submitted within and not later than the time when the Bristol Bay Cooperative Region Plan is submitted to Congress in accordance with section 1204 of the Alaska National Interest Lands Conservation Act.

(c) The study of any of said rivers shall be pursued in as close cooperation with appropriate agencies of the affected State and its political subdivisions as possible, shall be carried on jointly with such agencies if request for such joint study is made by the State, and shall include a determination of the degree to which the State or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the national wild and scenic rivers system.

(d) In all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic and recreational river areas, and all river basin and project plan reports submitted to the Congress shall consider and discuss any such potentials. The Secretary of the Interior and the Secretary of Agriculture shall make specific studies and investigations to determine which additional wild, scenic and recreational river areas within the United States shall be evaluated in planning reports by all Federal agencies as potential alternative uses of the water and related land resources involved.

SEC. 6. (a) The Secretary of the Interior and the Secretary of Agriculture are each authorized to acquire lands and interests in land within the authorized boundaries of any component of the national wild and scenic rivers system designated in section 3 of this Act, or hereafter designated for inclusion in the system by Act of Congress, which is administered by him, but he shall not acquire fee title to an average of more than 100 acres per mile on both sides of the river. Lands owned by a State may be acquired only by donation, and lands owned by an Indian tribe or a political subdivision of a State may not be acquired without the consent of the appropriate governing body thereof as long as the Indian tribe or political subdivision is following a plan for management and protection of the lands which the Secretary finds protects the land and assures its use for purposes consistent with this Act. Money appropriated for Federal purposes from the land and water conservation fund shall, without prejudice to the use of appropriations from other sources, be available to Federal departments and agencies for the acquisition of property for the purposes of this Act.

(b) If 50 per centum or more of the entire acreage within a federally administered wild, scenic or recreational river area is owned by the United States, by the State or States within which it lies, or by political subdivisions of those States, neither Secretary shall acquire fee title to any lands by condemnation under authority of this Act. Nothing contained in this section, however, shall preclude the use of condemnation when necessary to clear title or to acquire scenic easements or such other easements as are reasonably necessary to give the public access to the river and to permit its members to traverse the length of the area or of selected segments thereof.

(c) Neither the Secretary of the Interior nor the Secretary of Agriculture may acquire lands by condemnation, for the purpose of including such lands in any national wild, scenic or recreational river area, if such lands are located within any incorporated city, village, or borough which has in force and applicable to such lands a duly adopted, valid zoning ordinance that conforms with the purposes of this Act. In order to carry out the provisions of this subsection the appropriate Secretary shall issue guidelines, specifying standards for local zoning ordinances, which are consistent with the purposes of this Act. The standards specified in such guidelines shall have the object of (A) prohibiting new commercial or industrial uses other than commercial or industrial uses which are consistent with the purposes of this Act, and (B) the protection of the bank lands by means of acreage, frontage, and setback requirements on development.

(d) The appropriate Secretary is authorized to accept title to non-Federal property within the authorized boundaries of any federally administered component of the national wild and scenic rivers system designated in section 3 of this Act or hereafter designated for inclusion in the system by Act of Congress and, in exchange therefor, convey to the grantor any federally owned property which is under his jurisdiction within the State in which the component lies and which he classifies as suitable for exchange or other disposal. The values of the properties so exchanged either shall be approximately equal or, if they are not approximately equal, shall be equalized by the payment of cash to the grantor or to the Secretary as the circumstances require.

(e) The head of any Federal department or agency having administrative jurisdiction over any lands or interests in land within the authorized boundaries of any federally administered component of the national wild and scenic rivers system designated in section 3 of this Act or hereafter designated for inclusion in the system by Act of Congress is authorized to transfer to the appropriate Secretary jurisdiction over such lands for administration in accordance with the provisions of this Act. Lands acquired by or transferred to the Secretary of Agriculture for the purposes of this Act within or adjacent to a national forest shall upon such acquisition or transfer become national forest lands.

(f) The appropriate Secretary is authorized to accept donations of lands and interests in land, funds, and other property for use in connection with his administration of the national wild and scenic rivers system.

(g)(1) Any owner or owners (hereinafter in this subsection referred to as "owner") of improved property on the date of its acquisition, may retain for themselves and their successors or assigns a right of use and occupancy of the improved property for noncommercial residential purposes for a definite term not to exceed twenty-five years or, in lieu thereof, for a term ending at the death of the owner, or the death of his spouse, or the death of either or both of them. The owner shall elect the term to be reserved. The appropriate Secretary shall pay to the owner the fair market value of the property on the date of such acquisition less the fair market value on such date of the right retained by the owner.

(2) A right of use and occupancy retained pursuant to this subsection shall be subject to termination whenever the appropriate Secretary is given

reasonable cause to find that such use and occupancy is being exercised in a manner which conflicts with the purposes of this Act. In the event of such a finding, the Secretary shall tender to the holder of that right an amount equal to the fair market value of that portion of the right which remains unexpired on the date of termination. Such right of use or occupancy shall terminate by operation of law upon tender of the fair market price.

(3) The term "improved property", as used in this Act, means a detached, one-family dwelling (hereinafter referred to as "dwelling"), the construction of which was begun before January 1, 1967, (except where a different date is specifically provided by law with respect to any particular river) together with so much of the land on which the dwelling is situated, the said land being in the same ownership as the dwelling, as the appropriate Secretary shall designate to be reasonably necessary for the enjoyment of the dwelling for the sole purpose of noncommercial residential use, together with any structures accessory to the dwelling which are situated on the land so designated.

SEC. 7. (a) The Federal Power Commission shall not license the construction of any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act (41 Stat. 1063), as amended (16 U.S.C. 791a et seq.), on or directly affecting any river which is designated in section 3 of this Act as a component of the national wild and scenic rivers system or which is hereafter designated for inclusion in that system, and no department or agency of the United States shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration. Nothing contained in the foregoing sentence, however, shall preclude licensing of, or assistance to, developments below or above a wild, scenic or recreational river area or on any stream tributary thereto which will not invade the area or unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area on the date of approval of this Act. No department or agency of the United States shall recommend authorization of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration, or request appropriations to begin construction of any such project, whether heretofore or hereafter authorized, without advising the Secretary of the Interior or the Secretary of Agriculture, as the case may be, in writing of its intention so to do at least sixty days in advance, and without specifically reporting to the Congress in writing at the time it makes its recommendation or request in what respect construction of such project would be in conflict with the purposes of this Act and would affect the component and the values to be protected by it under this Act.

Any license heretofore or hereafter issued by the Federal Power Commission affecting the New River of North Carolina shall continue to be effective only for that portion of the river which is not included in the National Wild and Scenic Rivers System pursuant to section 2 of this Act and no project or undertaking so licensed shall be permitted to invade, inundate or otherwise adversely affect such river segment.

(b) The Federal Power Commission shall not license the construction of any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act, as amended, on or directly affecting any river which is listed in section 5, subsection (a), of this Act, and no department or agency of the United States shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river might be designated, as determined by the Secretary responsible for its study or approval--

(i) during the ten-year period following enactment of this Act or for a three complete fiscal year period following any Act of Congress designating any river for potential addition to the national wild and scenic rivers system, whichever is later, unless, prior to the expiration of the relevant period, the Secretary of the Interior and, where national forest lands are involved, the Secretary of Agriculture, on the basis of study, determine that such river should not be included in the national wild and scenic rivers system and notify the Committees on Interior and Insular Affairs of the United States Congress, in writing, including a copy of the study upon which the determination was made, at least one hundred and eighty days while Congress is in session prior to publishing notice to that effect in the Federal Register: Provided, That if any Act designating any river or rivers for potential addition to the national wild and scenic rivers system provides for a period for the study or studies which exceeds such three complete fiscal year period the period provided for in such Act shall be substituted for the three complete fiscal year period in the provisions of this clause (i); and (ii) during such additional period thereafter as, in the case of any river the report for which is submitted to the President and the Congress, is necessary for congressional consideration thereof or, in the case of any river recommended to the Secretary of the Interior for inclusion in the national wild and scenic rivers system under section (2)(a)(ii) of this Act, is necessary for the Secretary's consideration thereof, which additional period, however, shall not exceed three years in the first case and one year in the second.

Nothing contained in the foregoing sentence, however, shall preclude licensing of, or assistance to, developments below or above a potential wild, scenic or recreational river area or on any stream tributary thereto which will not invade the area or diminish the scenic, recreational, and fish and wildlife values present in the potential wild, scenic or recreational river area on the date of approval of this Act. No department or agency of the United States shall, during the periods hereinbefore specified, recommend authorization of any water resources project on any such river or request appropriations to begin construction of any such project, whether heretofore or hereafter authorized, without advising the Secretary of the Interior and, where national forest lands are involved, the Secretary of Agriculture in writing of its intention so to do at least sixty days in advance of doing so and without specifically reporting to the Congress in writing at the time it makes its recommendation or request in what respect construction of such project would be in conflict with the purposes of this Act and would affect the component and the values to be protected by it under this Act.

(c) The Federal Power Commission and all other Federal agencies shall, promptly upon enactment of this Act, inform the Secretary of the Interior and, where national forest lands are involved, the Secretary of Agriculture, of any proceedings, studies, or other activities within their jurisdiction which are now in progress and which affect or may affect any of the rivers specified in section 5, subsection (a), of this Act. They shall likewise inform him of any such proceedings, studies, or other activities which are hereafter commenced or resumed before they are commenced or resumed.

(d) Nothing in this section with respect to the making of a loan or grant shall apply to grants made under the Land and Water Conservation Fund Act of 1965 (78 Stat. 897; 16 U.S.C. 4601-5 et seq.).

SEC. 8. (a) All public lands within the authorized boundaries of any component of the national wild and scenic rivers system which is designated in section 3 of this Act or which is hereafter designated for inclusion in that system are hereby withdrawn from entry, sale, or other disposition under the public land laws of the United States.

(b) All public lands which constitute the bed or bank, or are within one-quarter mile of the bank, of any river which is listed in section 5, subsection (a), of this Act are hereby withdrawn from entry, sale, or other disposition under the public land laws of the United States for the periods specified in section 7, subsection (b), of this Act. Notwithstanding the foregoing provisions of this subsection or any other provision of this Act, subject only to valid existing rights, including valid Native selection rights under the Alaska Native Claims Settlement Act, all public lands which constitute the bed or bank, or are within an area extending two miles from the bank of the river channel on both sides of the river segments referred to in paragraphs (77) through (88) of section 5(a) are hereby withdrawn from entry, sale, State selection or other disposition under the public land laws of the United States for the periods specified in section 7(b) of this Act.

SEC. 9. (a) Nothing in this Act shall affect the applicability of the United States mining and mineral leasing laws within components of the national wild and scenic rivers system except that--

(i) all prospecting, mining operations, and other activities on mining claims which, in the case of a component of the system designated in section 3 of this Act, have not heretofore been perfected or which, in the case of a component hereafter designated pursuant to this Act or any other Act of Congress, are not perfected before its inclusion in the system and all mining operations and other activities under a mineral lease, license, or permit issued or renewed after inclusion of a component in the system shall be subject to such regulations as the Secretary of the Interior or, in the case of national forest lands, the Secretary of Agriculture may prescribe to effectuate the purposes of this Act;

(ii) subject to valid existing rights, the perfection of, or issuance of a patent to, any mining claim affecting lands within the system shall confer or convey a right or title only to the mineral deposits and such rights only to the use of the surface and the surface resources

as are reasonably required to carrying on prospecting or mining operations and are consistent with such regulations as may be prescribed by the Secretary of the Interior or, in the case of national forest lands, by the Secretary of Agriculture; and

(iii) subject to valid existing rights, the minerals in Federal lands which are part of the system and constitute the bed or banks or are situated within one-quarter mile of the bank of any river designated a wild river under this Act or any subsequent Act are hereby withdrawn from all forms of appropriation under the mining laws and from operation of the mineral leasing laws including, in both cases, amendments thereto.

Regulations issued pursuant to paragraphs (i) and (ii) of this subsection shall, among other things, provide safeguards against pollution of the river involved and unnecessary impairment of the scenery within the component in question.

(b) The minerals in any Federal lands which constitute the bed or banks or are situated within one-quarter mile of the bank of any river which is listed in section 5, subsection (a) of this Act are hereby withdrawn from all forms of appropriation under the mining laws during the periods specified in section 7, subsection (b) of this Act. Nothing contained in this subsection shall be construed to forbid prospecting or the issuance of leases, licenses, and permits under the mineral leasing laws subject to such conditions as the Secretary of the Interior and, in the case of national forest lands, the Secretary of Agriculture find appropriate to safeguard the area in the event it is subsequently included in the system. Notwithstanding the foregoing provisions of this subsection or any other provision of this Act, all public lands which constitute the bed or bank, or are within an area extending two miles from the bank of the river channel on both sides of the river segments referred to in paragraphs (77) through (88) of section 5(a), are hereby withdrawn, subject to valid existing rights, from all forms of appropriation under the mining laws and from operation of the mineral leasing laws including, in both cases, amendments thereto, during the periods specified in section 7(b) of this Act.

SEC. 10. (a) Each component of the national wild and scenic rivers system shall be administered in such manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values. In such administration primary emphasis shall be given to protecting its esthetic, scenic, historic, archeologic, and scientific features. Management plans for any such component may establish varying degrees of intensity for its protection and development, based on the special attributes of the area.

(b) Any portion of a component of the national wild and scenic rivers system that is within the national wilderness preservation system, as established by or pursuant to the Act of September 3, 1964 (78 Stat. 890; 16 U.S.C., ch. 23), shall be subject to the provisions of both the Wilderness Act and this Act with respect to preservation of such river and its immediate environment, and in case of conflict between the provisions of these Acts the more restrictive provisions shall apply.

(c) Any component of the national wild and scenic rivers system that is administered by the Secretary of the Interior through the National Park Service shall become a part of the national park system, and any such component that is administered by the Secretary through the Fish and Wildlife Service shall become a part of the national wildlife refuge system. The lands involved shall be subject to the provisions of this Act and the Acts under which the national park system or national wildlife system, as the case may be, is administered, and in case of conflict between the provisions of these Acts, the more restrictive provisions shall apply. The Secretary of the Interior, in his administration of any component of the national wild and scenic rivers system, may utilize such general statutory authorities relating to areas of the national park system and such general statutory authorities otherwise available to him for recreation and preservation purposes and for the conservation and management of natural resources as he deems appropriate to carry out the purposes of this Act.

(d) The Secretary of Agriculture, in his administration of any component of the national wild and scenic rivers system area, may utilize the general statutory authorities relating to the national forests in such manner as he deems appropriate to carry out the purposes of this Act.

(e) The Federal agency charged with the administration of any component of the national wild and scenic rivers system may enter into written cooperative agreements with the Governor of a State, the head of any State agency, or the appropriate official of a political subdivision of a State for State or local governmental participation in the administration of the component. The States and their political subdivisions shall be encouraged to cooperate in the planning and administration of components of the system which include or adjoin State- or county-owned lands.

SEC. 11. (a) The Secretary of the Interior shall encourage and assist the States to consider, in formulating and carrying out their comprehensive statewide outdoor recreation plans and proposals for financing assistance for State and local projects submitted pursuant to the Land and Water Conservation Fund Act of 1965 (78 Stat. 897), needs and opportunities for establishing State and local wild, scenic and recreational river areas. He shall also, in accordance with the authority contained in the Act of May 28, 1963 (77 Stat. 49), provide technical assistance and advice to, and cooperate with, States, political subdivisions, and private interests, including nonprofit organizations, with respect to establishing such wild, scenic and recreational river areas.

(b) The Secretaries of Agriculture and of Health, Education, and Welfare shall likewise, in accordance with the authority vested in them, assist, advise, and cooperate with State and local agencies and private interests with respect to establishing such wild, scenic and recreational river areas.

SEC. 12. (a) The Secretary of the Interior, the Secretary of Agriculture, and the head of any other Federal department or agency having jurisdiction over any lands which include, border upon, or are adjacent to, any river included within the National Wild and Scenic Rivers System or under consideration for such inclusion, in accordance with section 2(a)(ii), 3(a), or 5(a), shall take such action respecting management policies, regulations, contracts, plans,

affecting such lands, following the date of enactment of this sentence, as may be necessary to protect such rivers in accordance with the purposes of this Act. Such Secretary or other department or agency head shall, where appropriate, enter into written cooperative agreements with the appropriate State or local official for the planning, administration, and management of Federal lands which are within the boundaries of any rivers for which approval has been granted under section 2(a)(ii). Particular attention shall be given to scheduled timber harvesting, road construction, and similar activities which might be contrary to the purposes of this Act.

(b) Nothing in this section shall be construed to abrogate any existing rights, privileges, or contracts affecting Federal lands held by any private party without the consent of said party.

(c) The head of any agency administering a component of the national wild and scenic rivers system shall cooperate with the Secretary of the Interior and with the appropriate State water pollution control agencies for the purpose of eliminating or diminishing the pollution of waters of the river.

SEC. 13. (a) Nothing in this Act shall affect the jurisdiction or responsibilities of the States with respect to fish and wildlife. Hunting and fishing shall be permitted on lands and waters administered as parts of the system under applicable State and Federal laws and regulations unless, in the case of hunting, those lands or waters are within a national park or monument. The administering Secretary may, however, designate zones where, and establish periods when, no hunting is permitted for reasons of public safety, administration, or public use and enjoyment and shall issue appropriate regulations after consultation with the wildlife agency of the State or States affected.

(b) The jurisdiction of the States and the United States over waters of any stream included in a national wild, scenic or recreational river area shall be determined by established principles of law. Under the provisions of this Act, any taking by the United States of a water right which is vested under either State or Federal law at the time such river is included in the national wild and scenic rivers system shall entitle the owner thereof to just compensation. Nothing in this Act shall constitute an express or implied claim or denial on the part of the Federal Government as to exemption from State water laws.

(c) Designation of any stream or portion thereof as a national wild, scenic or recreational river area shall not be construed as a reservation of the waters of such streams for purposes other than those specified in this Act, or in quantities greater than necessary to accomplish these purposes.

(d) The jurisdiction of the States over waters of any stream included in a national wild, scenic or recreational river area shall be unaffected by this Act to the extent that such jurisdiction may be exercised without impairing the purposes of this Act or its administration.

(e) Nothing contained in this Act shall be construed to alter, amend, repeal, interpret, modify, or be in conflict with any interstate compact made

by any States which contain any portion of the national wild and scenic rivers system.

(f) Nothing in this Act shall affect existing rights of any State, including the right of access, with respect to the beds of navigable streams, tributaries, or rivers (or segments thereof) located in a national wild, scenic or recreational river area.

(g) The Secretary of the Interior or the Secretary of Agriculture, as the case may be, may grant easements and rights-of-way upon, over, under, across, or through any component of the national wild and scenic rivers system in accordance with the laws applicable to the national park system and the national forest system, respectively: Provided, That any conditions precedent to granting such easements and rights-of-way shall be related to the policy and purpose of this Act.

SEC. 14. The claim and allowance of the value of an easement as a charitable contribution under section 170 of title 26, United States Code, or as a gift under section 2522 of said title shall constitute an agreement by the donor on behalf of himself, his heirs, and assigns that, if the terms of the instrument creating the easement are violated, the donee or the United States may acquire the servient estate at its fair market value as of the time the easement was donated minus the value of the easement claimed and allowed as a charitable contribution or gift.

SEC. 14A. (a) Where appropriate in the discretion of the Secretary, he may lease federally owned land (or any interest therein) which is within the boundaries of any component of the National Wild and Scenic Rivers System and which has been acquired by the Secretary under this Act. Such lease shall be subject to such restrictive covenants as may be necessary to carry out the purposes of this Act.

(b) Any land to be leased by the Secretary under this section shall be offered first for such lease to the person who owned such land immediately before its acquisition by the United States.

SEC. 15. Notwithstanding any other provision to the contrary in sections 3 and 9 of this Act, with respect to components of the National Wild and Scenic Rivers System in Alaska designated by paragraphs (38) through (50) of section 3(a) of this Act--

(1) the boundary of each such river shall include an average of not more than six hundred and forty acres per mile on both sides of the river. Such boundary shall not include any lands owned by the State or a political subdivision of the State nor shall such boundary extend around any private lands adjoining the river in such manner as to surround or effectively surround such private lands; and

(2) the withdrawal made by paragraph (iii) of section 9(a) shall apply to the minerals in Federal lands which constitute the bed or bank or are situated within one-half mile of the bank of any river designated a wild river by the Alaska National Interest Lands Conservation Act.

SEC. 16. As used in this Act, the term--

(a) "River" means a flowing body of water or estuary or, a section, portion, or tributary thereof, including rivers, streams, creeks, runs, kills, rills, and small lakes.

(b) "Free-flowing", as applied to any river or section of a river, means existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. The existence, however, of low dams, diversion works, and other minor structures at the time any river is proposed for inclusion in the national wild and scenic rivers system shall not automatically bar its consideration for such inclusion: Provided, That this shall not be construed to authorize, intend, or encourage future construction of such structures within components of the national wild and scenic rivers system.

(c) "Scenic easement" means the right to control the use of land (including the air space above such land) within the authorized boundaries of a component of the wild and scenic rivers system, for the purpose of protecting the natural qualities of a designated wild, scenic or recreational river area, but such control shall not affect, without the owner's consent, any regular use exercised prior to the acquisition of the easement.

SEC. 17: There are hereby authorized to be appropriated, including such sums as have heretofore been appropriated, the following amounts for land acquisition for each of the rivers described in section 3(a) of this Act:

Clearwater, Middle Fork, Idaho, \$2,909,800;
Eleven Point, Missouri, \$10,407,000;
Feather, Middle Fork, California, \$3,935,700;
Rio Grande, New Mexico, \$253,000;
Rogue, Oregon, \$15,147,000;
St. Croix, Minnesota and Wisconsin, \$21,769,000;
Salmon, Middle Fork, Idaho, \$1,837,100; and
Wolf, Wisconsin, \$142,150.

NOTE: The following amendments have been made to P.L. 90-542 through December 23, 1980:

P.L. 92-560
P.L. 93-279
P.L. 93-621
P.L. 94-199
P.L. 94-407
P.L. 94-486
P.L. 95-625
P.L. 96-87
P.L. 96-199
P.L. 96-487
P.L. 96-580



United States Department of the Interior

FISH AND WILDLIFE SERVICE

15 NORTH LAURA STREET

JACKSONVILLE, FLORIDA 32202

July 1, 1981

Memorandum

To: Regional Director, National Park Service, Southeast Regional Office, Atlanta, Georgia

From: Area Manager, Fish and Wildlife Service, Jacksonville, Florida

Subject: Biological Assessment, Proposed Loxahatchee National Wild and Scenic River (Fish and Wildlife Service Log No. 4-1-81-080)

The Fish and Wildlife Service has reviewed the biological assessment submitted with your April 15 memo regarding the proposal to include in the National Wild and Scenic Rivers System a portion of the Loxahatchee River in Palm Beach and Martin Counties, Florida. The biological assessment was submitted in accordance with Section 7 of the Endangered Species Act, as amended.

The 7.5 mile reach of the Loxahatchee River from riverbend to the southern boundary of Jonathan Dickinson State Park has been recommended for inclusion in the Wild and Scenic Rivers System. The bald eagle, red-cockaded woodpecker, brown pelican, Florida everglade kite, eastern indigo snake, West Indian manatee and American alligator were considered in this assessment. We assume that the fourth listed species on page one was intended to be the Florida everglade kite, not the Florida pelican.

In concept, we believe that the proposed action will benefit the natural resources of the Loxahatchee River. The biological assessment, however, is very sketchy in analysis of actual and potential endangered species problems associated with the proposed river designation. In general, we find the assessment to be basically a reproduction of the list supplied to you on March 3, 1981, together with a thorough project description. The further objectives of a biological assessment are to determine the actual distribution of the species of interest; the actual and potential impacts of the project on listed species; and discussion of the efforts that will be taken to reduce, eliminate, or mitigate any adverse effects.

It is our understanding that details outlining specific impacts and potential protective measures will be addressed in a general management plan to be prepared jointly by Palm Beach County, Florida Department of Natural Resources and the U.S. Department of the Interior. At such time, a more concise evaluation of potential endangered species concerns should be made.

We request that the Service have the opportunity to review this plan, and if necessary, provide consultation, under Section 7 of the Endangered Species Act.

Based on information contained in your assessment, however, we concur with your determination that your proposal will not adversely impact the above listed species. This does not constitute a Biological Opinion as described in Section 7 of the Endangered Species Act; however, it does fulfill the requirements of the Act and no further action on your part is required at this time.

If modifications are made in the project or when additional information involving potential impacts to listed species arise, such as the preparation of the general management plan, consultation may have to be reinitiated. We appreciated the opportunity to review your proposal, and we look forward to receiving a copy of the general management plan when it becomes available.


Donald J. Hankla



FLORIDA DEPARTMENT OF STATE

George Firestone

Secretary of State

Ron Levitt

Assistant Secretary of State

DIVISION OF ARCHIVES, HISTORY
AND RECORDS MANAGEMENT

L. Ross Morrell, Director
(904) 488-1480

December 19, 1980

Mr. Dennis Ragsdale
U. S. Department of the Interior
National Park Service
Southeast Regional Office
75 Spring Street, S.W.
Atlanta, Georgia 30303

Re: L58-SER-OA

Dear Mr. Ragsdale:

A check of the Florida Master Site File shows three archaeological and one historic sites recorded for the area mentioned in your request of December 11, 1980.

Enclosed please find photocopies of county road maps showing the locations of these sites. A list giving some information on these sites is also enclosed.

There may be other sites that exist along the Loxahatchee River but are as yet unreported. There has been no survey for cultural resources conducted for that area.

I hope this information will be helpful to you. If you have any questions, please do not hesitate to call or write.

Sincerely,

M. Katherine Jones
Archaeologist and Master
Site File Coordinator

MKJ:hs

Enclosures

FLORIDA-State of the Arts

The Capitol • Tallahassee Florida 32301 • (904) 488-3680

Site No. 8Mt20

Site Name: Jonathan Dickinson
State Park

Description:

Jonathan Dickinson State Park encompasses 9,564 acres of coastal terrain to the west of Hobe Sound, the body of water separating the mainland and Jupiter Island.

Within the area designated by this nomination are shell mounds in excess of 30 feet in elevation. These are monumental vestiges of an aboriginal culture based on gathering the abundant aqua life in the nearby sounds, bays, and estuary. The aboriginals Dickinson's party came in contact with followed the same life style and could very well have added to the shell mounds within the park area.

The flat low lying terrain, the tropical vegetation, the tidal flow through the estuary - all provide a remarkable sensory experience and a vibrant link to the past.
(From the Florida Master Site File)

Site No. 8PB34

Site Name: Jupiter Inlet Midden 1

Description:

The Jupiter Inlet Midden 1 is an irregular mound of shell approximately 80 yards long by 25-50 yards wide. It varies in height between 3 and 15 feet. This is all that remains of the midden which, in the early 20th century was estimated to be 600 yards long and 20 feet high.

At present, there is a house built atop the mound (apparently the only reason the mound is still in existence); all the rest of this site has, in the recent past, been borrowed as road surfacing material.

The site, as it exists today, in no way resembles its original configuration. The major part of the midden has been carried away and the shoreline of the inlet has been altered by modern dredging.
(From the Florida Master Site File)



FLORIDA DEPARTMENT OF STATE

George Firestone
Secretary of State

DIVISION OF ARCHIVES,
HISTORY AND RECORDS MANAGEMENT
The Capitol, Tallahassee, Florida 32301
(904) 488-1480

April 26, 1982

In reply refer to:

Mr. Louis Tesar
Historic Sites Specialist
(904) 487-2333

Ms. Sharon Keene, Chief
Rivers and Trails Division
Southeast Division
National Park Service
75 Spring Street, Southwest
Atlanta, Georgia 30303

Re: April 15, 1982 Letter and Attachments
L58-SER-P7
Cultural Resource Assessment Request
Loxahatchee River National Wild and Scenic River Study
Martin and Palm Beach Counties, Florida

Dear Ms. Keene:

In accordance with the procedures contained in 36 C.F.R., Part 800 ("Procedures for the Protection of Historic and Cultural Properties"), we have reviewed the above referenced project for possible impact to archaeological and historical sites or properties listed, or eligible for listing, in the National Register of Historic Places. The authorities for these procedures are the National Historic Preservation Act of 1966 (Public Law 89-665) as amended by P.L. 91-243, P.L. 93-54, P.L. 94-422, P.L. 94-458, and P.L. 96-515 and Presidential Executive Order 11593 ("Protection and Enhancement of the Cultural Environment").

A review of the Florida Master Site File indicates that site 8PB36, located in T40S-R42E, Sec. 32, is the only site recorded within the study area, while other nearby sites are also recorded. However, the lack of sites is not deemed significant, since the study area has not previously been subjected to a systematic site assessment survey. Indeed, based on known site distribution for the area, we would expect a number of previously recorded sites to be located adjacent to and within 150 meters of the Loxahatchee River and within the study area. Some of these sites, including 8PB36, are probably eligible for listing on the National Register of Historic Places. Designation of the study area as a national wild and scenic river would serve to help protect these resources.

FLORIDA-State of the Arts

Site No. 8PB35

Site Name: Jupiter Inlet Midden 2

Description:

Large midden (very little information given by recorder)

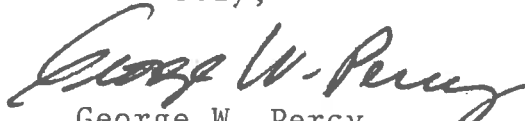
Site No. 8PB64

Site Name: Jupiter Inlet Lighthouse

Ms. Sharon Keene
April 26, 1982
Page Two

If you have any questions concerning our comments, please do not hesitate to contact us.

Sincerely,

A handwritten signature in cursive script that reads "George W. Percy". The signature is written in dark ink and is positioned above the typed name.

George W. Percy
Deputy State Historic
Preservation Officer

GWP:Teb