



*Shell Island*

## Appendixes, Abbreviations and Glossary, References, and Preparers and Consultants

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## APPENDIX A: AUTHORIZING LEGISLATION

114 STAT. 1050 PUBLIC LAW 106—299—OCT. 13, 2000

106th Congress

### An Act

To amend the Wild and Scenic Rivers Act to designate the Wekiva River and its tributaries of Wekiwa Springs Run, Rock Springs Run, and Black Water [HR. 2773] Creek in the State of Florida as components of the national wild and scenic rivers system.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

#### SECTION 1. SHORT TITLE.

This Act may be cited as the “Wekiva Wild and Scenic River Act of 2000”.

#### SEC. 2. FINDINGS.

The Congress finds the following:

- (1) Public Law 104—311 (110 Stat. 3818) amended section 5 of the Wild and Scenic Rivers Act (16 U.S.C. 1276) to require the study of the Wekiva River and its tributaries of Rock Springs Run and Seminole Creek for potential inclusion in the national wild and scenic rivers system.
- (2) The study determined that the Wekiva River, Wekiwa Springs Run, Rock Springs Run, and Black Water Creek are eligible for inclusion in the national wild and scenic rivers system.
- (3) The State of Florida has demonstrated its commitment to protecting these rivers and streams by the enactment of the Wekiva River Protection Act (Florida Statute chapter 369), by the establishment of a riparian wildlife protection zone and water quality protection zone by the St. Johns River Water Management District, and by the acquisition of lands adjacent to these rivers and streams for conservation purposes.
- (4) The Florida counties of Lake, Seminole, and Orange have demonstrated their commitment to protect these rivers and streams in their comprehensive land use plans and land development regulations.
- (5) The desire for designation of these rivers and streams as components of the national wild and scenic rivers system has been demonstrated through strong public support, State and local agency support, and the endorsement of designation by the Wekiva River Basin Ecosystem Working Group, which represents a broad cross section of State and local agencies, organizations, and recreational users.
- (6) The entire lengths of the Wekiva River, Rock Springs Run, and Black Water Creek are held in public ownership or conservation easements or are defined as waters of the State of Florida.

#### SEC. 3. DESIGNATION OF WEKIVA RIVER AND TRIBUTARIES, FLORIDA, AS COMPONENTS OF NATIONAL WILD AND SCENIC RIVERS SYSTEM.

Section 3(a) of the Wild and Scenic Rivers Act (16 U.S.C. 1274(a)) is amended by adding at the end the following new paragraph:

“(161) WEKIVA RIVER, WEKIWA SPRINGS RUN, ROCK SPRINGS RUN, AND BLACK WATER CREEK, FLORIDA—The 41.6-mile segments referred to in this paragraph, to be administered by the Secretary of the Interior:

“(A) WEKIVA RIVER AND WEKIWA SPRINGS RUN.—The 14.9 miles of the Wekiva River, along Wekiwa Springs Run from its confluence with the St. Johns River to Wekiwa Springs, to be administered in the following classifications:

- “(i) From the confluence with the St. Johns River to the southern boundary of the Lower Wekiva River State Preserve, approximately 4.4 miles, as a wild river.
- “(ii) From the southern boundary of the Lower Wekiva River State Preserve to the northern boundary of Rock Springs State Reserve at the Wekiva River, approximately 3.4 miles, as a recreational river.
- “(iii) From the northern boundary of Rock Springs State Reserve at the Wekiva River to the southern boundary of Rock Springs State Reserve at the Wekiva River, approximately 5.9 miles, as a wild river.
- “(iv) From the southern boundary of Rock Springs State Reserve at the Wekiva River upstream along Wekiwa Springs Run to Wekiwa Springs, approximately 1.2 miles, as a recreational river.

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“(B) ROCK SPRINGS RUN—The 8.8 miles from the confluence of Rock Springs Run with the Wekiwa Springs Run forming the Wekiva River to its headwaters at Rock Springs, to be administered in the following classifications:

- “(i) From the confluence with Wekiwa Springs Run to the western boundary of Rock Springs Run State Reserve at Rock Springs Run, approximately 6.9 miles, as a wild river.
- “(ii) From the western boundary of Rock Springs Run State Reserve at Rock Springs Run to Rock Springs, approximately 1.9 miles, as a recreational river.

“(C) BLACK WATER CREEK.—The 17.9 miles from the confluence of Black Water Creek with the Wekiva River to outflow from Lake Norris, to be administered in the following classifications:

- “(i) From the confluence with the Wekiva River to approximately .25 mile downstream of the Seminole State Forest road crossing, approximately 4.1 miles, as a wild river.
- “(ii) From approximately .25 mile downstream of the Seminole State Forest road to approximately .25 mile upstream of the Seminole State Forest road crossing, approximately .5 mile, as a scenic river.
- “(iii) From approximately .25 mile upstream of the Seminole State Forest road crossing to approximately .25 mile downstream of the old railroad grade crossing (approximately River Mile 9), approximately 4.4 miles, as a wild river.
- “(iv) From approximately .25 mile downstream of the old railroad grade crossing (approximately River Mile 9), upstream to the boundary of Seminole State Forest (approximately River Mile 10.6), approximately 1.6 miles, as a scenic river.
- “(v) From the boundary of Seminole State Forest (approximately River Mile 10.6) to approximately .25 mile downstream of the State Road 44 crossing, approximately .9 mile, as a wild river.
- “(vi) From approximately .25 mile downstream of State Road 44 to approximately .25 mile upstream of the State Road 44A crossing, approximately .6 mile, as a recreational river.
- “(vii) From approximately .25 mile upstream of the State Road 44A crossing to approximately .25 mile downstream of the Lake Norris Road crossing, approximately 4.7 miles, as a wild river.
- “(viii) From approximately .25 mile downstream of the Lake Norris Road crossing to the outflow from Lake Norris, approximately 1.1 miles, as a recreational river.”.

### SEC. 4. SPECIAL REQUIREMENTS APPLICABLE TO WEKIVA RIVER AND TRIBUTARIES.

(a) DEFINITIONS.—In this section and section 5:

- (1) WEKIVA RIVER SYSTEM—The term “Wekiva River system” means the segments of the Wekiva River, Wekiwa Springs Run, Rock Springs Run, and Black Water Creek in the State of Florida designated as components of the national wild and scenic rivers system by paragraph (161) of section 3(a) of the Wild and Scenic Rivers Act (16 U.S.C. 1274(a)), as added by this Act.
- (2) COMMITTEE—The term “Committee” means the Wekiva River System Advisory Management Committee established pursuant to section 5.
- (3) COMPREHENSIVE MANAGEMENT PLAN—The terms “comprehensive management plan” and “plan” mean the comprehensive management plan to be developed pursuant to section 3(d) of the Wild and Scenic Rivers Act (16 U.S.C. 1274(d)).
- (4) SECRETARY—The term “Secretary” means the Secretary of the Interior.

(b) COOPERATIVE AGREEMENTS.—

- (1) USE AUTHORIZED—In order to provide for the long- term protection, preservation, and enhancement of the Wekiva River system, the Secretary shall offer to enter into cooperative agreements pursuant to sections 10(e) and 11(b)(1) of the Wild and Scenic Rivers Act (16 U.S.C. 1281(e), 1282(b)(1)) with the State of Florida, appropriate local political jurisdictions of the State, namely the counties of Lake, Orange, and Seminole, and appropriate local planning and environmental organizations.
- (2) EFFECT OF AGREEMENT—Administration by the Secretary of the Wekiva River system through the use of cooperative agreements shall not constitute National Park Service administration of the Wekiva River system for purposes of section 10(c) of such Act (16 U.S.C. 1281(c)) and shall not cause the Wekiva River system to be considered as being a unit of the National Park System. Publicly owned lands within the boundaries of the Wekiva River system shall continue to be managed by the agency having jurisdiction over the lands, in accordance with the statutory authority and mission of the agency.
- (d) COMPLIANCE REVIEW.—After completion of the comprehensive management plan, the Secretary shall biennially review compliance with the plan and shall promptly report to the Committee on Resources of the House of Representatives and the Committee on Energy and Natural Resources of the Senate any deviation from the plan that could result in any diminution of the values for which the Wekiva River system was designated as a component of the national wild and scenic rivers system.

- (d) TECHNICAL ASSISTANCE AND OTHER SUPPORT—The Secretary may provide technical assistance, staff support, and funding to assist in the development and implementation of the comprehensive management plan.
- (e) LIMITATION ON FEDERAL SUPPORT—Nothing in this section shall be construed to authorize funding for land acquisition, facility development, or operations.

**SEC. 5. WEKIVA RIVER SYSTEM ADVISORY MANAGEMENT COMMITTEE.**

(a) ESTABLISHMENT.—The Secretary shall establish an advisory committee, to be known as the Wekiva River System Advisory Management Committee, to assist in the development of the comprehensive management plan for the Wekiva River system.

(b) MEMBERSHIP.—The Committee shall be composed of a representative of each of the following agencies and organizations:

- (1) The Department of the Interior, represented by the Director of the National Park Service or the Director's designee.
- (2) The East Central Florida Regional Planning Council.
- (3) The Florida Department of Environmental Protection, Division of Recreation and Parks.
- (4) The Florida Department of Environmental Protection, Wekiva River Aquatic Preserve.
- (5) The Florida Department of Agriculture and Consumer Services, Division of Forestry, Seminole State Forest.
- (6) The Florida Audubon Society.
- (7) The nonprofit organization known as the Friends of the Wekiva.
- (8) The Lake County Water Authority.
- (9) The Lake County Planning Department.
- (10) The Orange County Parks and Recreation Department, Kelly Park.
- (11) The Seminole County Planning Department.
- (12) The St. Johns River Water Management District.
- (13) The Florida Fish and Wildlife Conservation Commission.
- (14) The City of Altamonte Springs.
- (15) The City of Longwood
- (16) The City of Apopka.
- (17) The Florida Farm Bureau Federation.
- (18) The Florida Forestry Association.

(c) ADDITIONAL MEMBERS.— Other interested parties may be added to the Committee by request to the Secretary and unanimous consent of the existing members.

(d) APPOINTMENT—Representatives and alternates to the Committee shall be appointed as follows:

- (1) State agency representatives, by the head of the agency.
- (2) County representatives, by the Boards of County Commissioners.
- (3) Water management district, by the Governing Board.
- (4) Department of the Interior representative, by the Southeast Regional Director, National Park Service.
- (5) East Central Florida Regional Planning Council, by Governing Board.
- (6) Other organizations, by the Southeast Regional Director, National Park Service.

(e) ROLE OF COMMITTEE.—The Committee shall assist in the development of the comprehensive management plan for the Wekiva River system and provide advice to the Secretary in carrying out the management responsibilities of the Secretary under this Act. The Committee shall have an advisory role only, it will not have regulatory or land acquisition authority.

(f) VOTING AND COMMITTEE PROCEDURES. Each member agency, agency division, or organization referred to in subsection (b) shall have one vote and provide one member and one alternate. Committee decisions and actions will be made with consent of three-fourths of all voting members. Additional necessary Committee procedures shall be developed as part of the comprehensive management plan.

**SEC. 6. AUTHORIZATION OF APPROPRIATIONS.**

There are authorized to be appropriated such sums as may be necessary to carry out this Act and paragraph (161) of section 3(a) of the Wild and Scenic Rivers Act (16 U.S.C. 1274(a)), as added by this Act.

Approved October 13, 2000.

## APPENDIX B: EXAMPLES OF ORDINANCES, GUIDELINES AND PROGRAMS THAT PROMOTE WATER RESOURCE PROTECTION

### Design Guidelines for Boat Launches and Take-outs

In 2004 the National Park Service's Rivers, Trails and Conservation Assistance Program generated a report that provides recommendations and design guidelines for canoe and kayak launch and take-out sites. The document is called "Logical Lasting Launches: Design Guidance for Canoe and Kayak Launches." This NPS release provides numerous design options that are functional and long-lasting while minimizing impacts on river and shoreline resources.

Source: National Park Service. Spring 2004. "Logical Lasting Launches: Design Guidance for Canoe and Kayak Launches." Rivers, Trails & Conservation Assistance Program.

### Example of a Local Government Fertilizer Use Ordinance in Florida

In 2008 Marion County, Florida, adopted an ordinance that has the intent of protecting the Rainbow River and its springshed by setting efficiency-based controls on fertilizer use (a primary nitrogen source) in the county. The ordinance includes controls that are based on best management practices, such as fertilizer application rates per lawn type, restrictions for fertilizer use on impervious surfaces, mandatory fertilizer-free zones (e.g. near waterways, karst sinkholes), and restrictions for placement of grass clippings and other vegetation matter near waterways or storm sewers.

Source: Marion County, FL. 2008. *Marion County Ordinance for Florida Friendly Fertilizer Use on Urban Landscapes*. Marion County Code of Ordinances. Chapter 19: Water and Sewers, Article V: Florida Friendly Fertilizer Use on Urban Landscapes, Sections 19-241 to 19-255. [Ordinance No. 08-35, § 1-15, 11-4-2008].

### Example of a Local Government River Protection Ordinance in Florida

Marion County, Florida, also has an ordinance that specifically aims to protect the Rainbow River by taking preventive measures on trash and motorized boating impacts on the river and its resources. Under this ordinance, the possession of food or alcoholic and nonalcoholic beverages in disposable containers is prohibited on the Rainbow River. This includes bottles, cans, paper sacks, boxes, breakable plastic utensils, paper napkins, and paper towels. In addition to prohibiting disposable containers on the Rainbow River, this ordinance also includes restrictions for motorized boating in environmentally sensitive areas and a "no wake – idle speed only zone" on the Rainbow River. Private boating concessioners as well as public parks remind river users of these Marion County laws.

Source: Marion County, FL. 2008. *Marion County Ordinance for Florida Friendly Fertilizer Use on Urban Landscapes*. Marion County Code of Ordinances. Chapter 5: Boats, Docks and Waterways, Article IV: Rainbow River and K.P. Hole, Sections 5-51 to 5-55. [Ordinance No. 85-17, § 2-8, 10-22-1985; Ordinance No. 94-4, § 2-3, 2-1-1994].

### Examples of a Partnership Watershed Management Structures

In 2005 the Coastal Management Branch of the U.S. Environmental Protection Agency generated a report that documents numerous examples of effective partnership watershed management structures throughout the United States. The National Estuary Program (NEP) has been set up to guide the development of volunteer, interagency, and community-based watershed management in the United States. This document identifies effective management strategies, governance structures, and possible pitfalls and solutions in the development and management of a partnership watershed organization.

Source: U.S. Environmental Protection Agency (U.S.E.P.A). February 2005. *Community-Based Watershed Management: Lessons from the National Estuary Program*. EPA-842-B-05-003. U.S.E.P.A. Coastal Management Branch, Office of Wetlands, Oceans, and Watersheds, National Estuary Program.

Also, in addition to the many NEP partnerships throughout the United States, several other examples of active, well-developed, and effective watershed management partnerships exist throughout North America as well. Some examples are as follows:

- Walla Walla Watershed Management Partnership (Walla Walla, WA)  
<http://www.wallawallawatershed.org/>
- Superior Watershed Partnership (Marquette, MI)  
<http://www.superiorwatersheds.org/>
- Papillion Creek Watershed Partnership (Omaha, NE)  
<http://www.papiopartnership.org/>
- Anacostia Watershed Restoration Partnership (Washington, D.C.)  
<http://anacostia.net/>
- Yahara Lakes Legacy Partnership (Madison, WI)  
<http://www.danewaters.com/YaharaLakesLegacyPartnership.aspx>
- Hawai'i Association of Watershed Partnerships — the umbrella organization for nine watershed partnerships throughout Hawai'i (Honolulu, HI)  
<http://hawp.org/>

### Examples of Sewer Expansion Programs in Florida

During the past decade or two, numerous municipalities, counties, and private utility companies across Florida and the United States have implemented various forms of sewer and water expansion programs to bring modern utility services to older developments that previously only had individual septic systems and wells. Many of these programs are voluntary and/or neighborhood-driven. Most of these local sewer expansion programs were prompted by the need to protect groundwater aquifers from contamination caused by large numbers and high concentrations of septic systems in the community. Although the goals and objectives of these sewer expansion programs may be similar, each program has a unique implementation strategy and funding mechanism. Some examples of local governments and utility companies that implemented sewer expansion programs in Florida are as follows:

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- Emerald Coast Utilities Authority — Sewer Expansion Program (Pensacola, FL)  
<http://www.ecua.org/services/sewer-services.asp>
- City of Jacksonville Water and Sewer Expansion Authority (Jacksonville, FL)  
<http://www.coj.net/Departments/Independent+Boards+and+Agencies/Water+and+Sewer+Expansion+Authority/default.htm>
- City of Cape Coral — Utility Extension Program (Cape Coral, FL)  
<http://www.capecoralutilityexpansion.com>
- City of Port St. Lucie — Sewer and Water Expansion Program (Port St. Lucie, FL)  
<http://www.cityofpsl.com/utility/index.html>



## APPENDIX C: THREATENED AND ENDANGERED SPECIES IN THE WEKIVA RIVER BASIN

**Table C-1. Federal and State Listed Threatened and Endangered Species that may be found in  
the Wild and Scenic River System Corridor**

Scientific Name	Common Name	Federal Status	State of Florida Status
<b>PLANTS AND LICHENS</b>			
<i>Bonamia grandiflora</i>	Florida bonamia	<i>Threatened</i>	<i>Endangered</i>
<i>Calopogon multiflorus</i>	many-flowered grasspink		<i>Endangered</i>
<i>Carex chapmanii</i>	Chapman's sedge		<i>Endangered</i>
<i>Centrosema arenicola</i>	sand butterfly pea		<i>Endangered</i>
<i>Chionanthus pygmaeus</i>	pygmy fringe tree	<i>Endangered</i>	<i>Endangered</i>
<i>Clitoria fragrans</i>	scrub pigeon-wing	<i>Threatened</i>	<i>Endangered</i>
<i>Coelorachis tuberculosa</i>	Piedmont jointgrass		<i>Threatened</i>
<i>Cucurbita okeechobeensis</i>	Okeechobee gourd	<i>Endangered</i>	<i>Endangered</i>
<i>Deeringothamnus pulchellus</i>	beautiful pawpaw	<i>Endangered</i>	<i>Endangered</i>
<i>Dennstaedtia bipinnata</i>	hay-scented fern		<i>Endangered</i>
<i>Drosera intermedia</i>	spoon-leaved sundew		<i>Threatened</i>
<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	scrub wild buckwheat	<i>Threatened</i>	<i>Endangered</i>
<i>Hartwrightia floridana</i>	hartwrightia		<i>Threatened</i>
<i>Hasteola robertiorum</i>	Florida hasteola		<i>Endangered</i>
<i>Illicium parviflorum</i>	star anise		<i>Endangered</i>
<i>Lechea cernea</i>	nodding pinweed		<i>Threatened</i>
<i>Lupinus aridorum</i>	scrub lupine	<i>Endangered</i>	<i>Endangered</i>
<i>Monotropa hypopithys</i>	pinemap		<i>Endangered</i>
<i>Najas filifolia</i>	narrowleaf naiad		<i>Threatened</i>
<i>Nemastylis floridana</i>	celestial lily		<i>Endangered</i>
<i>Nolina atopocarpa</i>	Florida beargrass		<i>Threatened</i>
<i>Nolina brittoniana</i>	Britton's beargrass	<i>Endangered</i>	<i>Endangered</i>
<i>Ophioglossum palmatum</i>	hand fern		<i>Endangered</i>
<i>Panicum abscissum</i>	cutthroat grass		<i>Endangered</i>
<i>Paronychia chartacea pulvinata</i>	papery whitlow-wort	<i>Threatened</i>	<i>Endangered</i>
<i>Pecluma plumula</i>	plume polypody		<i>Endangered</i>
<i>Polygala lewtonii</i>	Lewton's polygala	<i>Endangered</i>	<i>Endangered</i>
<i>Polygonella myriophylla</i>	sandlace (Small's jointweed)	<i>Endangered</i>	<i>Endangered</i>
<i>Prunus geniculata</i>	scrub plum	<i>Endangered</i>	<i>Endangered</i>
<i>Pteroglossaspis ecristata</i>	giant orchid		<i>Threatened</i>
<i>Salix floridana</i>	Florida willow		<i>Endangered</i>
<i>Sideroxylon alachuense</i>	silver buckthorn		<i>Endangered</i>
<i>Stylisma abdita</i>	scrub stylisma		<i>Endangered</i>
<i>Vicia ocalensis</i>	Ocala vetch		<i>Endangered</i>
<i>Warea amplexifolia</i>	clasping (wide-leaf) warea	<i>Endangered</i>	<i>Endangered</i>
<i>Warea carteri</i>	Carter's warea	<i>Endangered</i>	<i>Endangered</i>
<i>Zephyranthes simpsonii</i>	rain lily		<i>Threatened</i>
<b>REPTILES</b>			
<i>Alligator mississippiensis</i>	American alligator	Treated as <i>threatened</i> because of similarity	<i>Species of Special Concern</i>
<i>Drymarchon couperi</i>	eastern indigo snake	<i>Threatened</i>	<i>Threatened</i>
<i>Gopherus polyphemus</i>	gopher tortoise		<i>Threatened</i>
<i>Neoseps reynoldsi</i>	sand skink	<i>Threatened</i>	<i>Threatened</i>

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<i>Stilosoma extenuatum</i>	short-tailed snake		Threatened
<b>BIRDS</b>			
<i>Aphelocoma coerulescens</i>	Florida scrub-jay	<i>Threatened</i>	<i>Threatened</i>
<i>Falco peregrines</i>	peregrine falcon		<i>Endangered</i>
<i>Falco sparverius paulus</i>	southeastern American kestrel		<i>Threatened</i>
<i>Grus canadensis pratensis</i>	Florida sandhill crane		<i>Threatened</i>
<i>Mycteria americana</i>	wood stork	<b>Endangered</b>	<i>Endangered</i>
<i>Picoides borealis</i>	red-cockaded woodpecker	<b>Endangered</b>	<i>Species of Special Concern</i>
<i>Polyborus plancus audubinii</i>	Audubon's crested caracara	<i>Threatened</i>	
<i>Rostrhamus sociabilis plumbeus</i>	Everglade snail kite	<i>Endangered</i>	
<i>Sterna antillarum</i>	least tern		<i>Threatened</i>
<b>MAMMALS</b>			
<i>Trichechus manatus latirostris</i>	West Indian (Florida) manatee	<i>Endangered/ Critical Habitat</i>	<i>Endangered</i>
<i>Ursus americanus floridanus</i>	Florida black bear		<i>Threatened</i>

## APPENDIX D: INVENTORY OF CURRENT CONDITIONS FOR HISTORIC AND CULTURAL RESOURCE VALUES

HISTORIC AND CULTURAL			
Criterion (# sites)	Current Conditions*	Management Authority	Current Actions
<b>Sites on Public Lands</b>			
Underwater Shipwreck (1)	Poor	FDHR, FPS, CAMA	Conduct ground-disturbing activities in accordance with FDHR guidelines; educate; enforce agency rules.
Middens (32)	Good (5) Fair (8) Poor (13) Unknown (5)  18 are often inaccessible because of high water conditions 3 are inaccessible due to overgrowth/heavy vegetation	FDHR, FPS, CAMA	Conduct ground disturbing activities in accordance with FDHR guidelines; educate; enforce agency rules.
Prehistoric Village Site (1)	Poor	FDHR, FPS	Conduct ground-disturbing activities in accordance with FDHR guidelines; educate; enforce agency rules.
Pre-ceramic Lithic Waste Scatter (4)	Fair (2) Unknown (2)  2 sites are often inaccessible because of to high water conditions and/or overgrowth.	FDHR, FPS, CAMA	Conduct ground-disturbing activities in accordance with FDHR guidelines; educate; enforce agency rules.
African American Sites from Town of Markham (3)	Fair (1 cemetery) Poor (1 historic site) Destroyed (1 church)	FDHR, FPS	Conduct ground-disturbing activities in accordance with FDHR guidelines; educate; enforce agency rules.
Artifact Scatter (1)	Unknown  Often inaccessible because of high water conditions and/or heavy vegetation and overgrowth.	FDHR, FPS, CAMA	Conduct ground-disturbing activities in accordance with FDHR guidelines; educate; enforce agency rules.
Isolated Finds (4)	Not Applicable — these finds were collected.	FDHR, FPS	Conduct ground-disturbing activities in accordance with FDHR guidelines; educate; enforce agency rules.
Cemetery from Town of Ethel (1)	Fair	FDHR, FPS	Conduct ground-disturbing activities in accordance with FDHR guidelines; educate; enforce agency rules.
Burial Mound (1)	Destroyed	FDHR, FPS	Conduct ground-disturbing activities in accordance with FDHR guidelines; educate; enforce agency rules.
Logging Trail circa 1940s (1)	Fair  Often inaccessible because of high water conditions.	FDHR, FPS	Conduct ground-disturbing activities in accordance with FDHR guidelines; educate; enforce agency rules.

HISTORIC AND CULTURAL			
Criterion (# sites)	Current Conditions*	Management Authority	Current Actions
Windmill Remains (1)	Poor  Often inaccessible because of high water conditions.	FDHR, FPS, CAMA	Conduct ground disturbing activities in accordance with FDHR guidelines; educate; enforce agency rules.
Pottery — limited surface scatter (1)	Unknown	FDHR, FDOF	Conduct ground-disturbing activities in accordance with FDHR guidelines.
Type unknown (1)	Unknown	FDHR, SJRWMD	Identify and monitor sites for any disturbances; Any ground-disturbing activities will be coordinated with FDHR.
Evidence of Pre-European Contact Settlement	Unknown	FDHR, Orange County	Unknown
Early Homestead Site (1)	Unknown	FDHR, Orange County	Unknown
<b>Sites on Private Lands</b>			
Middens (7)	Unknown (7)	FDHR	Unknown
Prehistoric Habitation (3) (Shell Island, Wekiva Hillside, and Serenity)	Unknown (Wekiva Hillside and Serenity) Shell Island has evidence of pilfering, sanitary issues, and general deterioration.	FDHR Rollins College owns Shell Island site.	Unknown (Wekiva Hillside and Serenity) Shell Island is unmanaged.
Lithic Waste Scatter (1)	Unknown	FDHR	Unknown
Artifact Scatter (15)	Unknown (15)	FDHR	Unknown
Isolated Finds (5)	Unknown	FDHR	Unknown
Burial Mound (1) (Rock Springs Burial Mound)	Unknown	FDHR	Unknown
Windmill Remains (1)	Unknown	FDHR	Unknown
19th Century American Homestead (1) (Twin Oaks)	Unknown	FDHR	Unknown
Wilson's Cypress Company Black Water Creek Sawmill Remains (1) (includes segment of railroad grade and historic road)	Unknown	FDHR	Unknown
Unknown, 20th Century American Site (1)	Unknown	FDHR	Unknown

\*Good = structural stability and physical wholeness, where no obvious deterioration other than normal occurs. Fair = there is discernable decline in condition between inspections, and the wholeness or physical integrity is and continues to be threatened by factors other than normal wear. Poor = describes an unstable condition where there is physical integrity from year to year; suggests immediate action to reestablish physical stability. Source of evaluative scale: Wekiva River Basin State Park Multi-unit Management Plan.

Note: This table, slightly modified, is from the 2008 *Wekiva Wild and Scenic River System Management Plan*.

## APPENDIX E: SUMMARY OF HISTORICAL WATER QUALITY AVERAGE DATA FROM THE WEKIVA RIVER AND ROCK SPRINGS RUN IN COMPARISON TO FLORIDA CLASS III SURFACE WATER CRITERIA

Values are averages (means) of available data for the period of record indicated.

Table E-1:

Analyte	Wekiva River at SR 46 (1954-2003)	Rock Springs Run above Wekiva River (1973-2003)	Class III Surface Water Criterion (62.302-500 FAC)
Conductivity ( $\mu$ mhos/cm)	624	244	Shall not be increased more than 50% above background or to 1275, whichever is greater.
pH (units)	7.42	7.31	> 6; see (1)
Alkalinity (mg/L as CaCO <sub>3</sub> )	94.9	86.6	> 20
Color (pcu)	61.5	203	NA
Turbidity (NTU)	3.34	1.60	NA
Dissolved O <sub>2</sub> (mg/L)	7.10	5.84	Shall not be less than 5.0. Normal daily and seasonal fluctuations shall be maintained.
Total Organic Carbon (mg/L)	8.31	21.9	NA
Total Nitrogen (mg/L)	1.25	1.68 e	See (2)
Total Kjeldahl Nitrogen (mg/L)	0.632	0.896	See (2)
Nitrate as NO <sub>3</sub> /NO <sub>2</sub> -N (mg/L)	0.578	0.784	See (2) and (3)
Ammonia (mg/L)	0.045	0.047	< 0.02
Orthophosphorus (mg/L)	0.108	0.084	See (2)
Total Phosphorus (mg/L)	0.141	0.118	See (2)
Chlorophyll a - corrected ( $\mu$ g/L)	1.70	2.90	NA; See (4)
Fecal Coliform (#/100ml)	100	54.2	See (5)
Total Coliform (#/100 ml)	1,351	1,649	NA

Analyte = chemical substance being analyzed

NA = no criterion is stated in the rule for this analyte (chemical substance being analyzed).

e = estimated by adding TKN (Total Kjeldahl Nitrogen) and NO<sub>x</sub>-N.

$\mu$ mhos, a unit of measurement for conductivity is expressed in either microSiemens ( $\mu$ S/cm) or micromhos ( $\mu$ mho/cm), which is the reciprocal of the unit of resistance, the ohm. The prefix "micro" means that it is measured in millionths of a mho. MicroSiemens and micromhos are equivalent units. Distilled water has a range of conductivity from 0.5 to 2  $\mu$ mhos/cm. Drinking water is generally between 50 to 1500  $\mu$ mhos/cm, and domestic wastewater may have conductivities above 10,000  $\mu$ mhos/cm.

mg/L = milligrams/liter; 1  $\mu$ g/L or microgram per liter represents 1 part per billion (ppb).

NTU = Nephelometric turbidity unit

#/100ml = number per 100 milliliters or per 3.4 fluid ounces

## APPENDIXES

- (1) Not to vary more than one unit above or below natural background of predominantly fresh waters and coastal waters as defined in Section 62-302.520(3)(b), *Florida Administrative Code* or more than two-tenths unit above or below natural background of open waters as defined in Section 62-302.520(3)(f), *Florida Administrative Code*, provided that the pH is not lowered to less than 6 units in predominantly fresh waters, or less than 6.5 units in predominantly marine waters, or raised above 8.5 units. If natural background is less than 6 units in predominantly fresh waters or 6.5 units in predominantly marine waters, the pH shall not vary below natural background or vary more than one unit above natural background of predominantly fresh waters and coastal waters, or more than two-tenths unit above natural background of open waters. If natural background is higher than 8.5 units, the pH shall not vary above natural background or vary more than one unit below natural background of predominantly fresh waters and coastal waters, or more than two-tenths unit below natural background of open waters.
- (2) Nutrients include total nitrogen, Kjeldahl-nitrogen,  $\text{NO}_2/\text{NO}_3 - \text{N}$ , total phosphorus, and orthophosphate. The Class III criterion is in narrative form: "The discharge of nutrients shall continue to be limited as needed to prevent violations of other standards contained in this chapter. Man-induced nutrient enrichment (total nitrogen or total phosphorus) shall be considered degradation in relation to the provisions of Sections 62-302.300, 62-302.700, and 62-4.242, *Florida Administrative Code*. In no case shall nutrient concentrations of a body of water be altered so as to cause an imbalance in natural populations of aquatic flora or fauna."
- (3) There is no Class III standard for nitrate. The Class I (drinking water) standard is 10 mg/L. FDEP's Ground Water section uses a concentration of 0.45 mg/L to indicate potential ground water-surface water impacts based on this level's potential to increase chlorophyll growth in surface waters. A concentration of 0.20 mg/L is widely cited as a "background concentration" for Florida springs, although in a sample of Florida springs unaffected by human population centers, the median value was found to be 0.08 mg/L (FDEP 2006).
- (4) Impairment may be indicated in streams with chlorophyll-a greater than 20 ug/L or an increase of over 50% over historical values is observed for at least two consecutive years (62-303.352, *Florida Administrative Code*)
- (5) Not to exceed a monthly average of 200, nor exceed 400 in 10% of the samples, nor exceed 800 on any one day.

This table, slightly modified, is from the 2008 *Wekiva Wild and Scenic River System Management Plan*.

## APPENDIX F: U.S. FISH AND WILDLIFE SERVICE CORRESPONDENCE



### United States Department of the Interior

NATIONAL PARK SERVICE  
DENVER SERVICE CENTER  
12795 W. ALAMEDA PARKWAY  
P.O. BOX 25287  
DENVER, COLORADO 80225-0287

In reply refer to:

**D18 Wekiva**

July 27, 2009

#### MEMORANDUM

TO Field Supervisor, USFWS, North Florida Field Office

FROM Planning Project Manager

RE Wekiva Wild and Scenic River Comprehensive Management Plan

The National Park Service is working with the Wekiva Wild and Scenic River System Advisory Management Committee to develop a comprehensive river management plan (CRMP) and environmental assessment for the Wekiva Wild and Scenic River in Lake, Orange, and Seminole counties, Florida (see map attached). The wild and scenic river designation includes Wekiwa Springs Run, Rock Springs Run, Black Water Creek, and the Wekiva River.

The process of developing a river management plan is intended to build consensus among stakeholders and the public to assure logic and consistency in plan proposals, and provide for rational decision making. The plan will provide a framework to guide resources management and visitor use. Public involvement from all constituencies is being sought throughout the course of the planning process.

In compliance with the National Environmental Policy Act and NPS policy, the river management plan will be developed concurrent with preparation of an environmental assessment (EA). The CRMP/EA will identify significant management and operational issues confronting the rivers, and present management alternatives for addressing these issues consistent with the rivers' legal and policy mandates. The environmental impacts associated with implementing each of the management alternatives will be fully analyzed.

## APPENDIXES

In accordance with consultation requirement of Section 7 of the Endangered Species Act and NPS policy, we wish to notify you of the CRMP/EA process and invite your participation. Below is a list of federally-listed endangered or threatened species for the river that we are considering using for the project. Please review for its adequacy and provide advice to ensure adequate evaluation of the potential impacts that the plan could have on federally-listed endangered and threatened species.

*Alligator mississippiensis* - American Alligator

*Drymarchon corais couperi* - Eastern Indigo Snake

*Aphelocoma coerulescens* - Florida Scrub-jay

*Mycteria americana* - Wood Stork

*Trichechus manatus latirostius* - West Indian Manatee

When it becomes available, you will receive a copy of the CRMP/EA that will include the findings of the NPS in regards to potential effects on listed species from the alternatives.

We look forward to working closely with you throughout plan development and welcome your comments and advice regarding protection and preservation of Wekiva River's diverse natural resources. Should you have any questions or wish to discuss this project in more detail, please contact Matthew Safford in our Planning Division at 303-969-2898 or at [matthew\\_safford@nps.gov](mailto:matthew_safford@nps.gov).

Attachment

Map of Wekiva Wild and Scenic River



Candace Martino/R4/FWS/DOI  
09/01/2009 03:31 PM

To  
matthew\_safford@nps.gov

cc  
Jay Herrington/R4/FWS/DOI@FWS, John Milio/R4/FWS/DOI@FWS, Paula  
Sisson/R4/FWS/DOI@FWS, Erin Gawera/R4/FWS/DOI@FWS

Subject  
Fw: 09-FA-0060 Wekiva Wild and Scenic River Management Plan

Hello Matthew,

Thank-you for notifying the U.S. Fish and Wildlife Service (Service) in a July 28, 2009, memorandum about the Wekiva Wild and Scenic River System Advisory Management Committee's intent to develop a Comprehensive River Management Plan and Environmental Assessment (CRMP/EA) for the Wekiva Wild and Scenic River in Lake, Orange and Seminole counties. Based on the map showing the designations of the Wekiva Springs Run, Rock Springs Run, Black Water Creek, and the Wekiva River, and the species that were identified in the letter, we have provided comments relative to those species. Also, we refer you to our website located at [www.fws.gov/northflorida/](http://www.fws.gov/northflorida/) to find more information, guidelines, regulatory and landowner tools that may be useful in the development of the plan.

Eastern Indigo Snake – The Service considers all habitats except open water and salt marsh, suitable habitat for indigo snakes. We are currently working on a survey protocol with our Vero Beach Field Office and hope to have it completed within several months. We currently have the Eastern Indigo Snake Protection Measures available on the website.

Florida Scrub-Jay – The Seminole State Forest scrub-jay population and the Northeast Lake County scrub-jay metapopulation occurs in relative proximity to the Seminole and Lake County Blackwater Creek designated segments. Our website referenced above contains all the necessary information for incorporation into the plan – Reference Materials, the 5-Year Status Review, the Florida Umbrella Habitat Conservation Plan, Biological Information, Survey Guidelines, and etc.

West Indian Manatee – Occurs within the Wekiva River Basin. We have listed some of the basic impact considerations for manatees and their habitat:

- the type (powerboat, canoe, kayak, sailboat, etc.) density, and speed of watercraft utilizing the designated waters;
- the type, density and location of in-water structures (boat docks and ramps, canoe/kayak launches, fishing/observation platforms, etc.) within the designated waters;
- the type, density and location of contiguous land use as it affects water quality and quantity (withdrawals), possible entrapment of manatees within water control structures, direct and indirect impacts to aquatic vegetation, etc.;

## APPENDIXES

- physical, chemical, and biological changes to the river, stream and creek systems as a result of dredging, habitat enhancement/restoration, spread of nuisance and invasive aquatic vegetation, etc.

Wood Stork – the Lake County Mud Lake (Hontoon Island) wood stork colony with the coordinates of 28 58.0 & 81 23.0 is within 15 miles (a regulatory criteria) of some of the designated focus areas in the plan. However, this colony has not been active in the last three years. All wood stork colonies in the state are listed with activity status under the heading of wood storks on our website.

Our wood stork effect determination key located on the Jacksonville Army Corps of Engineers (Corps) website was designed primarily for use by the Corps project managers and State Regulatory agencies; however, other federal agencies, project permit applicants and co-sponsors of civil works projects may find this key and its supporting documents useful in identifying potential impacts to wood storks, and planning how best to avoid, minimize, or compensate for any identified adverse effects.

The American Alligator is not a federally-listed species so we do not provide comments relative to that species.

We look forward to reviewing a draft copy of the CRMP/EA when it becomes available. Thank-you for your coordination with our agency.

\*\*\*\*\*

Candace Martino, Fish and Wildlife Biologist  
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E-mail:candace\_martino@fws.gov  
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904.731.3142 (direct)  
904.731.3336 (main)  
904.731.3045 or 3048 (fax)

## ABBREVIATIONS AND GLOSSARY

Coastal and Aquatic Managed Areas (CAMA)

Florida Department of Agriculture and Consumer Services (FDACS)  
Division of Forestry (FDOF)

Florida Department of Environmental Protection (FDEP)  
Florida Division of Recreation and Parks (aka Florida Park Service or FPS)  
Office of Coastal and Aquatic Managed Areas (or Coastal and Aquatic Managed Areas  
(CAMA)

Florida Department of Transportation (FDOT)

Florida Division of Historical Resources (FDHR)

Florida Fish and Wildlife Conservation Commission (FWC)  
Bureau of Invasive Plant Management (BIPM)

Florida Natural Areas Inventory (FNAI)

Lake County Water Authority (LCWA)

National Register — The National Register of Historic Places

Orange County Community and Environmental Services Department  
Orange County Parks and Recreation Division

St. Johns River Water Management District (SJRWMD or the district)

U.S. Fish and Wildlife Service (USFWS)

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Headsprings — A spring that serves as the headwaters of a stream. Wekiwa and Rock springs are examples of headsprings.

MFLs minimum flows and levels — St. Johns River Water Management District defines MFLs as follows: “MFLs are the minimum water levels and/or flows adopted by the District Governing Board as necessary to prevent significant harm to the water resources or ecology of an area resulting from water withdrawals permitted by the District. MFLs define how often and for how long high, average and low water levels and/or flows should occur to prevent significant harm.” Found at [www.sjrwmd.com](http://www.sjrwmd.com), “Minimum Flows and Levels,” dated 5/22/01.

mg/L — milligrams/liter

Outstanding Florida Waters (OFWs) — Bodies of water in Florida that have been designated by the Florida Department of Environmental Protection (under authority of Section 403.061 (27), Florida Statutes) as *worthy of special protection because of their natural attributes*. Outstanding

## ABBREVIATIONS AND GLOSSARY

Florida Waters have restrictions on new activities that would reduce water quality or otherwise degrade the body of water.

outstandingly remarkable values (ORVs) — A rare or exemplary feature or characteristic that is directly related to the river. A river must possess at least one outstandingly remarkable value to be eligible for Wild and Scenic River designation. The outstandingly remarkable values identified for the Wekiva River System are scenic, recreation, wildlife and habitat, historic and cultural resources, and water quality and quantity.

springshed — The recharge area of a spring, within which all precipitation that falls on the surface will percolate through the ground and eventually resurfaces through the spring.

TMDL (total maximum daily loads) —the maximum amount of a pollutant that a body of water can receive and still meet water quality standards.

Wekiva Parkway and Protection Act - *Florida Statutes*, Chapter 369, Part III (originally adopted by the Florida legislature in 2004 and subsequently amended)

Wekiva River Aquatic Preserve (the aquatic preserve) — Waters and associated wetlands and floodplains of the Wekiva River, Middle St. Johns River, portions of Black Water Creek, Little Wekiva River, and Rock Springs Run. The Wekiva River Aquatic Preserve was established by the Florida legislature on June 23, 1975, through the Florida Aquatic Preserve Act (Chapter 258.35-258-45, *Florida Statutes*). The primary purpose of the designation is to preserve the biological resources of this riverine system.

Wekiva River Basin Working Group (WBWG) – A working group of agencies, local governments, and non-profit conservation organizations that periodically meet to share information and collaborate on efforts to protect natural resources of the Wekiva basin.

Wekiva River Buffer Conservation Area — This designated buffer area includes mainly seasonally flooded wetlands in the floodplain between the Wekiva and Little Wekiva rivers. Protection of the area in a natural condition helps preserve the water quality of the Wekiva and Little Wekiva rivers.

Wekiva River Protection Act, *Florida Statutes*, Chapter 369, Part II, originally adopted by the Florida legislature in 1988 and subsequently amended.

Wekiva River Protection Area (WRPA) — This is the area designated in the Wekiva River Protection Act for special planning and regulation efforts.

Wekiva Wild and Scenic River System Advisory Management Committee (the advisory management committee) — The advisory committee authorized by the Wild and Scenic Rivers Act as amended in 200 to recommend management strategies for the Wekiva Wild and Scenic River System. Unlike most rivers in the national wild and scenic river system that are managed exclusively by either a federal or state agency, the Wekiva River is considered a partnership wild and scenic river, meaning that it is jointly managed by a consortium of local stakeholder groups (the Wekiva River System Advisory Management Committee) with oversight and coordination provided by the National Park Service.

Wekiva Study Area (WSA) - An area designated by the Florida legislature in the Wekiva Parkway and Protection Act for special planning and regulation efforts.

Wekiva Wild and Scenic River Study Area — the area originally studied for potential federal Wild and Scenic River designation.

Wekiva springshed — The springshed of the Wekiva River System.

## REFERENCES

**Note:** Many of the following references are from the 2008 “Draft Wekiva Wild and Scenic River System Management Plan.” As text/information from that study was used in this plan, the associated references were also brought into this plan. Dates of access to Internet sites relate to the preparation of the draft 2008 plan. Many personal communications were also listed in that plan, and some of that information has also been used in this plan. Several people contributed information to the 2008 plan, such as the following:

- Joe Bishop, Forest Supervisor II, Seminole State Forest  
 Lester Dillard, Graduate student, University of Central Florida, Orlando  
 John Fillyaw, Manager, Wekiwa Springs State Park  
 Kelly Gestring, Biologist, Florida Fish and Wildlife Conservation Commission  
 Amy Giannotti, Regional Biologist, Florida Department of Environmental Protection, Bureau  
 Invasive Plant Management  
 Melissa Gibbs, Professor, Stetson University, Orlando, FL  
 Paul Lammardo, Biologist, Florida Department of Environmental Protection, Wekiva River  
 Aquatic Preserve  
 David Murray, Biologist, Florida Department of Environmental Protection, Wekiva River  
 Aquatic Preserve  
 Keith Schue, Ocala-Wekiva Conservation Project Coordinator, The Nature Conservancy  
 Gregg Walker, Biologist, Florida Department of Environmental Protection, Wekiva Basin  
 State Parks
- Belleville, B.  
 1999 “River Out of Time — Wekiva River,  
 Florida.” *Sierra Magazine*, July 1999.
- Briggs, Gerald R., M. S. Eberhard Roeder, and  
 Elke Ursin  
 2007 “Nitrogen Impacts on Onsite Sewage  
 Treatment and Disposal Systems in  
 the Wekiva Study Area.” Florida  
 Department of Health, Division of  
 Environmental Health, Bureau of  
 Onsite Sewage Programs, Tallahassee,  
 FL.
- Camp, Dresser, and McKee  
 2005 “Wekiva Parkway and Protection Act  
 Master Stormwater Management Plan  
 Support, Final Report.” Prepared for  
 the St. Johns River Water  
 Management District.
- Cook, T. Central Florida Heritage Foundation  
 2005 “Orlando: A Visual History — Early  
 Tourist Sites.” [Internet]. Available  
 from: [www.cfhf.net/orlando/  
 tourist1.htm](http://www.cfhf.net/orlando/tourist1.htm) [Accessed 2007 May].
- Denton, C.  
 1992 “The Wekiva River Basin: A Resource  
 Revisited.” The Friends of the Wekiva,  
 Inc.
- Executive Office of Governor Jeb Bush  
 2004 Governor Signs Legislation to Protect  
 Wekiva [Internet Available from:  
[http://www.myflorida.com/myflorida/  
 eogadmin/showPress.jsp?press\\_id=  
 3285](http://www.myflorida.com/myflorida/eogadmin/showPress.jsp?press_id=3285) ]. [Accessed 2007 April].
- Florida Archaeological Law Enforcement  
 Task Force  
 1997 Minutes of December 16, 1997,  
 Florida Archaeological Law  
 Enforcement Task Force Meeting.  
 Wekiva River Aquatic Preserve,  
 Florida Department of Environmental  
 Protection, Florida Department of  
 State.

- Florida Bureau of Archaeological Research  
2005 "Best Management Practices: An Owners' Guide to Protecting Archaeological Sites — Preserving and Protecting Florida's Archaeological Sites for Future Generations."
- Florida Department of Environmental Protection (FDEP)  
1987 "Wekiva River Aquatic Preserve Management Plan." Bureau of Land and Aquatic Resource Management, Division of Recreation and Parks.  
1996 Wekiva River Basin Interagency Strategic Plan.  
2000 "Ecological Assessment of the Wekiva River; Seminole, Lake and Orange Counties." Bureau of Laboratories, Division of Resource Assessment and Management, Tallahassee, FL.  
2004 "A Strategy for Water Quality Protection: Wastewater Treatment in the Wekiva Study Area." Available from: <http://www.dep.state.fl.us/central/Home/Admin/WekivaReportDecember2004.pdf>  
2005 Wekiva River Basin State Parks Multi-Unit Management Plan. Office of Park Planning, Division of Recreation and Parks.  
2006 "Integrated Water Quality Assessment for Florida: 2006 305(b) Report and 303(d) List Update." Bureau of Watershed Management, Tallahassee FL.  
2006-07a "EcoSummary: Rock Springs." <ftp://ftp.dep.state.fl.us/pub/labs/lds/reports/8462.pdf>.  
2006-07b "EcoSummary: Wekiwa Springs." <ftp://ftp.dep.state.fl.us/pub/labs/lds/reports/8544.pdf>.  
2007 Wekiva River Aquatic Preserve Website. [Accessed May 2007].
- Florida Department of Environmental Regulation  
1983 "Report to the Environmental Regulation Commission — Extending the Boundaries of the Outstanding Florida Waters Designation within the Wekiva River System."
- Florida Department of Health (FDOH)  
2004 "Wekiva Basin Onsite Sewage Treatment and Disposal System Study." Available from: <http://www.doh.state.fl.us/ENVIRONMENT/ostds/wekiva/wekivastudyrtf.pdf>
- Florida Department of Transportation (FDOT)  
2005 "Wekiva Area Water Budget." Report number 1620-7024, contract BD521.
- Florida Division of Forestry (FDOF), Florida Department of Agriculture and Consumer Services (FDACS),  
2000 "Five-Year Resource Management Plan for the Seminole State Forest (2000-2005)." Lake County. Florida.
- Florida Division of Historical Resources (FDHR), Bureau of Archaeological Research (BAR)  
2005 "Best Management Practices: An Owner's Guide to Protecting Archaeological Sites" [PDF on the Internet]. Available from: [www.flheritage.com/archaeology/education/culturalmgmt](http://www.flheritage.com/archaeology/education/culturalmgmt)  
2007 Florida Bureau of Archaeological Research Training Programs [Webpage]. Available from: [www.flheritage.com/archaeology/education/training](http://www.flheritage.com/archaeology/education/training)
- Florida Division of Parks and Recreation  
2007 "Wekiwa Springs State Park History; Lower Wekiva River Preserve State Park History; and Rock Springs Run State Reserve History." [Websites]. Available from: [www.floridastateparks.org](http://www.floridastateparks.org) [Accessed 2007 May].

## REFERENCES

- Florida Fish and Wildlife Conservation Commission (FWC)  
2007 Species of Greatest Conservation Need. [Website]. <http://myfwc.com/wildlifelegacy/review/SGCN.pdf>. [Accessed 2007 May].
- Florida Geological Survey (FGS)  
2005 Wekiva Aquifer Vulnerability Assessment: Report of Investigation no. 104. Tallahassee FL (online as [ftp://ftp.dep.state.fl.us/pub/geo/hydrogeology/Wekiva\\_AVA/RI\\_104a.pdf](ftp://ftp.dep.state.fl.us/pub/geo/hydrogeology/Wekiva_AVA/RI_104a.pdf)).
- Florida Springs Task Force  
2000 "Florida's Springs: Strategies for Protection and Restoration." Florida Department of Environmental Protection.  
2006 "Florida's Springs: Strategies for Protection and Restoration." Florida Department of Environmental Protection.
- Florida State Parks (FPS)  
2007 See Florida Division of Parks and Recreation
- Gilbert, T. and J. Wooding  
1996 "An Overview of Black Bear Kills in Florida 1976- Florida Game and Freshwater Fish 1995." Commission, Tallahassee, FL.
- Hatley, P.  
2005 "A Model for Smart Growth Management: Florida Enacts Landmark Legislation to Protect Water and Natural Resources, while Directing Appropriate Growth in the Wekiva River basin [Internet]." Available from: [www.pamelajohatley.com/Articles/Wekiva.pdf](http://www.pamelajohatley.com/Articles/Wekiva.pdf) [Accessed 2007 April].
- Lake County, Florida  
2007 "A Brief History of Lake County." [Internet]. Available from: [www.lakecountyfl.gov/historical\\_museum/fast\\_facts.aspx](http://www.lakecountyfl.gov/historical_museum/fast_facts.aspx) [Accessed 2007 May].
- MACTEC  
2007 "Phase I Report, Wekiva River Basin Nitrate Sourcing Study." Project number 6063060079 for the St. Johns River Water Management District.
- Mattson, R. A., E. F. Lowe, C. L. Lippincott, J. Di, L. Battoe  
2006 "Wekiva River and Rock Spring Run Pollutant Reduction Goals." Prepared for St. Johns River Water Management District, Palatka, FL.
- Mechling, Mark, Gabriel S. Pastrana, Eric B. Fuller, and William C. Aley IV  
2007 "Technical Perspectives: Multiple Nitrogen Loading Assessments from Onsite Waste Treatment and Disposal Systems within the Wekiva River Basin, Wekiva Study Area, Florida." Ellis & Associates, Inc, Jacksonville, FL.
- Milanich, Jerald T.  
1994 *Archaeology of Precolumbian Florida*. University Press of Florida, Gainesville.
- Milanich, Jerald T. and Charles H. Fairbanks  
1980 *Florida Archaeology*. Academic Press, New York.
- National Park Service, U.S. Department of the Interior  
1999 "Wekiva River, Rock Spring Run, and Seminole Creek Wild and Scenic River Study." Southeast Support Office.  
2002 "An Overview of Anti-looting Efforts in Florida" by G. T. York and J. Miller. *Cultural Resource Management*. Volume 25. No. 2. Available from: <http://crm.cr.nps.gov/archive/25-02/25-2-8.pdf>
- National Parks and Conservation Association  
2007 *Unnatural Disaster: Global Warming and Our National Parks*. Washington, D.C.



- Otis Environmental Consultants  
2007 "Estimates of Nitrogen Loadings to Groundwater from Onsite Wastewater Treatments Systems in the Wekiva Study Area, Task 2 Report, Wekiva Onsite Nitrogen Contribution Study." Madison, WI.
- Pandion Systems, Inc.  
2008 "Draft Wekiva Wild and Scenic River System Management Plan." Prepared for the Wekiva Wild and Scenic River System Advisory Management Committee. Gainesville, FL
- Roof, J. C. and J. B. Wooding  
1996 "Evaluation of S.R. 46 Wildlife Crossings." Tech. Rep #54. Fl Coop. Fish and Wildl. Res. Unit, Univ. of FL.
- St. Johns River Water Management District (SJRWMD)  
2003 "Lake Norris Conservation Area Land Management Plan."  
2006 "Wekiva River Buffer Conservation Area Land Management Plan."
- Seminole County Convention & Visitors Bureau.  
2007 "About Seminole County" [Internet article]. Available from: <http://www.visitseminole.com> [Accessed May 2007].
- Shelley, Deborah  
2009 Manager, Wekiva River Aquatic Preserve. Personal communication with NPS Natural Resource Specialist Don Wojick. July 2009
- Spear, Kevin and Nin-Hai Tseng  
2006 "Land Buy Advances Wekiva Parkway. Orlando Sentinel." December 8, 2006.
- State of Florida  
2004 Wekiva Parkway and Protection Act [Internet]. Available from: <http://www.dca.state.fl.us/fdcp/dcp/wekiva/wekivaact/index.cfm>. [Accessed 2007 April].
- U.S. Department of Agriculture  
1993 *Soil Survey Manual*. Soil Survey Division staff. Washington, D.C.
- Walker, G. and J. A. Baber  
2003 "Wildlife use and interactions with structures constructed to minimize vehicle collisions and animal mortality along State Road 46, Seminole County, Florida." Florida Department of Environmental Protection, Division of Recreation and Parks, Apopka, FL.
- Wekiva Basin Area Task Force  
2003 "Final Report: Recommendations for Planning and Locating the Wekiva Parkway While Preserving the Wekiva River Basin Ecosystem."
- Wekiva River Basin Coordinating Committee  
2004 "Final Report: Recommendations for Enhanced Land Use Planning Strategies and Development Standards to Protect Water Resources of the Wekiva River Basin."
- Wekiva Wild and Scenic River Advisory Management Committee.  
2008 See Pandion Systems, Inc.
- Weisman, Brent R.  
1993 "An Overview of the Prehistory of the Wekiva River Basin." *The Florida Anthropologist* 46(1): 20-36.
- Wetland Solutions, Inc.  
2004 "Work Plan, Pollutant Load Reduction Goal Analysis for the Wekiva River and Rock Springs Run." Prepared for St. Johns River Water Management District, Palatka, FL.
- York, G.T. and J. Miller  
2002 "An Overview of Anti-looting Efforts in Florida." See National Park Service.

## REFERENCES

Young, Dr. Linda

2007 "Final Report, Task 3: Assess  
Contributions of Onsite Wastewater  
Treatment Systems Relative to Other  
Sources, Wekiva Onsite Nitrogen  
Contribution Study." Institute of Food  
and Agricultural Sciences (IFAS),  
University of Florida, Gainesville, FL.

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### **Wekiva Wild and Scenic River System Advisory Management Committee**

Committee members provided review of this environmental assessment



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 sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; 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 ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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