



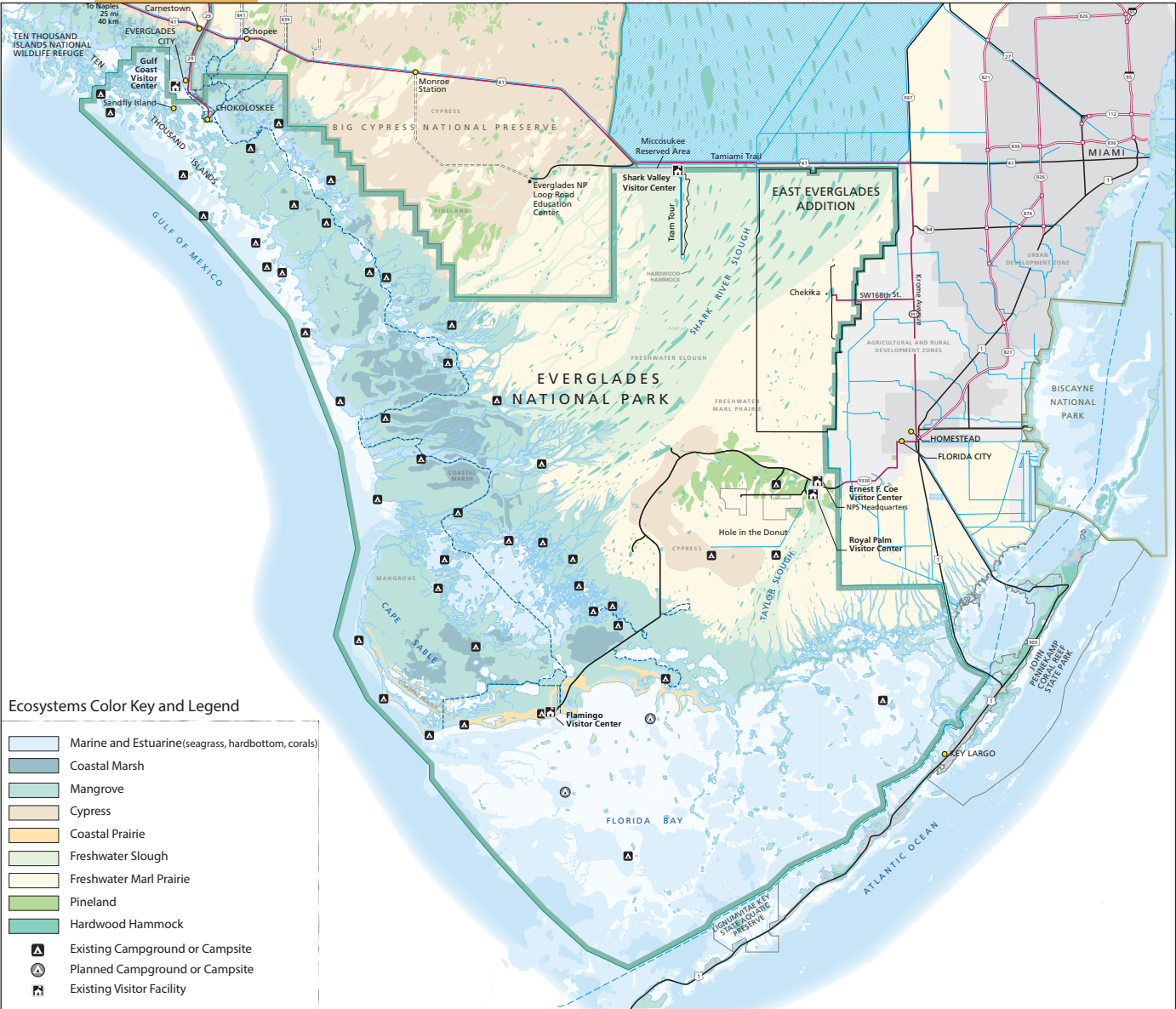
Foundation Document

Everglades National Park

Florida

October 2017





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Mission of the National Park Service

The National Park Service (NPS) preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. The National Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

The NPS core values are a framework in which the National Park Service accomplishes its mission. They express the manner in which, both individually and collectively, the National Park Service pursues its mission. The NPS core values are:

- **Shared stewardship:** We share a commitment to resource stewardship with the global preservation community.
- **Excellence:** We strive continually to learn and improve so that we may achieve the highest ideals of public service.
- **Integrity:** We deal honestly and fairly with the public and one another.
- **Tradition:** We are proud of it; we learn from it; we are not bound by it.
- **Respect:** We embrace each other's differences so that we may enrich the well-being of everyone.

The National Park Service is a bureau within the Department of the Interior. While numerous national park system units were created prior to 1916, it was not until August 25, 1916, that President Woodrow Wilson signed the National Park Service Organic Act formally establishing the National Park Service.

The national park system continues to grow and comprises more than 400 park units covering more than 84 million acres in every state, the District of Columbia, American Samoa, Guam, Puerto Rico, and the Virgin Islands. These units include, but are not limited to, national parks, monuments, battlefields, military parks, historical parks, historic sites, lakeshores, seashores, recreation areas, scenic rivers and trails, and the White House. The variety and diversity of park units throughout the nation require a strong commitment to resource stewardship and management to ensure both the protection and enjoyment of these resources for future generations.



The arrowhead was authorized as the official National Park Service emblem by the Secretary of the Interior on July 20, 1951. The sequoia tree and bison represent vegetation and wildlife, the mountains and water represent scenic and recreational values, and the arrowhead represents historical and archeological values.

Introduction

Every unit of the national park system will have a foundational document to provide basic guidance for planning and management decisions—a foundation for planning and management. The core components of a foundation document include a brief description of the park as well as the park’s purpose, significance, fundamental resources and values, other important resources and values, and interpretive themes. The foundation document also includes special mandates and administrative commitments, an assessment of planning and data needs that identifies planning issues, planning products to be developed, and the associated studies and data required for park planning. Along with the core components, the assessment provides a focus for park planning activities and establishes a baseline from which planning documents are developed.

A primary benefit of developing a foundation document is the opportunity to integrate and coordinate all kinds and levels of planning from a single, shared understanding of what is most important about the park. The process of developing a foundation document begins with gathering and integrating information about the park. Next, this information is refined and focused to determine what the most important attributes of the park are. The process of preparing a foundation document aids park managers, staff, and the public in identifying and clearly stating in one document the essential information that is necessary for park management to consider when determining future planning efforts, outlining key planning issues, and protecting resources and values that are integral to park purpose and identity.

While not included in this document, a park atlas is also part of a foundation project. The atlas is a series of maps compiled from available geographic information system (GIS) data on natural and cultural resources, visitor use patterns, facilities, and other topics. It serves as a GIS-based support tool for planning and park operations. The atlas is published as a (hard copy) paper product and as geospatial data for use in a web mapping environment. The park atlas for Everglades National Park can be accessed online at: <http://insideparkatlas.nps.gov/>.



Part 1: Core Components

The core components of a foundation document include a brief description of the park, park purpose, significance statements, fundamental resources and values, other important resources and values, and interpretive themes. These components are core because they typically do not change over time. Core components are expected to be used in future planning and management efforts.

Brief Description of the Park

Everglades National Park was authorized by Congress in 1934. Because park lands could be acquired only through public or private donation, land acquisition proceeded slowly over the ensuing years. Through the sustained efforts of many supporters, and critical funding provided by the State of Florida, the park was eventually established 13 years later. President Harry S. Truman dedicated the park on December 6, 1947, in Everglades City. Everglades National Park was the first national park in the United States set aside solely for its biological resources rather than its scenic or historic values, and it has received international recognition by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as a World Heritage Site and an International Biosphere Reserve and by the Ramsar Convention as a Wetland of International Importance.

From the original 460,000 acres at the time of the park's establishment in 1947, boundary changes expanded the park to 1.4 million acres by 1958. The Everglades National Park Protection and Expansion Act of 1989 added the East Everglades (109,506 acres) part of the park, bringing the Northeast Shark River Slough within the park boundaries. This East Everglades Addition (or the Addition) has provided the cornerstone of long-range planning to restore more natural hydrologic conditions and revitalize wildlife habitat and ecosystem health. The 1989 act also authorized modifications to the Central and Southern Florida Project to restore, to the extent practicable, more natural flows of water into the park, and it included flood protection provisions for adjacent agricultural and residential areas. The State of Florida subsequently donated some 44,000 acres to the park in a series of transfers in 1991, 1993, and 2003. This donation represents more than 40% of lands that comprise the East Everglades Addition. The park now encompasses 1,509,000 acres, including the largest legislated wilderness area (1,296,500 acres) east of the Rocky Mountains.

The park preserves part of the remaining Everglades ecosystem, a vast "River of Grass" that originally extended from its headwaters in the Kissimmee Chain of Lakes through Lake Okeechobee and into the Water Conservation Areas and Everglades National Park, including the coastline of the Gulf of Mexico and Florida Bay. Today, freshwater from the historic River of Grass enters the park at its northern boundary near the Tamiami Trail and flows into a series of local basins with Shark River Slough as the predominant slough. A diverse biological community thrives in the park within an expansive patterned wetland in a subtropical climate. The position of the park at the tip of a seasonally flooded peninsula that is surrounded by a warm Caribbean sea has resulted in the formation of a diverse and unique biological treasure.





Upland areas in the park contain pine rocklands and tropical hardwood hammocks, and both habitats feature a high diversity of plants. Beginning at the coastline, the estuarine system of creeks, lakes, and bays serves as the nursery for marine animals and invertebrates. The coastal mangrove forest is complemented by an expansive wetland ecosystem. Densely populated wading bird rookeries are found on isolated islands in Florida Bay. The islands protect breeding birds from predation but are close enough to the mainland to allow daily flights for foraging in the marshes. Florida Bay, the largest marine body of water within Everglades National Park, contains approximately 393,000 acres, all of which is designated submerged marine wilderness; that is, the sea floor is under traditional wilderness protection, but the water column is nonwilderness. Much of Florida Bay is covered by submerged vegetation. Seagrass, mud, and macroalgae habitats provide shelter and food for animals, sustaining the bay's food web. The fish populations of the bay's seagrass meadows lure anglers from around the world to try their luck with rod and reel.

The health of these communities has been compromised by the historic diversion of water away from the Everglades watershed. Before Everglades National Park was established, the conservation movement inspired some protection of the area's fauna. Florida Governor William Jennings, with help from the Florida Audubon Society, instituted a ban on wading bird plume hunting in 1900. Later, through efforts of individuals including Ernest Coe, Marjory Stoneman Douglas, and Daniel Beard, the extent of human impacts on the natural resources of the Everglades was recognized and the park's enabling legislation was passed in 1934. Since passage of the 1989 act, public concern regarding regional development and ecosystem degradation has galvanized efforts among various governmental and nongovernmental organizations to work toward a balanced and sustainable South Florida ecosystem. Among these efforts, the South Florida Ecosystem Restoration Task Force, a consortium of federal and state agencies, local governments, and tribal representatives, was established by Congress in 1996. Approval of the Comprehensive Everglades Restoration Plan (CERP) in 2000 resulted in unprecedented focus on Everglades National Park and the greater Everglades ecosystem. The Comprehensive Everglades Restoration Plan is led by the U.S. Army Corps of Engineers and the South Florida Water Management District in consultation with ten other state or federal agencies and two sovereign tribal nations. Some of the initial CERP projects have already been planned and built, as have parts of the Modified Water Deliveries project and the Tamiami Trail Modifications project, which are designed to restore and protect the Everglades ecosystem. Some of these efforts are improving the flow of water to the park and the quality of this water. Over the next 30 years, more ambitious CERP and NPS projects will yield further improvements of the park's hydrology, habitats, food web, and overall function and sustainability of the ecosystem. Restoring and sustaining environmental conditions and communities of the entire Greater Everglades ecosystem, including Florida Bay, is important for the integrity of Everglades National Park and the economy of South Florida.

From initial settlement by American Indian tribes about 6,000 years ago to more recent use of Everglades resources throughout the 20th century, the story of Everglades National Park includes links between natural resources and human use (both historic and prehistoric) of the area. The most meaningful and effective way to understand and appreciate the story of Everglades National Park is through exploration, education, and recreation within the vast subtropical wilderness.

A wide variety of recreational opportunities is available to visitors. Popular activities include wildlife viewing, nature hikes, fishing, camping, bicycling, motor boating, and canoeing. The 99-mile-long Wilderness Waterway that runs through the western part of the park offers outstanding backcountry boating and camping experiences. Five visitor centers and contact stations provide visitors with orientation, interpretation, and educational information and opportunities. The Ernest F. Coe Visitor Center is just inside the main park entrance near Homestead. The Gulf Coast Visitor Center, 5 miles south of Tamiami Trail in Everglades City, serves as the gateway for exploring the Ten Thousand Islands and the park's western backcountry. The Shark Valley Visitor Center on Tamiami Trail (U.S. Highway 41), about 25 miles west of the Florida Turnpike, is in the heart of the park's freshwater ecosystem including the Northeast Shark River Slough. The Flamingo Visitor Center, about 38 miles south of the park entrance at the southern end of the Florida peninsula, is the gateway to exploring Florida Bay, Whitewater Bay, and the backcountry. Another important visitor contact site is Royal Palm/Anhinga Trail. The nonpublic Key Largo Ranger Station / Florida Bay Interagency Science Center provides a presence in the upper keys for park operations, science, and research. The East Everglades Operation Center in Miami and Loop Road Environmental Education Camp in Big Cypress National Preserve provide additional opportunities for park program development and/or delivery. Partnerships are crucial to the success of the park's conservation and education mission. The park engages with local, state, and federal agencies; American Indian tribes; and nongovernmental organizations in programs that have importance within and beyond park boundaries.



Park Purpose

The purpose statement identifies the specific reason(s) for establishment of a particular park. The purpose statement for Everglades National Park was drafted through a careful analysis of its enabling legislation and the legislative history that influenced its development. The park was established when the enabling legislation adopted by Congress was signed into law on May 30, 1934 (see appendix A for enabling legislation and subsequent amendments). The purpose statement lays the foundation for understanding what is most important about the park.

EVERGLADES NATIONAL PARK preserves the largest subtropical wilderness in the nation, a vast natural area in the southern Everglades and Florida Bay known throughout the world for its unparalleled ecological values, natural hydrologic conditions, vibrant cultural heritage, and unique recreational and educational opportunities.



Park Significance

Significance statements express why a park's resources and values are important enough to merit designation as a unit of the national park system. These statements are linked to the purpose of Everglades National Park, and are supported by data, research, and consensus. Statements of significance describe the distinctive nature of the park and why an area is important within a global, national, regional, and systemwide context. They focus on the most important resources and values that will assist in park planning and management.

The following significance statements have been identified for Everglades National Park. (Please note that the sequence of the statements does not reflect the level of significance.)

1. **Interconnected Waterways.** Everglades National Park is a unique subtropical wetland that is the hydrologic connection between central Florida's freshwater ecosystem and the coastal systems of Florida Bay and the Gulf of Mexico.
2. **Global Designations.** As the first national park designated for the protection of biological resources, Everglades National Park is the only place in the United States jointly designated as an International Biosphere Reserve, a World Heritage Site, and a Wetland of International Importance.
3. **Wilderness.** Everglades National Park contains the largest subtropical wilderness area in North America and the largest legislated wilderness area east of the Rocky Mountains. The park's legislated wilderness is known as the Marjory Stoneman Douglas Wilderness Area.
4. **Natural Wonder.** Everglades National Park contains a vast and hydrologically connected ecosystem, with wetland sloughs and prairies, tropical hardwood hammocks, pine rocklands, extensive mangrove estuaries, and Florida Bay with its expansive seagrass meadows. These diverse habitats support a mix of tropical and temperate plants and animals, including iconic species such as the ghost orchid, Florida panther, Cape Sable seaside sparrow, Florida leafwing, American alligator, American crocodile, roseate spoonbill, West Indian manatee, smalltooth sawfish, wood stork, anhinga, snook, and tarpon.





5. **Ecosystem Restoration.** Everglades National Park includes and protects a large remnant of an endangered, vast, interconnected, and recovering ecosystem that has been impacted by and still faces unprecedented pressure from the regional water management system. Restoration of this ecosystem, considered one of the most endangered in the national park system, is dependent on a globally significant experiment in intergovernmental collaboration.
6. **Ecosystem Services.** Everglades National Park provides critical ecosystem services, outdoor recreation opportunities, and an enhanced quality of life for the almost 7 million people in South Florida.
7. **Avian Significance.** Everglades National Park provides important foraging and breeding habitat for more than 400 species of birds, is a significant breeding ground for wading birds in North America, and functions as a primary corridor and refuge for migratory and wintering wildlife populations.
8. **Human History.** Everglades National Park preserves archeological and historical resources spanning approximately 6,000 years of human history, revealing adaptation to and exploitation and alteration of its unique environment.
9. **Ethnographic and Archeological Resources Associated with American Indian Tribes of Florida.** Everglades National Park includes natural and cultural resources that are part of the ancestral territory of American Indian tribes of Florida (including the Miccosukee Tribe of Indians of Florida, the Seminole Tribe of Florida, the Seminole Nation of Oklahoma, and other American Indian groups such as the Council of the Original Miccosukee Simanolee Nation Aboriginal Peoples).
10. **Recreational Values.** Everglades National Park provides the public with the opportunity to experience the Everglades wilderness for recreation, reflection, and solitude in proximity to one of the largest metropolitan areas in the United States.

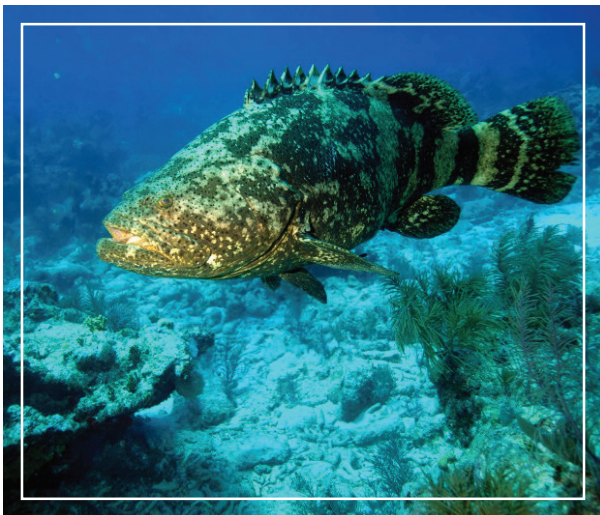
Fundamental Resources and Values

Fundamental resources and values (FRVs) are those features, systems, processes, experiences, stories, scenes, sounds, smells, or other attributes determined to warrant primary consideration during planning and management processes because they are essential to achieving the purpose of the park and maintaining its significance. Fundamental resources and values are closely related to a park's legislative purpose and are more specific than significance statements.

Fundamental resources and values help focus planning and management efforts on what is truly significant about the park. One of the most important responsibilities of NPS managers is to ensure the conservation and public enjoyment of those qualities that are essential (fundamental) to achieving the purpose of the park and maintaining its significance. If fundamental resources and values are allowed to deteriorate, the park purpose and/or significance could be jeopardized.

The following fundamental resources and values have been identified for Everglades National Park. (Please note that the resources and values are in alphabetical order.)

- **Ecological Integrity / Dynamics (Restoration).** Everglades National Park is globally renowned for its physical and biological characteristics. The ecological functions of the park and of South Florida have, however, been massively altered by water diversions across basins, channelizing water flow into canals, draining areas to allow development, and establishing flood control structures. Resulting water flows are reduced and insufficient to maintain ecological integrity. Restoration efforts within the park including fire and nonnative species management and the ecosystemwide Comprehensive Everglades Restoration Project seek to establish a new balance between natural protection and urban or agricultural development and address the entire Everglades watershed, including Everglades National Park.
- **Ecosystem / Landscape Diversity.** Everglades National Park's position within the transition zone between tropical and temperate climates has produced a diverse biological community. Three soil types—rockland, marl, and peat—are present within the park. Major community types in the park include coastal and estuarine communities, mangrove forests, coastal salt marshes, coastal prairies, freshwater sloughs, marl prairies, pine rocklands, hardwood hammocks, and cypress swamps.
- **Ethnographic Resources.** Everglades National Park protects places important for subsistence, spiritual, and ceremonial purposes including sites associated with events, beliefs, and traditional stories of indigenous people. The lifeways of American Indians including the Calusa, Tequesta, Seminoles, and Miccosukees can be seen in large-scale architectural shell works, shell tools, carved wood, and long-distance canoe trails.



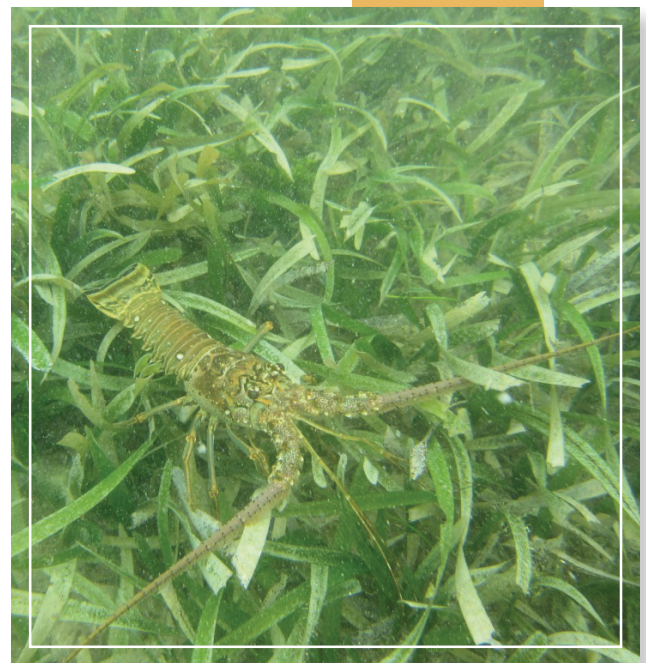
- **Functioning Hydrologic System.** Everglades National Park protects part of the Greater Everglades, the largest freshwater marsh in the United States. In the previous century, the hydrologic system of South Florida was drastically altered from its natural state to that of a highly managed system. The majority of the freshwater that historically flowed to the south was diverted to the ocean by a network of canals. Natural patterns of water quantity, quality, timing, and distribution are critical to the health of the Everglades ecosystem that supports the myriad plant and animal species within the park, including Florida Bay.
- **Human History.** A rich human story of the Everglades is deeply interwoven with its marshes, dense mangroves, towering palms, alligator holes, and tropical fauna. Various groups and people have navigated through and wrestled with the watery landscape to make it home. The cultural resources of Everglades National Park represent past and present lifeways of American Indians who existed and thrived in this environment. Other people associated with the area include Florida pioneers and settlers, as well as the people and groups who advocated for eventual conservation and restoration of the area. Noteworthy historical aspects of the Everglades include its role in 19th and 20th century U.S. military efforts, the drainage and alteration of the region for the growth of the South Florida population and economy, and the work to preserve and restore its wetland ecosystem, work that continues today.
- **Native Plants and Animals.** The diverse ecosystem of the Everglades includes habitats ranging from Caribbean tropical to temperate North American, making it possible for a vast array of native plants and animals to exist in the park. The wide diversity of plants and plant communities in the park are distinctive in the continental United States and on a global scale. There are 52 reptiles, 238 fish, and 21 amphibian species not commonly observed in other units of the national park system. Approximately 1,030 plant species can be found in the park including prominent and colorful bromeliads and 39 native orchid species. The sawgrass that makes up much of the prairies in the Everglades is one of the oldest green plants in the world. Charismatic wildlife within the park includes alligators, crocodiles, Florida panthers, wood storks, and manatees. A total of 20 species of plants, birds, reptiles, mammals, and fish within the park are federally listed or proposed for listing as threatened, endangered, or species of concern.
- **Public Enjoyment.** The diverse habitats of the park offer visitors a wide range of activities including canoeing, kayaking, boating, fresh and saltwater fishing, biking, hiking, unparalleled wildlife and bird viewing, photography, astronomy, and camping in the expansive wilderness. Visitors value the park for its quiet and peaceful terrain and the prospect of finding solitude among the mangroves or in the River of Grass. The numerous water trails throughout the park allow visitors to explore the park's extensive backcountry by motorboat, canoe, or kayak. The coastal environments of Florida Bay and Ten Thousand Islands provide excellent boating and fishing options for those seeking solitude and adventure.
- **Wilderness Character.** In the 1978 legislation, more than 92% of Everglades National Park was designated as wilderness, and in 1997 this area was named the Marjory Stoneman Douglas Wilderness. It is the largest legislated wilderness area (1,296,500 acres, with another 81,900 acres identified as potential wilderness) east of the Rocky Mountains. The submerged marine (marine waters) portion of the Marjory Stoneman Douglas Wilderness, approximately 530,000 acres in extent, is unusual in that it includes the marine bottom (benthic surface) but not the water column or the water surface. The 2015 East Everglades Wilderness Study proposed designation of an additional 42,200 acres as wilderness and the eventual designation of another 43,100 acres of potential wilderness, which would ensure that most of the area would be permanently protected and managed to preserve its natural quality from an ecosystem perspective. The park's undeveloped lands, inland waters, and coastal marine habitats offer exceptional opportunities to experience solitude, natural sounds, night skies, unobstructed views, and primitive recreation.

Other Important Resources and Values

Everglades National Park contains other resources and values that are not fundamental to the purpose of the park and may be unrelated to its significance, but are important to consider in planning processes. These are referred to as “other important resources and values” (OIRV). These resources and values have been selected because they are important in the operation and management of the park and warrant special consideration in park planning.

The following other important resources and values have been identified for Everglades National Park:

- **Ecosystem Services Including Economic Values.** As part of the Greater Everglades ecosystem, Everglades National Park provides important services to humans including support to agriculture, fisheries, urban communities, and recreation. The hydrologic and ecosystem processes filter pollutants and excess nutrients for domestic water supplies, replenish aquifers, reduce flooding, irrigate farm lands, support fish nurseries, and provide recreational opportunities that support a large tourism-based economy. Everglades National Park regularly welcomes approximately one million visitors annually who spent over \$90 million in communities near the park. That spending typically supports over 1,300 jobs in the local area. In addition, broader economic studies of South Florida highlight the importance of the multi-billion-dollar tourism industry, of which the park plays an important role across three counties.
- **Historic Buildings and Structures.** Historic structures within the park include the Old Ingraham Highway and associated structures; Nike Missile Base Site HM-69; Flamingo and other Mission 66 buildings, structures, and cultural landscapes; East Everglades hunting camps; historic roads; Anhinga Trail; Civilian Conservation Corps-era ruins; and aircraft remains.
- **Museum Collection.** Everglades National Park’s museum collection consists of more than 3.4 million objects, archival documents and photographs, and specimens. The largest element of the collection is the archives, totaling more than 2.6 million items. The collection also includes more than 88,000 biological specimens, including mollusks, birds, insects, reptiles, amphibians, mammals, and a large herbarium of plants collected in the park. More than 675,000 objects have been recovered from more than 300 archeological sites in the park.



Interpretive Themes

Interpretive themes are often described as the key stories or concepts that visitors should understand after visiting a park—they define the most important ideas or concepts communicated to visitors about a park unit. Themes are derived from, and should reflect, park purpose, significance, resources, and values. The set of interpretive themes is complete when it provides the structure necessary for park staff to develop opportunities for visitors to explore and relate to all park significance statements and fundamental and other important resources and values.

Interpretive themes are an organizational tool that reveal and clarify meaning, concepts, contexts, and values represented by park resources. Sound themes are accurate and reflect current scholarship and science. They encourage exploration of the context in which events or natural processes occurred and the effects of those events and processes. Interpretive themes go beyond a mere description of the event or process to foster multiple opportunities to experience and consider the park and its resources. These themes help explain why a park story is relevant to people who may otherwise be unaware of connections they have to an event, time, or place associated with the park.

The following interpretive themes have been identified for Everglades National Park:

- Everglades National Park serves as a dynamic laboratory for innovative scientific investigations that identify, monitor, and build understanding of a vast and changing array of fragile and unique resources. The results of scientific research inform good environmental decision-making in the Everglades ecosystem and serve as a model for using science for managing ecosystems throughout the world.
- The water-dominated landscape of the Everglades has offered myriad experiences, challenges, and opportunities to humans who have inhabited this place for the last 6,000 years.
- The Everglades landscape is of great cultural importance to distinct groups of past and present people. Historically, these parklands served as a home, a source of abundant natural and cultural resources, and a place of refuge. Today, they serve as a reminder of past and present challenges, trials, and injustices.
- The greater Everglades ecosystem is the liquid heart of South Florida, where the seasonal ebb and flow of water over unique geography defines the environment, supports the region's web of life, and challenges humans to comprehend their relationship to nature and wilderness.
- Everglades National Park provides an opportunity for people to understand and experience the value of a diverse wilderness in proximity to extensive development. The park's designation as a World Heritage Site, an International Biosphere Reserve, and a Wetland of International Importance attests to its importance as a benchmark for monitoring environmental impact and change.
- The diverse habitats and protected status of Everglades National Park, both temperate and tropical, demonstrate the park's value as an important sanctuary in an increasingly urbanized landscape for wild animals, plants, and birds. Species, from those most common to those highly endangered, reveal life histories that are intimately tied to natural cycles of abundance, flood, fire, frost, hurricane, drought, life, and death.

Part 2: Dynamic Components

The dynamic components of a foundation document include special mandates and administrative commitments and an assessment of planning and data needs. These components are dynamic because they will change over time. New special mandates can be established and new administrative commitments made. As conditions and trends of fundamental and other important resources and values change over time, the analysis of planning and data needs will need to be revisited and revised, along with key issues. Therefore, this part of the foundation document will be updated accordingly.

Special Mandates and Administrative Commitments

Many management decisions for a park unit are directed or influenced by special mandates and administrative commitments with other federal agencies, state and local governments, utility companies, partnering organizations, and other entities. Special mandates are requirements specific to a park that must be fulfilled. Mandates can be expressed in enabling legislation, in separate legislation following the establishment of the park, or through a judicial process. They may expand on park purpose or introduce elements unrelated to the purpose of the park. Administrative commitments are, in general, agreements that have been reached through formal, documented processes, often through memorandums of agreement. Examples include easements, rights-of-way, arrangements for emergency service responses, etc. Special mandates and administrative commitments can support, in many cases, a network of partnerships that help fulfill the objectives of the park and facilitate working relationships with other organizations. They are an essential component of managing and planning for Everglades National Park.

Special Mandates

- **16 USC Note (Miccosukee Reserved Area Act).** The purposes of this act are: (1) to replace the special use permit with a legal framework under which the tribe can live permanently and govern their own affairs in a modern community within the park, and (2) to protect the park outside the Miccosukee Reserved Area from adverse effects of structures or activities within that area, and to support restoration of the South Florida ecosystem, including restoring the environment of the park.
- **16 USC 410b Administration and Development.** The provisions of the Federal Power Act (16 USC 791a et seq.) shall not apply to this park. Furthermore nothing in sections 410 to 410c of 16 USC 410 shall be construed to lessen any existing rights of the Seminole Indians that are not in conflict with the purposes for which the Everglades National Park is created.
- **16 USC 410c Preservation of Primitive Conditions.** Everglades National Park shall be permanently reserved as a wilderness, and no development project or plan for the entertainment of visitors shall be undertaken that will interfere with the preservation intact of the unique flora and fauna and the essential primitive natural conditions now prevailing in this area.
- **16 USC 410n Drainage of Lands and Rights-of-Way.** Unless the Secretary, after notice and opportunity for hearing, shall find that the same is seriously detrimental to the preservation and propagation of the flora or fauna of Everglades National Park, he shall permit such drainage through the natural waterways of the park and the construction, operation, and maintenance of artificial works for conducting water thereto as is required for the reclamation by the State of Florida or any political subdivision thereof or any drainage district organized under its laws of lands lying easterly of the eastern boundary of the park.

(S)He shall grant said permission, however, only after a master plan for the drainage of said lands has been approved by the State of Florida and after finding that the approved plan has engineering feasibility and is so designed as to minimize disruptions of the natural state of the park. Any right-of-way granted pursuant to this section shall be revocable upon breach of the conditions upon which it is granted, which conditions shall also be enforceable in any other appropriate manner, and the grantee shall be obligated to remove its improvements and to restore the land occupied by it to its previous condition in the event of such revocation.

- **16 USC 410r Rules and Regulations for Lands Acquired as Part of the Park.** All lands and submerged lands title to which is accepted by the Secretary of the Interior shall, upon the acceptance of title thereto, become parts of the Everglades National Park and shall be subject to all laws and regulations applicable thereto.
- **16 USC 410r-7 (b) Protection of Ecosystem.** The Secretary shall manage the park in order to maintain the natural abundance, diversity, and ecological integrity of native plants and animals, as well as the behavior of native animals, as a part of their ecosystem.
- **16 USC 410r-7 (c) Private Airboating.** The park shall be closed to the operation of airboats . . . except that within a limited capacity and on designated routes within the addition, owners of record of registered airboats in use within the addition as of January 1, 1989, shall be issued nontransferable, nonrenewable permits, for their individual lifetimes, to operate personally owned airboats for noncommercial use in accordance with rules prescribed by the Secretary (of the Interior) to determine ownership and registration, establish uses, permit conditions, and penalties, and to protect the biological resources of the area.
- **16 USC 410r-7 (d) Commercial Airboating.** The Secretary is authorized to negotiate and enter into concession contracts with the owners of commercial airboat and tour facilities in existence on or before January 1, 1989, located within the (East Everglades Addition) for the provision of such services at their current locations under such rules and conditions as (s)he may deem necessary for the accommodation of visitors and the protection of biological resources of the area.
- **16 USC 410r-7 (e) Marjory Stoneman Douglas Visitor Center.** The Secretary is authorized and directed to expedite the construction of the visitor center facility at Everglades City, Florida, as described in the Development Concept Plan, Gulf Coast, dated February 1989, and upon construction shall designate the visitor center facility as “The Marjory Stoneman Douglas Center” in commemoration of the vision and leadership shown by Mrs. Douglas in the protection of the Everglades and Everglades National Park.
- **16 USC 410r-7 (f) Ernest F. Coe Visitor Center.** On completion of construction of the main visitor center facility at the headquarters of Everglades National Park, the Secretary shall designate the visitor center facility as the “Ernest F. Coe Visitor Center,” to commemorate the vision and leadership shown by Mr. Coe in the establishment and protection of Everglades National Park.
- **16 USC 410r-8 (a) Improved Water Deliverables.** Upon completion of a final report by the Chief of the U.S. Army Corps of Engineers, the Secretary of the Army, in consultation with the Secretary, is authorized and directed to construct modifications to the Central and Southern Florida Project to improve water deliveries into the park and shall, to the extent practicable, take steps to restore the natural hydrological conditions within the park.
- **16 USC 410r-9 (a) Boundary Revision to Include Tarpon Basin Property.** Authorizes a boundary revision to include the nearly 600-acre Tarpon Basin parcel (Tarpon Basin) in Key Largo, Florida. Land added to Everglades National Park by this section shall be administered as part of Everglades National Park in accordance with applicable laws [including regulations].

- **16 USC 1132 Designated Wilderness.** In 1978, a 1,296,500-acre designated wilderness area that includes land, freshwater, and submerged marine areas was established within Everglades National Park and included another 81,900 acres identified as potential wilderness; the wilderness was originally named “Everglades Wilderness” (National Parks and Recreation Act of 1978). The name of the wilderness area was later changed to “Marjory Stoneman Douglas Wilderness” (Marjory Stoneman Douglas Wilderness and Ernest F. Coe Visitor Center Designation Act of 1997).
- **33 CFR Part 385 Programmatic Regulations for the Comprehensive Everglades Restoration Plan.** The purpose of the programmatic regulations is to ensure that the goals and purposes of the Comprehensive Everglades Restoration Plan are achieved and to establish the processes necessary for implementing the plan.
- **PL 106-541 Sec. 601 Comprehensive Everglades Restoration Plan (2000).** The plan was approved as a framework for modifications and operational changes to the Central and Southern Florida Project that are needed to restore, preserve, and protect the South Florida ecosystem while providing for other water-related needs of the region, including water supply and flood protection. The plan shall be implemented to ensure the protection of water quality in, the reduction of the loss of fresh water from, and the improvement of the environment of the South Florida ecosystem and to achieve and maintain the benefits to the natural system (including Everglades National Park) and human environment described in the plan.
- **Florida’s Everglades Forever Act.** Florida legislation was enacted in 1994 to maintain and restore the ecosystem of the Everglades.
- **Section 403.061(27) Florida Statutes.** Grants the Department of Environmental Protection the power to establish rules that provide for a special category of waterbodies within the state, to be referred to as “Outstanding Florida Waters,” which shall be worthy of special protection because of their natural attributes. Everglades waterbodies are listed as Outstanding Florida Waters.

Administrative Commitments

For information about the existing administrative commitments for Everglades National Park, please see appendix B.

Assessment of Planning and Data Needs

Once the core components of part 1 of the foundation document have been identified, it is important to gather and evaluate existing information about the park’s fundamental and other important resources and values, and develop a full assessment of the park’s planning and data needs. The assessment of planning and data needs section presents planning issues, the planning projects that will address these issues, and the associated information requirements for planning, such as resource inventories and data collection, including GIS data.

There are three sections in the assessment of planning and data needs:

1. analysis of fundamental and other important resources and values
2. identification of key issues and associated planning and data needs
3. identification of planning and data needs (including spatial mapping activities or GIS maps)

The analysis of fundamental and other important resources and values and identification of key issues leads up to and supports the identification of planning and data collection needs.

Analysis of Fundamental Resources and Values

The fundamental resource or value analysis table includes current conditions, potential threats and opportunities, planning and data needs, and selected laws and NPS policies related to management of the identified resource or value.

Fundamental Resource or Value	Ecological Integrity / Dynamics (Restoration)
Related Significance Statements	Significance statements 1, 2, 4, 5, 6, and 7.
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • The Everglades is a World Heritage Site, an International Biosphere Reserve, and a Wetland of International Importance and is the only natural system in North America that is listed as endangered. • The large intact ecosystems of the park contribute to its iconic status. These include one of the largest contiguous mangrove forests in the world; one of the largest stands of seagrass beds; and one of the largest standing/remaining pine rocklands in the world. • Because they are high and dry, pinelands have been a magnet for development since the earliest days of settlement. More than 98% of South Florida's pinelands have been lost, and the park is host to the largest remaining stand. • Natural processes in the park have been significantly altered by the regional water management system, and some components of the East Everglades Addition lands were severely impacted prior to being added to Everglades National Park in 1989. • Ecological systems have been impacted by a lack of freshwater, saltwater intrusion, nutrient enrichment, mercury contamination, nonnative plants and animals, and compartmentalization (i.e., physical barriers or land use development features that impact natural flows and conditions) of the greater ecosystem outside of the park. These continue to present barriers to restoring ecosystem integrity. • Florida Bay has a history of highly variable water quality conditions, with algal bloom episodes that can last from weeks to even years. The last period of extended blooms was between 2005 and 2007. • The park is working with partnerships to correct external conditions affecting the park's ecosystem integrity (e.g., compartmentalization). • The spatial extent and connectivity of natural areas in the Greater Everglades Ecosystem is increasing. • The level of disturbance in the ecosystem is not visible or immediately apparent to most visitors. People are acclimated to the current conditions and do not fully perceive an unnatural or altered state. • The park contains some of the strongest remaining reservoirs of threatened and endangered species. • Robust datasets exist because of the resource issues and restoration efforts. <p>Trends</p> <ul style="list-style-type: none"> • Ecosystem conditions are stabilizing but not necessarily improving across all ecosystem components. The park remains a fragile ecosystem, with a need for improved resilience. • Saltwater intrusion and sea level rise are increasing. Effects may not be apparent over the next five years but in the long term it will be a significant threat. The rate is increasing due to climate change. • Urban population and development pressures surround the park and continue to adversely affect park resources. • Restoration initiatives are beginning to have measureable benefits in the park. • Some positive trends are occurring: the alligator populations have increased since 1985; crocodiles in the park have improved significantly since canal plugs were installed in 2002; certain wading bird species, particularly white ibis, have had upward trends in number of nesting pairs since 2010; nutrient levels have decreased and water quality has improved.

Fundamental Resource or Value	Ecological Integrity / Dynamics (Restoration)
Current Conditions and Trends	Trends (continued) <ul style="list-style-type: none"> National attention on the park's issues is leading to greater awareness, and the world is looking at the Everglades ecosystem restoration efforts and how water is being brought to the park. Restoration actions within the park are positively affecting ecological integrity. The former agricultural lands in the Hole-in-the-Donut are improving. A total of 4,895 acres of rock-crushed soils have been removed, hydrology has been restored, herbaceous-dominated wetlands have been restored, and nonnative species are below the 1% cover threshold where soil has been removed. Marl prairies have increased in the park as a result of lack of water. Unnaturally intense fires or the absence of fires negatively impact pine rocklands, tree islands, marsh soils, and wetland vegetation.
Threats and Opportunities	Threats <ul style="list-style-type: none"> Continued long-term urban population growth and development. Loss of freshwater marsh due to saltwater intrusion. Damage to seagrass habitat and fauna (especially sponges) by algal blooms lasting for more than several months. Sea level rise that will exacerbate the impact of storms on park resources. The frequency of nuisance flooding may result in a faster rate of plant succession from freshwater to saltwater species. Sea-level rise and saltwater intrusion could accelerate the loss of Everglades soils, marsh elevation (by erosion and biological processes) and habitat, and accelerate the inland extension of open estuarine waters. Continued inputs of sulfur and nitrogen pollutants from agricultural runoff and atmospheric deposition drive the methylation of mercury (which is derived from atmospheric deposition), accumulation into food webs, and nutrient enrichment effects. Elevated levels of mercury in invertebrates, frogs, fish, wading birds, pythons, and alligators exceed environmental and human health thresholds. Opportunities <ul style="list-style-type: none"> The last six of 9,300 parcels in the East Everglades Expansion Area are about to be acquired. This will increase the park's ability to manage water flows and therefore more natural ecosystem processes. Continued commitment of the National Park Service, the federal government, and the state to restoration projects. Restoration actions will increase freshwater flow and provide mechanisms to slow saltwater intrusion associated with sea-level rise. Restoration projects will also maximize ecological adaptation to sea-level rise (maximizing ecological integrity) and enhance resilience of park resources and habitats. Cooperate with partners on phosphorus and sulfur reductions in lands adjacent to Everglades National Park, including dialogue with Everglades Agricultural Area producers about mitigation strategies to reduce sulfur in runoff. Continue using opportunities through federal air quality programs (e.g., regional haze program) to work cooperatively with other federal and state air quality agencies and local stakeholders to reduce air quality impacts in the park. Pursue a partnership at the park's Florida Bay Interagency Science Center/Administrative Site in Key Largo with key stakeholders to increase the scope and effectiveness of the site to facilitate improved management and interpretation of park and ecosystem resources, and visitor opportunities. The partnership would work to redevelop the site and greatly expand programs with the public by building on the longstanding commitments of science and research institutions (such as Florida International University) and other agencies (NOAA/Florida Keys National Marine Sanctuary), to better meet mutual goals related to science, conservation, and public knowledge and enjoyment.

Fundamental Resource or Value	Ecological Integrity / Dynamics (Restoration)
Data and/or GIS Needs	<ul style="list-style-type: none"> • Adaptive monitoring for resource stewardship and visitor use. • Fisheries independent monitoring. • Large-scale ecological modeling. • Large-scale habitat mapping. • Marine water quality monitoring (expansion). • Monitoring of sulfur (ongoing). • Research and monitoring program of ecological system (ongoing).
Planning Needs	<ul style="list-style-type: none"> • Adaptive management plan. • Fisheries management plan. • Habitat recovery plan. • Climate change scenario planning. • Wilderness stewardship plan.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • Bald and Golden Eagle Protection Act • Clean Air Act • Clean Water Act • Endangered Species Act • Federal Noxious Weed Act • Lacey Act, as amended • Migratory Bird Treaty Act • National Environmental Policy Act • National Invasive Species Act • Paleontological Resources Preservation Act • Wilderness Act • Executive Order 13112, "Invasive Species" • Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</p> <ul style="list-style-type: none"> • NPS <i>Management Policies 2006</i> (§1.6) "Cooperative Conservation Beyond Park Boundaries" • NPS <i>Management Policies 2006</i> (§4.1) "General Management Concepts" • NPS <i>Management Policies 2006</i> (§4.1.4) "Partnerships" • NPS <i>Management Policies 2006</i> (§4.4.1) "General Principles for Managing Biological Resources" • NPS <i>Management Policies 2006</i> (§4.7) "Air Resource Management" • NPS <i>Management Policies 2006</i> (§4.7.2) "Weather and Climate" • NPS <i>Management Policies 2006</i> (§6.3) "Wilderness Resource Management" • Director's Order 18: <i>Wildland Fire Management</i> • Director's Order 41: <i>Wilderness Stewardship</i> • NPS <i>Natural Resource Management Reference Manual 77</i> • NPS <i>Reference Manual 18: Wildland Fire Management</i> • NPS <i>Reference Manual 41: Wilderness Stewardship</i>



Fundamental Resource or Value	Ecosystem / Landscape Diversity
Related Significance Statements	Significance statements 1, 2, 3, 4, 5, and 7.
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • With implementation of initial Comprehensive Everglades Restoration Plan projects, the spatial extent and connectivity of natural areas in the Greater Everglades Ecosystem has increased. • A loss of peat soil has been occurring since the 1960s and earlier when drainage works were put in. The significant loss of peat soil has resulted from dewatering of the wetlands and oxidation and fire associated with the unnatural, dried-down state of the system. This soil loss has resulted in the loss of ridge and slough morphology and loss of tree islands. • The ridge, slough, and tree island (RSTI) landscape in the north half of Shark Slough and Rocky Glades is severely impacted as a consequence of the regional water management system. The RSTI landscape in Broad/Lostman's River is stable in most areas. Southern Shark Slough and coastal swamps/lagoons are relatively stable. • Marl and rockland soils are stable. Organic soils (muck or peat) are in severe decline in northeastern Shark Slough. • Approximately 20,000 acres of turtle grass (<i>Thalassia testudinum</i>) in north-central Florida Bay have been lost due to insufficient fresh water from the Everglades and extremely high temperatures and salinity levels. This has resulted in a loss of estuarine habitat and fish and invertebrate diversity and abundance. Seagrass meadows in shallow areas of Florida Bay have been extensively scarred by boat propellers. • Nonnative plants have caused large-scale landscape alterations. More than 55,000 acres are infested with invasive nonnative plant species. • The park protects the largest intact pine rockland in southern Florida. Long-term fire return intervals for pine rocklands are much longer than desired. As of 2015, pine rocklands had not been burned for more than six years. • Coastal and marine areas of the park provide critical habitat and important nesting areas for numerous federal- and state-listed threatened and endangered species such as the Smalltooth sawfish, American crocodile, West Indian manatee, and several sea turtle species. • The 2016 fire management plan provides the tools and strategies to apply fire to systematically enhance natural resources in the park.

Fundamental Resource or Value	Ecosystem / Landscape Diversity
<p>Current Conditions and Trends</p>	<p>Trends</p> <ul style="list-style-type: none"> • Soil loss risk is high in RSTI regions where peat soils should predominate. • Habitat quality and quantity for birds and mammals has been significantly diminished in the compromised portions of the RSTI landscape. Notably, the abundance and area of tree islands, which are highly productive biological “hot spots,” have decreased about 70% over the past 50 years. • Planning and actions to control invasive nonnative plants are underway with a wide range of partnerships. It is uncertain if the rate of expansion of invasive nonnative plants is greater than the rate of their decline due to management. • The increasing frequency of red tide along the west coast of Florida has resulted in large-scale fish kills. • As a result of deficient flows of fresh water through the Everglades to Florida Bay, the bay has unnaturally high salinity. In dry years, bay salinity is double that of ocean water. This salinity increase has greatly altered the ecology of the bay and compromised its ecological integrity. • Everglades wading bird populations remain far below historic, pre-drainage levels. Some increases in nesting have been observed in recent years, especially for ibis. Wood storks and roseate spoonbills remain scarce. • The numbers of nonnative freshwater fish species are increasing. Nonnative species are being observed in more locations in recent surveys, suggesting that they are spreading. • Freshwater fish species composition is changing, with fewer long hydroperiod dependent species than desired. Fish biomass and species composition are below the very conservative targets used to design the assessment and have declined over the last 20 years. Freshwater fish biomass is far below restoration-based goals. • Nonnative herpetofauna introduction is increasing. • Burmese pythons are widespread, abundant, and reproducing. Invasive pythons are thought to be responsible for the loss of mammals in the park. • Tegú populations are growing outside of the park and are being detected inside the park more frequently. Tegus eat eggs and are a threat to native reptiles and birds. • Out of the four sport fish species monitored (snook, red drum, spotted seatrout, gray snapper), red drum and gray snapper have had relatively stable catch rates. Snook populations declined in response to a cold-spell kill in 2010 and have not yet indicated recovery. Pink shrimp populations are significantly reduced. • Crocodile populations have improved significantly since canal plugs on Cape Sable were installed. Juvenile crocodile survival and growth rates along the Florida Bay coastline remain below restoration target values. • Alligator populations have improved since 1985. Nesting numbers have increased, nesting success remains erratic, and population numbers appear to have stabilized below the numbers expected in a restored ecosystem.
<p>Threats and Opportunities</p>	<p>Threats</p> <ul style="list-style-type: none"> • The park has been invaded by multiple nonnative species, and, once established, invasive nonnatives are very difficult to completely eradicate. Native reptiles and mammals are at greatest risk. At-risk species of concern and invasive nonnative species occur together in the Pinelands and Marl prairies, Broad and Lostman’s Rivers, and Taylor Slough headwaters. • Disruption of the natural fire regime has impacted species diversity. Intense wildfire can have adverse impacts on some species and their habitat over the short or long term; and other species can be adversely affected by the absence of fire or increased fire return intervals. • There is high risk that some of the many nonnative plant and animal species in Florida will become established in the park in the near future. • Climate change and sea level rise could alter habitat.

Fundamental Resource or Value	Ecosystem / Landscape Diversity
Threats and Opportunities	<p>Threats (continued)</p> <ul style="list-style-type: none"> Nutrient enrichment from runoff and deposition of excess nitrogen pollution can harm surface waters, soils, and vegetation. Nitrogen acts as a fertilizer, contributes to eutrophication, and can help invasive nonnative plant species to grow faster and out-compete native vegetation adapted to lower nitrogen conditions. <p>Opportunities</p> <ul style="list-style-type: none"> Continued commitment of the National Park Service, the federal government, and the state of Florida to restoration projects. Restoration actions should spur greater seagrass habitat diversity, which would minimize seagrass die-off risk and increase animal diversity. Work with local universities and partners in ongoing research of nonnative/invasive species risks to develop improved methodologies that help prevent and control those species that pose the greatest threat to the Everglades. Continue cooperating with federal and state air quality agencies for air pollution emission reductions and support open dialogue with Everglades Agricultural Area producers regarding impacts from runoff of phosphorus, nitrogen, and sulfur from areas north of the park.
Data and/or GIS Needs	<ul style="list-style-type: none"> Adaptive monitoring for resource stewardship and visitor use. Bathymetry of Florida Bay and Gulf Coast. Inventory of invertebrate and trophic levels below invertebrates. Large-scale ecological modeling. Phytoplankton and nutrient monitoring and understanding causes of harmful algae blooms. Soil mapping.
Planning Needs	<ul style="list-style-type: none"> Climate change scenario planning. Plant conservation plan. Regional coastal zone management planning.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> Clean Air Act Clean Water Act Endangered Species Act Federal Noxious Weed Act of 1974 Lacey Act, as amended National Invasive Species Act National Environmental Policy Act Wilderness Act Executive Order 13112, "Invasive Species" Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</p> <ul style="list-style-type: none"> NPS Management Policies 2006 (§1.6) "Cooperative Conservation Beyond Park Boundaries" NPS Management Policies 2006 (§4.1) "General Management Concepts" NPS Management Policies 2006 (§4.1.4) "Partnerships" NPS Management Policies 2006 (§4.4.1) "General Principles for Managing Biological Resources" NPS Management Policies 2006 (§4.7) "Air Resource Management" NPS Management Policies 2006 (§4.7.2) "Weather and Climate" NPS Natural Resource Management Reference Manual 77

Fundamental Resource or Value	Ethnographic Resources
Related Significance Statements	Significance statement 9.
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • Association with the land by American Indian tribes remains strong. The park regularly consults with tribal governments and communicates with tribal employees and community members regarding a wide range of activities within the park. There is strong awareness by the park of the importance of the land to American Indian tribes. • Connections to the park remain strong today; some burial sites are 100 years old and others are more recent. It is noteworthy that the remains of the thousands of people who lived and died within the park boundary are still present in burial mounds, cemeteries, and burial grounds. Burial activities are still occurring at designated locations. <p>Trends</p> <ul style="list-style-type: none"> • There is increased interest by traditionally associated American Indian tribes to use the park and its resources.
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Threats to natural resources also affect the traditional use of the environment. <p>Opportunities</p> <ul style="list-style-type: none"> • Establish partnerships with tribes to engage in resource management and scientific studies and to provide for traditional activities on park lands.
Data and/or GIS Needs	<ul style="list-style-type: none"> • Cultural landscape inventory. • Ethnographic overview and assessment.
Planning Needs	<ul style="list-style-type: none"> • Cultural landscape report. • Climate change scenario planning.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • American Indian Religious Freedom Act • Antiquities Act • Archaeological Resources Protection Act • Archeological and Historic Preservation Act • Museum Properties Management Act of 1955, as amended • Native American Graves Protection and Repatriation Act • National Historic Preservation Act, as amended • Executive Order 11593, "Protection and Enhancement of the Cultural Environment" • Executive Order 13007, "Indian Sacred Sites" • "Curation of Federally-Owned and Administered Archaeological Collections" (36 CFR 79) • "Protection of Historic Properties" (36 CFR 800) • Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</p> <ul style="list-style-type: none"> • NPS Management Policies 2006 (chapter 5) "Cultural Resource Management" • Director's Order 24: NPS Museum Collections Management • Director's Order 28: Cultural Resource Management • Director's Order 28A: Archeology • NPS Museum Handbook, parts I, II, and III • The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation



Fundamental Resource or Value	Functioning Hydrologic System
Related Significance Statements	Significance statements 1, 2, 4, 5, 6, and 7.
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> Hydrologic system spatial and temporal characteristics have been significantly altered. Drainage and engineering works in the larger Everglades ecosystem have altered the timing, quantity, and distribution of water into the park. The total volume of water delivered to Everglades National Park is usually less than half of what is desirable given historical patterns and the needs of desired habitat types. The location of water deliveries is mismatched to downstream land management goals. The park is more drought prone than the rest of the system, which has resulted in deficient water quantity particularly during dry periods. Saltwater intrusion in the southern Taylor Slough has caused expansion of a coastal wetland “white zone” with low plant abundance and productivity. White water lilies, which are indicative of healthy Everglades sloughs, are not abundant in any part of the park due to insufficient water volume deliveries, and sawgrass marshes have expanded into areas that were formerly sloughs. Point source discharge into the park, including through the S-12 control structures, has degraded water quality. <p>Trends</p> <ul style="list-style-type: none"> Sea-level rise is evident in estuarine and freshwater wetland gauges. Ecosystem restoration initiatives are beginning to improve temporal and spatial hydrologic distribution. Artificial drought conditions based on regional water management decisions and actions are expected to continue.

Fundamental Resource or Value	Functioning Hydrologic System
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Impacts due to disruptions in the timing, duration, distribution, quantity, and quality of water deliveries into the park. • More intense storm surges and higher sea-levels potentially overtopping the marl ridge and threatening Cape Sable wetlands. • Increases in peat collapse due to saltwater intrusion, which results in decreasing wetland elevation and accelerating the conversion of wetlands to open water estuaries as sea-level rises. • More intense storm surges and higher sea-levels resulting in increased coastal wetland erosion, yielding wetland loss and water quality problems in adjacent coastal waters. <p>Opportunities</p> <ul style="list-style-type: none"> • Improved ecological conditions in the park through implementation of the Central Everglades Planning Project authorized by the Water Resources Development Act of 2016. • Fully implement Modified Water Deliveries and C111 canal projects. • Restoration projects and plans including the Central Everglades Planning Project and the Comprehensive Everglades Restoration Plan. • Tamiami Trail Next Steps and the 2.3 miles of bridging. • Seepage management on park's eastern boundary.
Data and/or GIS Needs	<ul style="list-style-type: none"> • Assessment of benefits of the Modified Water Deliveries and C111 canal projects. • Coastal hydrodynamic and climate change model. • Hydrologic monitoring (underway). • Marine water quality monitoring (expansion). • Measurements of saltwater intrusion. • Soil elevation change monitoring.
Planning Needs	<ul style="list-style-type: none"> • Combined operating plan for Modified Water Deliveries and C111 canal projects. • Design for roadway improvements on eastern Tamiami Trail. • Climate change scenario planning. • Restoration plan for newly acquired lands.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • Clean Water Act • Water rights adjudication and law • Executive Order 11514, "Protection and Enhancement of Environmental Quality" • Executive Order 11988, "Floodplain Management" • Executive Order 12088, "Federal Compliance with Pollution Control Standards" • National Flood Insurance Program • Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</p> <ul style="list-style-type: none"> • NPS Management Policies 2006 (§4.6.1) "Protection of Surface Waters and Groundwaters" • NPS Management Policies 2006 (§4.6.2) "Water Rights" • NPS Management Policies 2006 (§4.6.4) "Floodplains" • NPS Management Policies 2006 (§4.8.1.1) "Shorelines and Barrier Islands" • Director's Order 77-2: Floodplain Management



Fundamental Resource or Value	Human History
Related Significance Statements	Significance statement 8.
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • Condition is good as indicated by archeological assessments of known sites conducted in the last six years. • Most campsites along the Wilderness Waterway are cultural sites, but they are the only dry spaces where visitor use can be accommodated. • There is a good understanding of archeological site types and distribution in the park. • An inventory of Florida Bay was conducted, and no submerged archeological sites were identified. <p>Trends</p> <ul style="list-style-type: none"> • Tree islands, both inside and outside the park, have disappeared due to water management actions. • Hurricane activities in the last few decades have created cutbanks that are eroding many cultural sites. • Exposure of sites to human impact in the East Everglades Addition lands has decreased as private airboating and hunting have been eliminated. Exposure to human impact may eventually cease.

Fundamental Resource or Value	Human History
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Cultural resources are threatened by rising sea levels and climate change-induced increases in large storms. • Waves from boats lead to erosion of cultural sites. • Looting of cultural sites has occurred and may continue. • Root systems of nonnative vegetation negatively impact archeological resources and make some areas impenetrable. • Visitors camp on top of cultural sites (e.g., shell mounds). The park does not prohibit this activity. <p>Opportunities</p> <ul style="list-style-type: none"> • Because most cultural resources are not well known by the public, there is an opportunity to increase public education and exposure. • Pursue partnerships with tribes, universities, and the NPS Southeast Archeological Center for the study of cultural resources and to share new information with the public.
Data and/or GIS Needs	<ul style="list-style-type: none"> • Archeological overview and assessment (historic archeology). • Submerged archeological sites inventory on Gulf Coast side of park. • Shapefile data with buffer zone for archeological sites.
Planning Needs	<ul style="list-style-type: none"> • Climate change scenario planning.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • American Indian Religious Freedom Act • Antiquities Act • Archeological and Historic Preservation Act • Archaeological Resources Protection Act • Historic Sites Act • Native American Graves Protection and Repatriation Act • National Historic Preservation Act, as amended • Executive Order 11593, "Protection and Enhancement of the Cultural Environment" • Executive Order 13007, "Indian Sacred Sites" • "Curation of Federally-Owned and Administered Archaeological Collections" (36 CFR 79) • "Protection of Historic Properties" (36 CFR 800) • Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" <p>NPS Policy-level Guidance (NPS <i>Management Policies 2006</i> and Director's Orders)</p> <ul style="list-style-type: none"> • NPS <i>Management Policies 2006</i> (chapter 5) "Cultural Resource Management" • Director's Order 24: <i>NPS Museum Collections Management</i> • Director's Order 28: <i>Cultural Resource Management</i> • Director's Order 28A: <i>Archeology</i> • NPS <i>Museum Handbook</i>, parts I, II, and III • <i>The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i>

Fundamental Resource or Value	Native Plants and Animals
Related Significance Statements	Significance statements 2, 4, 6, 7, and 10.
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • Orchid populations are generally stable. • Fire-adapted plant species are prevalent in the Pinelands, short hydroperiod marshes, sawgrass marshes, and coastal prairies that cover 72% (or 1,101 square miles) of the land surface of Everglades National Park. • Loggerhead nesting on Cape Sable beaches has remained stable over the last three years (2014–2016). • Small mammals have greatly declined due to python predation and other factors. • There are 16 nonnative species and 32 native freshwater fish species. • Burmese pythons are widespread, abundant, and reproducing. Invasive pythons are thought to be responsible for the loss of mammals in the park. • Increasing presence of nonnative reptiles is causing a significant loss of native mammal and reptile species. • Nonnative invertebrates are a concern, but there is little research and data on their presence and impact. • Coastal native plant and animal communities are affected by sea level rise. • Harmful algal bloom episodes have resulted in the loss of sponges from Florida Bay. • Monitoring of sea turtles has lapsed. A brief assessment suggests that one of five listed sea turtles is improving due to enhanced nest success, whereas the status of the other four species is unknown. • Two fish species found in the park are listed as species of special concern: the mangrove rivulus (<i>Rivulus marmoratus</i>) and the federally endangered smalltoothed sawfish (<i>Pristis pectinata</i>). • The park's night sky serves as a harbor for hundreds of nocturnal animal species. <p>Trends</p> <ul style="list-style-type: none"> • Trends for native plants and animals are mixed. • Trends for threatened and endangered species vary by species. Some are improving (e.g., manatees, wood storks), and some are declining or threatened by sea level rise (e.g., Cape Sable seaside sparrow and several coastal endemic plant species). • Following significant population declines and habitat loss in the 1990s, conditions for the Cape Sable seaside sparrow have not improved. • Habitat quality and quantity for birds and mammals has been significantly diminished in the compromised portions of the ridge, slough, and tree island landscape. Notably, the abundance and area of tree islands, which are highly productive biological “hot spots,” has decreased about 70% over the past 50 years. The Everglades wading bird populations remain far below historic, pre-drainage levels. Some increases in nesting have been observed in recent years, especially for ibis. Woodstorks and roseate spoonbills remain scarce; ibis are doing well. • Introduction of nonnative reptiles and amphibians is increasing. • Tegu populations are growing outside of the park and are being detected more frequently inside the park. Tegus eat eggs and are a threat to native reptiles and birds. • Four sportfish species are near desired conditions; snook are below desired condition; and pink shrimp are significantly compromised. • The species composition of freshwater fish is shifting, and there are fewer long hydroperiod dependent species than desired. • Crocodiles have improved significantly since canal plugs on Cape Sable were installed in 2010 and 2011. Juvenile crocodile survival and growth rates along the Florida Bay coastline remain below restoration target values.

Fundamental Resource or Value	Native Plants and Animals
Current Conditions and Trends	<p>Trends (continued)</p> <ul style="list-style-type: none"> Alligator populations have improved since 1985. Nesting numbers have increased, nesting success remains erratic, and population numbers appear to have stabilized below the numbers expected in a restored ecosystem. Loggerhead nesting on Cape Sable beaches has remained stable over the last three years.
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> Displacement and loss of native species due to nonnative invasive plants and animals, including insect pests. Much longer than desired long-term fire return intervals, which can result in increased risk of high intensity fires that negatively impact the heterogeneity of fire-adapted plant species. Illegal harvesting and poaching activities (including fish, plants, snakes, alligator, stone crab, lobster). Habitat fragmentation. Recent seagrass die-off event in Florida Bay, which may spur a cycle of harmful algae blooms that increase seagrass and sponge mortality. Atmospheric deposition of mercury increasing the risk of mercury bio-accumulation, which specifically threatens top predators (fish, wading birds, panthers, and alligators). <p>Opportunities</p> <ul style="list-style-type: none"> Public education regarding threats to native plants and animals and overall trends. Boater education classes to reduce impacts on habitats, especially propeller scarring of seagrass meadows. Citizen science projects to engage public with native plants and animals (e.g., Dragonfly Mercury Project) and issues facing these resources. Continue Everglades restoration to improve conditions for natural plant communities, wildlife, and fisheries. Coordinate with other agencies on Everglades restoration and other resource management initiatives. Control spread and introduction of nonnative plants and animals. Manage fire to more closely approximate natural fire regimes. Protect native plants and animals through law enforcement. Cooperate with partners for phosphorus and sulfur reductions in lands adjacent to Everglades National Park, including dialogue with Everglades Agricultural Area producers about mitigation strategies to reduce sulfur in runoff. Continue using federal air quality programs (e.g., regional haze program) for the park to work cooperatively with other federal and state air quality agencies and local stakeholders to reduce air quality impacts in the park.
Data and/or GIS Needs	<ul style="list-style-type: none"> Data on economic value of fishery supported by Florida Bay and Ten Thousand Islands. Data on effects of fires. Data required by biological opinions or recovery plans. Ecosystem services study. Mapping of invasive species. Monitoring and research of populations and conditions of native plants and animals (ongoing). Monitoring of sulfur (ongoing). South Florida/Caribbean Inventory and Monitoring Network research activities (ongoing).

Fundamental Resource or Value	Native Plants and Animals
Planning Needs	<ul style="list-style-type: none"> • Climate change scenario planning. • Constrictor management plan. • Plan for new wetland mitigation banks. • Resource stewardship strategy. • Seagrass management plan.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • Bald and Golden Eagle Protection Act • Clean Air Act • Clean Water Act • Endangered Species Act • Federal Noxious Weed Act • Lacey Act, as amended • Migratory Bird Treaty Act • National Invasive Species Act • National Environmental Policy Act • Paleontological Resources Preservation Act • Wilderness Act • Executive Order 13112, "Invasive Species" • Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" <p>NPS Policy-level Guidance (NPS <i>Management Policies 2006</i> and Director's Orders)</p> <ul style="list-style-type: none"> • NPS <i>Management Policies 2006</i> (§1.6) "Cooperative Conservation Beyond Park Boundaries" • NPS <i>Management Policies 2006</i> (§4.1) "General Management Concepts" • NPS <i>Management Policies 2006</i> (§4.1.4) "Partnerships" • NPS <i>Management Policies 2006</i> (§4.4.1) "General Principles for Managing Biological Resources" • NPS <i>Management Policies 2006</i> (§4.7) "Air Resource Management" • NPS <i>Management Policies 2006</i> (§4.7.2) "Weather and Climate" • Director's Order 18: <i>Wildland Fire Management</i> • NPS <i>Natural Resource Management Reference Manual 77</i> • NPS <i>Reference Manual 18: Wildland Fire Management</i>





Fundamental Resource or Value	Public Enjoyment
Related Significance Statements	Significance statements 4, 6, 7, and 10.
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • Opportunities for public enjoyment are good. • The more interior areas of the park host a somewhat narrower range of activities than coastal areas such as Florida Bay, Ten Thousand Islands, and coastal backcountry. • Because of its location away from the lights of local communities, the park is an excellent place to view the wonders of the night sky. The Marjory Stoneman Douglas Wilderness provides outstanding opportunities to experience night skies. • Some opportunities, such as the Coastal Prairie Trail and canoeing in Shark River Slough, are not widely publicized. • A new, sustainably designed Gulf Coast Visitor Center (to be named the Marjory Stoneman Douglas Visitor Center) is not yet funded or constructed. • World class birding, photography, and fishing are available throughout the park. • There is currently no lodging in the park and only minimal amenities at Flamingo. <p>Trends</p> <ul style="list-style-type: none"> • A concession contract prospectus has been issued for new commercial services at Flamingo. • Expansion of the visitor center at Flamingo is planned, and funds are available for additional recreational vehicle electric hookups and new showers in the campground. • Private airboat properties are being acquired along the Tamiami Trail. Concession contracts will be issued for operation of these facilities to ensure high-quality experiences and enable NPS management of interpretive services and messages. • A free public trolley service brings people to the park from Homestead, and other opportunities for alternative transportation to the park continue to be explored. • A new type of visitor is coming to the park to see the former Cold War-era Nike Missile Base. This site could offer increased opportunities to meet the growing demand in visiting and learning about Cold War-era historic resources. • Efforts are being made to increase the park's relevancy in the local community through partnerships with such entities as the zoo, local hospitals, and Miami-Dade County Parks. The goal is to bring new people to the park and create interest among a wider group of audiences.

Fundamental Resource or Value	Public Enjoyment
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Overuse in some of the more accessible areas of the park is damaging resources. • Nonnative and potentially harmful wildlife and insects, such as the Zika virus and other mosquito-borne illnesses, are likely to keep some people away from the park. • Sea level rise and increased water deliveries after restoration could impact the walk-in campground at Flamingo and other developed areas. • The user/carrying capacity of some developed areas in the park is being exceeded or is projected to be exceeded. This includes vehicle parking capacity at a number of destinations including Shark Valley where the public parking fills up daily. • The health risk from mercury, mostly in freshwater fish, limits the use of the fishery for subsistence and may affect visitor enjoyment of the fisheries resource. <p>Opportunities</p> <ul style="list-style-type: none"> • Provide additional visitor use opportunities (e.g., bicycling) in the East Everglades, particularly at Chekika and along the Chekika access road. • Interpret sea level rise and its potential impacts on the park to the public. • Develop alternative transportation strategies for destinations along/near the main park road and/or Tamiami Trail to enhance visitor experiences and safety. • Identify strategies to address traffic, safety, circulation, and visitor experience issues such as filling in the canal along old Tamiami Trail to create more parking within the park's developed footprint while eliminating safety concerns such as parking along U.S. Highway 41. • Work to reduce mercury contamination in the Everglades ecosystem and better communicate fish and shellfish consumption advisories to the public. • Continue improving park sustainability and environmental leadership through the park's Climate Friendly Parks action plan. • Consider visitor use management actions consistent with the NPS and park missions, including restrictions, to protect resources. • An alternate waterway, a 120-mile route called the Everglades Paddling Trail, is proposed that would expand visitor use opportunities with a less traveled, partially nonmotorized route connecting the Gulf Coast and Flamingo areas. • New backcountry camping sites (e.g., chickees) are planned for selected locations along the Wilderness Waterway, Everglades Paddling Trail, and in Florida Bay. • New access to Joe Bay for nonmotorized use is planned, and new pole/troll zones and access corridors in Florida Bay would provide access to new areas and create new types of visitor experiences.
Data and/or GIS Needs	<ul style="list-style-type: none"> • Adaptive monitoring for resource stewardship and visitor use. • Traffic data. • Visitor use / satisfaction survey (update).
Planning Needs	<ul style="list-style-type: none"> • Development concept plan for Gulf Coast Visitor Center. • Law enforcement needs assessment. • Long-range interpretive plan. • Parking and transportation plan. • Plan/evaluation of future use of Chekika. • Visitor use management plan.

Fundamental Resource or Value	Public Enjoyment
<p>Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance</p>	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none">• Americans with Disabilities Act• Architectural Barriers Act• Clean Air Act• Clean Water Act• National Park Service Concessions Management Improvement Act• Rehabilitation Act of 1973• “Accessibility Guidelines” (36 CFR 1191.1) <p>NPS Policy-level Guidance (NPS <i>Management Policies</i> 2006 and Director’s Orders)</p> <ul style="list-style-type: none">• NPS <i>Management Policies</i> 2006 (chapter 7) “Interpretation and Education”• NPS <i>Management Policies</i> 2006 (chapter 8) “Use of the Parks”• NPS <i>Management Policies</i> 2006 (chapter 9) “Park Facilities”• NPS <i>Management Policies</i> 2006 (chapter 10) “Commercial Visitor Services”• Director’s Order 6: <i>Interpretation and Education</i>• Director’s Order 42: <i>Accessibility for Visitors with Disabilities in National Park Service Programs and Services</i>• NPS <i>Transportation Planning Guidebook</i>



Fundamental Resource or Value	Wilderness Character
Related Significance Statements	Significance statements 3, 4, and 10.
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • The condition of the park's wilderness character is generally good but could be better. • Untrammelled quality is degraded in places due to actions including those to control nonnative species and conduct prescribed fires. Some trammeling occurs in places due to installations such as Cape Sable plugs. • Helicopter landings degrade the undeveloped quality. • Increased numbers of flyovers from Everglades City airport degrade the quality of opportunity for solitude due to their impacts on soundscape and viewshed. • The natural quality is good in many places but degraded in many others due to the presence of nonnative species, poor water quality, and disrupted hydrology. • The undeveloped quality in Florida Bay is degraded by seabed scarring, docks, chickees, and aids to navigation. • Noise from motorboats affects feelings of solitude for those observing marine areas from designated wilderness (e.g., coastline, keys). Motorboats also degrade the undeveloped quality through stirring of sediment and effects on wildlife. • Conditions of some sites prevent them from being converted from potential wilderness to designated wilderness. These include the Hole-in-the-Donut area (nonnatives infestation), former agricultural sites, former housing sites, Old Ingraham Highway, and areas underlain by private mineral rights. • Noise from private airboat use on nonwilderness areas will affect opportunities for solitude by visitors in adjacent wilderness areas until private airboat use is phased out in accordance with the 1989 Everglades National Park Expansion Act. • Infrastructure from past/completed science projects remains in place, degrades the undeveloped quality, and should be removed. • Scenic views, both day and night, are sometimes obscured by pollution-caused haze. While the park is influenced by artificial light from the multiple population centers in the region, it maintains more naturalness than surrounding areas and serves as a harbor of dark skies. <p>Trends</p> <ul style="list-style-type: none"> • Considerations of wilderness character are being incorporated into decision-making. • The natural quality of the Hole-in-the-Donut area is improving. • A new permit system will provide more active management of private airboating. • The number of helicopter landings and scientific installations has stabilized and is not increasing. • Improved water flow under the Tamiami Trail in the East Everglades is improving the natural quality of wilderness. • New culverts at Old Ingraham Highway are improving water flow and the natural quality. • The new general management plan separates paddlers from motorboats along parts of the Wilderness Waterway, thus enhancing the quality of solitude. • Although new markers in Florida Bay will diminish the undeveloped quality, they will direct boaters along sustainable passageways, thereby reducing scarring of seagrass beds and thus preventing degradation to the natural quality. • From 2005 to 2014, visibility improved on both the 20% clearest days and the 20% haziest days, resulting in an overall improving visibility trend.

Fundamental Resource or Value	Wilderness Character
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Nonnative plants and animals. • Helicopters, airboats, and other mechanized transport. • Increased light from Miami metropolitan area. • More small vessels accessing remote areas. • Aircraft overflights. • New infrastructure (e.g., radio towers, research equipment, and monitoring stations). • Increased population in surrounding region. • Trash, fertilizer, pesticides, heavy metals, organic pollutants, and water quality generally. • Sources of park air pollution mostly outside the park include coal-fired power plants, vehicle exhaust, fires, dust, urban development, and agriculture. Some pollution sources have reduced emissions significantly in the past decade. These reductions are reflected in measures of ozone and fine particles, and these reductions are improving air quality in the park. Global atmospheric transport patterns favor deposition of pollutants in and around South Florida. • The biggest threat to the park's night sky is increased urban and industrial development as it continues to encroach and move west from the Miami metropolitan area and southeast from Naples toward the park boundaries. <p>Opportunities</p> <ul style="list-style-type: none"> • Education and interpretation to improve cooperation from surrounding communities, e.g., management of urban light, overflights, infrastructure, etc. • Manage air overflights. • Develop policy for private airboating that protects wilderness. • Improved opportunities for primitive and unconfined recreation resulting from the new access to Joe Bay. • Develop partnerships with organizations, agencies, and others to address issues within their areas of expertise and influence. • Nonnative management support through the South Florida Ecosystem Restoration Task Force nonnative species framework. • Remove infrastructure from past research projects and develop framework to prevent future accumulation of derelict infrastructure. • Expand interpretive and educational tools to communicate connections between wilderness, ecosystem health, land use, hydrology, air and water quality, night sky, scenic views, recreation, human health, climate change, and other associated resources. • Continue using federal air quality programs (e.g., regional haze program) for the park to work cooperatively with other federal and state air quality agencies and local stakeholders to reduce air quality impacts in the park.
Data and/or GIS Needs	<ul style="list-style-type: none"> • Data on effects of fires. • Visual resources inventory.
Planning Needs	<ul style="list-style-type: none"> • Wilderness stewardship plan.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • Clean Air Act • Wilderness Act <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</p> <ul style="list-style-type: none"> • NPS Management Policies 2006 (§1.4.6) "What Constitutes Park Resources and Values" • NPS Management Policies 2006 (§4.7) "Air Resource Management" • NPS Management Policies 2006 (chapter 6) "Wilderness Preservation and Management" • Director's Order 41: <i>Wilderness Stewardship</i> • <i>Keeping It Wild in the National Park Service: A User Guide to Integrating Wilderness Character into Park Planning, Management, and Monitoring</i> • NPS Reference Manual 41: <i>Wilderness Stewardship</i>

Analysis of Other Important Resources and Values

Other Important Resource or Value	Ecosystem Services Including Economic Values
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> The economic value of ecosystem services has clearly increased since establishment of Everglades National Park as the region has seen massive growth in human populations since the 1930s to where it is now in the top 10 of U.S. metropolitan areas for population and visitation. The South Florida region has been among the fastest growing areas for many decades, and the population has increased rapidly each decade since 1910. Tourism/eco-tourism is a strong economic driver of the region, and Everglades National Park plays an important role, attracting more than 1 million visitors annually from around the world. Although economic impacts specific to the park and the ecosystem services values are challenging to measure and document, this will become a more important issue to address in the coming years because of growing threats to the balance between natural and built environments as the 6 million+ metropolitan area continues to expand. <p>Trends</p> <ul style="list-style-type: none"> Over the past 5–10 years, ecosystem services provided by the park were at least stable and are probably increasing. The need for scholarly ecosystem services data will become more important in the future in order to identify the full range of short- and long-term benefits provided by Everglades National Park.
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> Unsustainable regional development/growth and lack of awareness of the ecosystem services concept by elected officials and managers. Climate change interacting with existing water management. <p>Opportunities</p> <ul style="list-style-type: none"> Miami is being targeted by philanthropic groups as a candidate city for “dealing with climate change.” These groups may become focused on recognizing and assessing the full spectrum of economic activities in the South Florida / Miami metropolitan region. Strategically focused groups such as these are likely to be aligned with NPS stewardship goals and may embrace ecosystem services as an effective way to evaluate economic value. The full economic activity and ecosystem services provided by Everglades National Park and the surrounding ecosystem should be assessed, including how this activity and the services provided will change as sea-level continues to rise. Based on current and predicted trends, large parts of Miami-Dade, Monroe, and Collier Counties could change from terrestrial to marine areas in the next few decades and certainly by the latter part of the 21st century. It is unclear how these changes will affect economic activity and the capacity for ecosystem services.
Data and/or GIS Needs	<ul style="list-style-type: none"> Comprehensive ecological vulnerability assessment. Ecosystem services study.
Planning Needs	<ul style="list-style-type: none"> Climate change scenario planning.

Other Important Resource or Value	Ecosystem Services Including Economic Values
<p>Laws, Executive Orders, and Regulations That Apply to the OIRV, and NPS Policy-level Guidance</p>	<p>Laws, Executive Orders, and Regulations That Apply to the OIRV</p> <ul style="list-style-type: none">• Clean Air Act• Clean Water Act• Coastal Zone Management Act• Wilderness Act• Executive Order 11514, "Protection and Enhancement of Environmental Quality"• Executive Order 11990, "Protection of Wetlands"• Executive Order 13352, "Facilitation of Cooperative Conservation"• Executive Order 13514, "Federal Leadership in Environmental, Energy, and Economic Performance"• "Resource Protection, Public Use, and Recreation" (36 CFR 2)• Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</p> <ul style="list-style-type: none">• Director's Order 77-2: <i>Floodplain Management</i>• Director's Order 77-1: <i>Wetland Protection</i>• NPS <i>Natural Resource Management Reference Manual 77</i>• NPS <i>Procedural Manual 77-1: Wetland Protection</i>• NPS <i>Procedural Manual 77-2: Floodplain Management</i>



Other Important Resource or Value	Historic Buildings and Structures
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> Many of the park's historic buildings and structures have extensive deferred maintenance and in Flamingo they have not been fully repaired from hurricane damage that occurred 11 years ago. Assessments of these buildings and structures have been done, and the Facility Condition Index varies from fair to poor. Park historic structures and buildings are included in the List of Classified Structures (database). The park possesses the best preserved and protected Cold War relic in South Florida in the historic Nike Missile Base. <p>Trends</p> <ul style="list-style-type: none"> More preservation and identification of sites has led to improvement in site conditions. A lot of work is being done to stabilize sites. Treatment plans have been developed for some of the buildings, structures, and landscapes. The condition of the Nike Missile Base has improved with maintenance and changed use of the site. The site was previously used for park operations purposes, but it is also now open for interpretive programs as a cultural resource.
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> Vandalism has occurred and could continue. Sea level rise and climate change is impacting the ability to preserve these historic buildings and structures. Exposure to the elements including the harsh subtropical environment, hurricanes, and subtropical vegetation causes deterioration. Adaptive reuse of structures can compromise integrity. <p>Opportunities</p> <ul style="list-style-type: none"> Increase interpretive activity and public access of historic buildings and structures. Increase awareness among park staff regarding the significance of historic buildings and structures. Pursue partnerships or secure grants to preserve historic buildings and structures. Conduct climate change adaptation analysis to ensure sustainability.
Data and/or GIS Needs	<ul style="list-style-type: none"> Cultural landscape inventory. Historic structures report for Pine Island administrative area.
Planning Needs	<ul style="list-style-type: none"> Climate change scenario planning. Cultural landscape report. Interpretive equipment and props acquisition plan for Nike Missile Base Site HM-69.

Other Important Resource or Value	Historic Buildings and Structures
<p>Laws, Executive Orders, and Regulations That Apply to the OIRV, and NPS Policy-level Guidance</p>	<p>Laws, Executive Orders, and Regulations That Apply to the OIRV</p> <ul style="list-style-type: none">• American Indian Religious Freedom Act• Archeological and Historic Preservation Act• Historic Sites Act• Museum Properties Management Act of 1955, as amended• National Historic Preservation Act, as amended• Executive Order 11593, "Protection and Enhancement of the Cultural Environment"• Executive Order 13007, "Indian Sacred Sites"• "Curation of Federally-Owned and Administered Archaeological Collections" (36 CFR 79)• "Protection of Historic Properties" (36 CFR 800)• Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" <p>NPS Policy-level Guidance (NPS <i>Management Policies</i> 2006 and Director's Orders)</p> <ul style="list-style-type: none">• NPS <i>Management Policies</i> 2006 (chapter 5) "Cultural Resource Management"• Director's Order 24: <i>NPS Museum Collections Management</i>• Director's Order 28: <i>Cultural Resource Management</i>• Director's Order 28A: <i>Archeology</i>• NPS <i>Museum Handbook</i>, parts I, II, and III• <i>The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i>



Other Important Resource or Value	Museum Collection
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> The condition of the museum collection is excellent. There is a significant museum collection cataloging backlog. About 1,454,000 items are accessioned but not cataloged. A shortage of storage space is leading to crowding of that space. Access to the collection is not user friendly. Everglades National Park hosts the South Florida Collection Management Center, which serves as the repository for five Florida national parks including Everglades National Park, Dry Tortugas National Park, De Soto National Memorial, Biscayne National Park, and Big Cypress National Preserve. <p>Trends</p> <ul style="list-style-type: none"> The museum collection has exceeded storage capacity and storage spaces not designed to house museum collections must be used. Preservation quality and methods have improved over the last decade. Increased publicity of the content of the collection has led to an increased interest in donating to the collection. The museum collection has become better known, and the value of the collection among staff and public has increased.
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> Physical threat from the subtropical environment including mold, pests, hurricanes, fires, and flooding. <p>Opportunities</p> <ul style="list-style-type: none"> Digitize collection. Increase access through exhibits and use for interpretation and interpretive programming. Find opportunities to deaccession some collection items, especially items that were not thoroughly vetted prior to accepting donations.
Data and/or GIS Needs	<ul style="list-style-type: none"> None identified.
Planning Needs	<ul style="list-style-type: none"> Scope of collections statement (update).
Laws, Executive Orders, and Regulations That Apply to the OIRV, and NPS Policy-level Guidance	<p>Laws, Executive Orders, and Regulations That Apply to the OIRV</p> <ul style="list-style-type: none"> American Indian Religious Freedom Act Archaeological Resources Protection Act Museum Properties Management Act of 1955, as amended Native American Graves Protection and Repatriation Act National Historic Preservation Act, as amended Executive Order 11593, "Protection and Enhancement of the Cultural Environment" Executive Order 13007, "Indian Sacred Sites" "Curation of Federally-Owned and Administered Archaeological Collections" (36 CFR 79) "Protection of Historic Properties" (36 CFR 800) <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</p> <ul style="list-style-type: none"> NPS Management Policies 2006 (chapter 5) "Cultural Resource Management" Director's Order 24: NPS Museum Collections Management Director's Order 28: Cultural Resource Management Director's Order 28A: Archeology NPS Museum Handbook, parts I, II, and III

Identification of Key Issues and Associated Planning and Data Needs

This section considers key issues to be addressed in planning and management and therefore takes a broader view over the primary focus of part 1. A key issue focuses on a question that is important for a park. Key issues often raise questions regarding park purpose and significance and fundamental and other important resources and values. For example, a key issue may pertain to the potential for a fundamental or other important resource or value in a park to be detrimentally affected by discretionary management decisions. A key issue may also address crucial questions that are not directly related to purpose and significance, but that still affect them indirectly. Usually, a key issue is one that a future planning effort or data collection needs to address and requires a decision by NPS managers.

The following are key issues for Everglades National Park and the associated planning and data needs to address them:

- Protection of Wilderness Character.** More than 90% of Everglades National Park is currently federally designated wilderness. The Marjory Stoneman Douglas Wilderness includes most of the park's undeveloped lands and inland waters as well as submerged marine land. Planning is essential to ensure sound wilderness stewardship and to preserve wilderness character through the process of setting goals, developing strategies, and determining a course of action. A wilderness stewardship plan was identified as a planning need that would guide the future management and preservation efforts of wilderness resources. Furthermore, the development of a wilderness stewardship plan would fulfill a requirement in *NPS Management Policies 2006*, chapter 6, "Wilderness Preservation and Management," which directs each park superintendent in charge of wilderness resources to develop and maintain a wilderness management (or stewardship) plan. Adaptive monitoring for resource stewardship and visitor use as well as an updated visitor use/satisfaction survey were identified as data needs that would help inform wilderness protection and stewardship efforts.
- Resource Stewardship.** The park has a number of large-scale complex resource stewardship issues for both natural and cultural resources. The altered hydrologic condition due to the regional water management system places the park front and center in the largest ecosystem restoration effort. This necessitates a variety of complex projects that are ongoing or planned to restore water delivery to the park through the East Everglades and Shark River Slough. These projects continue to require planning, monitoring, and collaboration with other federal, state, and local agencies. Along with managing hydrologic regimes is the continuing need to manage nutrient pollution associated with upstream agriculture and atmospheric deposition. This is a continuing concern, particularly where water management infrastructure transfers water into the park. Another major threat to Everglades National Park and the ecosystem is nonnative invasive species infestations, both plant and animal species. As one example, results from recent aerial surveys in the park indicate that 55,000 acres of canopy is covered in nonnative plant species, primarily Brazilian pepper, melaleuca, lygodium, and Australian pine. Animal species such as the Burmese python can survive in all park habitats and are found throughout the park. Changes in the ecosystem, the surrounding areas, and human uses and values have resulted in changes in the fire environment and fire regime. The park environment is a fire-adapted and -dependent landscape. Natural fire is required to maintain habitat and species diversity. The unique combination of climate and vegetation of the region creates a fragmented and highly flammable landscape next to one of the nation's largest metropolitan areas. A critical challenge to reestablishing and maintaining native ecosystems and habitats is maintaining an effective fire management program in the modern Everglades landscape. A resource stewardship strategy, constrictor management plan and a plan for new wetland mitigation banks were identified as planning needs that would address the interrelated parkwide resource stewardship issues. Data on the effects of fires were identified as a data need that would help inform this key issue.

For cultural resources, the nearly 6,000 years of human history present many challenges and opportunities for the park in the 21st century. Because of the vast size of the park, managers are working on ways to find and preserve these significant resources, and identify innovative ways to tell the many important stories tied to the history of the park and ecosystem.

These efforts will deepen understanding and appreciation of the complex Everglades history and story. While many resources have been documented and determined eligible for listing in the National Register of Historic Places, many others still need to be identified and evaluated for significance—including substantial archeological, ethnographical, historic, and prehistoric resources, as well as cultural landscapes. It is thought that many cultural sites including unique shell works sites have yet to be discovered. To American Indians the Everglades landscape holds deeply embedded heritage values important in maintaining and continuing group cultural identity. Ongoing work within the park and with many partners will further the park’s mission through preservation, education, and finding innovative ways to share this knowledge and tell the fascinating stories of people associated with the park. In light of this picture there are very real cultural resource threats and challenges tied to resource weathering, vandalism, sea level rise, and management actions, including those associated with ecosystem restoration.

- **Climate Change.** Climate change is expected to increase the extent and frequency of large storms and extreme weather events, flooding, erosion, nonnative invasive species, and a northward shift in native species ranges. Sea level rise may lead to loss of land and habitat, increased storm surge and erosion, rising groundwater tables, increased saltwater intrusion, and loss of freshwater ecosystems. Climate change may also affect seasonal use patterns at the park and access for dispersed recreation. There is a need to integrate climate change considerations into all park planning processes and frameworks, including development of a climate change scenario plan.
- **Infrastructure.** Much of the park’s infrastructure was created in the 1950s and 1960s and may be at risk from sea level rise and climate change, as well as deterioration due to facility age and the harsh South Florida climate. Visible effects on park infrastructure due to climate change include increases in flooding, saltwater intrusion, soil subsidence, and loss of natural protective berms. Furthermore, many buildings do not meet hurricane standards and have significant deferred maintenance. The backlog of deferred costs includes visitor safety items. Inundation models for Flamingo, Everglades City, and Florida Bay were identified as a data need that would help inform this parkwide issue. A development concept plan for Gulf Coast Visitor Center, site plan for the Key Largo interagency science center, plan/evaluation of future use of Chekika, updated capital investment strategy, and updated park asset management plan were identified as planning needs that would address high priority park infrastructure investment.
- **Relevancy.** Being relevant to the communities of South Florida and engaging local stakeholders in a meaningful and proactive way is a cornerstone of the park philosophy and the park is committed to expanding on these efforts over the coming years. Engaging the local community in stewardship of park resources, enhancing educational and interpretative opportunities within the park and around the local community, and developing outreach programs are all key goals in increasing park relevancy. An ecosystem services study, adaptive monitoring for resource stewardship and visitor use, and updated visitor use/satisfaction survey were identified as important data needs to inform this long-term issue. A communication and outreach strategy, commercial services strategy, and long-range interpretive plan were identified as planning needs related to increasing relevancy of the park.

Planning and Data Needs

To maintain connection to the core elements of the foundation and the importance of these core foundation elements, the planning and data needs listed here are directly related to protecting fundamental resources and values, park significance, and park purpose, as well as addressing key issues. To successfully undertake a planning effort, information from sources such as inventories, studies, research activities, and analyses may be required to provide adequate knowledge of park resources and visitor information. Such information sources have been identified as data needs. Geospatial mapping tasks and products are included in data needs.

Items considered of the utmost importance were identified as high priority, and other items identified, but not rising to the level of high priority, were listed as either medium- or low-priority needs. These priorities inform park management efforts to secure funding and support for planning projects.

Planning Needs – Where A Decision-Making Process Is Needed			
Related to an FRV, OIRV, or Key Issue?	Planning Needs	Priority (H, M, L)	Notes
Key Issue	Communication and outreach strategy	H	This strategy would help structure outreach efforts and define outreach goals, strategies, and activities related various target audiences. It would help the park stay relevant to an increasingly diverse public and reach out to communities that have not previously visited the park.
FRV, OIRV	Cultural landscape report	H	Needed for resources parkwide including Pine Island, Flamingo, Shark Valley tower, and Long Pine Key campground.
FRV, Key Issue	Development concept plan for Gulf Coast Visitor Center	H	This comprehensive site plan would define appropriate uses and functions for the site, establish a consistent, unified character for the site's development that adheres to a common vision, and establish a road map to guide capital improvements and preservation. This plan would also include the Marjorie Stoneman Douglas Visitor Center.
Key Issue	Key Largo site planning (interagency science center)	H	This would be a partnership effort with the State of Florida to increase visibility of the park around Key Largo and establish a development plan at this site.
FRV	Parking and transportation plan	H	This plan would include Shark Valley and the main visitor center areas.
FRV	Plan/evaluation of future use of Chekika	H	This plan would evaluate potential future uses at Chekika. It would define appropriate uses and function for the site, establish a consistent, unified character for the site's development that adheres to a common vision, and establish a plan to guide capital improvements and preservation.
FRV, Key Issue	Plan for new wetland mitigation banks	H	This plan would address infestations of nonnative plants similar to that done for Hole-in-the-Donut. It would evaluate restoration activities and management of the new wetlands mitigation banks.
FRV, Key Issue	Wilderness stewardship plan	H	Building upon the 2015 final general management plan / East Everglades wilderness study / environmental impact statement, this plan would examine and refine the existing plan to incorporate new information on visitor use patterns, methods of managing visitor use, ecosystem restoration, and natural resource management. It would provide a framework for measuring and monitoring wilderness character to ensure future management actions are taken as needed to adapt to changing conditions. It would include a wilderness character baseline assessment.
Key Issue	Park asset management plan (update)	M	This 10-year asset management strategy for the park would assist in the development of annual work plans and investment strategy, help prioritize park assets, and assist in determining operation and maintenance requirements. It would include climate change considerations.
FRV	Adaptive management plan	M	This plan would add thresholds to the monitoring framework outlined in the 2015 final general management plan / East Everglades wilderness study / environmental impact statement. These thresholds would be more specific than those in the 2015 plan.
FRV, OIRV, Key Issue	Climate change scenario planning	M	This comprehensive planning should be at a scale that is useful at the park level. It would integrate climate change considerations into all levels of park planning. It would include, but not be limited to, cultural resources, natural resources, ecosystem-scale infrastructure, and visitor use.

Planning Needs – Where A Decision-Making Process Is Needed			
Related to an FRV, OIRV, or Key Issue?	Planning Needs	Priority (H, M, L)	Notes
Key Issue	Commercial services strategy	M	This strategy would identify opportunities to enhance the park's mission and the visitor experience through public/private partnerships.
FRV, Key Issue	Constrictor management plan	M	This plan would set out objectives and implementation tasks for the management of constrictors such as pythons and would outline coordination efforts and strategies.
FRV	Fisheries management plan	M	This long-term comprehensive plan for fisheries management in park waters should be based on maintaining a balance between a high-quality recreational fishing experience in the park while preserving the park's unique native fisheries.
FRV	Plant conservation plan	M	This plan would focus on threatened, rare, or endemic plants in systems such as coastal hammocks.
FRV, Key Issue	Resource stewardship strategy	M	This comprehensive strategy would address achieving and maintaining the desired conditions of natural and cultural park resources.
Key Issue	Capital investment strategy (update)	L	This strategy would be informed by the park asset management plan update and would include climate change considerations.
FRV	Combined operating plan for Modified Water Deliveries and C111 canal projects	L	Underway but additional funding needed.
FRV	Design for roadway improvements on eastern Tamiami Trail	L	
FRV	Habitat recovery plan	L	This plan would address habitats of all threatened and endangered species.
OIRV	Interpretive equipment and props acquisition plan for Nike Missile Base Site HM-69	L	This plan would inform the acquisition of equipment and props, such as a mobile missile launcher, to better tell the Nike Missile Base story.
FRV	Law enforcement needs assessment	L	This is a required assessment.
FRV, Key Issue	Long-range interpretive plan	L	
FRV	Regional coastal zone management planning	L	Partnership planning with the National Oceanic and Atmospheric Administration in the lead and including the state and U.S. Fish and Wildlife Service.
FRV	Restoration plan for newly acquired lands	L	
OIRV	Scope of collections statement (update)	L	
FRV	Seagrass management plan	L	
FRV	Visitor use management plan	L	

Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV, OIRV, or Key Issue?	Data and GIS Needs	Priority (H, M, L)	Notes, Including Which Planning Need This Data Need Relates To
FRV, Key Issue	Adaptive monitoring for resource stewardship and visitor use	H	This is a commitment made in the general management.
FRV	Assessment of benefits of Modified Water Deliveries and C111 canal projects	H	This synthesis of data from ongoing monitoring is needed to advocate for future funding.
FRV, OIRV	Cultural landscape inventory	H	A parkwide cultural landscape inventory is required for compliance purposes and should include Pine Island, Shark Valley tower, and Long Pine Key campgrounds.
FRV, OIRV, Key Issue	Ecosystem services study	H	Collection of data on ecosystem benefits and service levels provided by the park as a whole to the surrounding area (e.g., aquifer maintenance, temperature regulation) and economic impact of natural resources (e.g., birds) that attract people to the park. It would help explain in a meaningful way ecosystem services in South Florida. Working on the study in concert with other parks and protected areas would add weight and credibility to the case to be made.
Key Issue	Inundation models for Flamingo, Everglades City, and Florida Bay	H	This modeling should include the main park road.
FRV, Key Issue	Visitor use / satisfaction survey (update)	H	Includes East Everglades.
FRV	Bathymetry of Florida Bay and Gulf Coast	M	This would support implementation of 2015 final general management plan.
FRV, Key Issue	Data on effects of fires	M	These data would inform fire management plan and associated compliance documents.
FRV	Data required by biological opinions or recovery plans	M	Collect data and conduct studies to fulfill the basic science needs and conservation actions specified in 2015 memorandum of understanding among U.S. Fish and Wildlife Service, National Park Service, and U.S. Geological Survey to benefit endangered Cape Sable seaside sparrow (CSSS) and its habitat, including: (1) intensive demographic monitoring in all subpopulations; (2) CSSS surveys and development of an improved spatially explicit population estimator; (3) vegetation monitoring; (4) feasibility study for CSSS future translocation; (5) prescribed/natural fire strategy; (6) comprehensive review of previous research (meta-summary); (7) measure microtopography; (8) develop habitat suitability index; (9) develop population modeling / population viability analysis tools; (10) woody vegetation pilot project; (11) hydrologic monitoring; (12) operational flexibility and infrastructure modifications to improve hydrologic conditions; (13) conduct food availability surveys; and (14) develop predictive tool to evaluate effects of mercury.
FRV	Fisheries independent monitoring	M	Sampling of areas; separate from monitoring based on creel data, which is currently done. Would inform fishery management plan.

Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV, OIRV, or Key Issue?	Data and GIS Needs	Priority (H, M, L)	Notes, Including Which Planning Need This Data Need Relates To
OIRV	Historic structures report for the Pine Island administrative area	M	
FRV	Marine water quality monitoring (expansion)	M	Add more fixed stations on the Gulf Coast and Florida Bay. This would also include more groundwater wells with salinity measurements (particularly in coastal areas) and airborne resistivity measurements of below ground salinity and South Florida/Caribbean Inventory and Monitoring Network (SFCN) ecotonal monitoring.
FRV	Monitoring of sulfur (ongoing)	M	Focused on understanding mercury methylation and changes in natural background levels of sulfur.
FRV	Visual resources inventory	M	The inventory would identify scenic and NPS / visitor values that could be considered in development of wilderness stewardship plan.
FRV	Archeological overview and assessment (historic archeology)	L	
FRV	Coastal hydrodynamic and climate change model	L	Data would help evaluate combined effects of restoration, climate change, and sea-level rise.
OIRV	Comprehensive ecological vulnerability assessment	L	Comprehensive assessment of ecological vulnerability to climate change and sea-level rise. The assessment would inform ecosystem services planning.
FRV	Data on economic value of fishery supported by Florida Bay and Ten Thousand Islands	L	
FRV	Ethnographic overview and assessment	L	Focus on American Indians.
FRV	Hydrologic monitoring (continued)	L	
FRV	Inventory of invertebrate and trophic levels below invertebrates	L	Would help better understand diseases and blights. Should include mycological inventory.
FRV	Large-scale ecological modeling	L	Develop physical and ecological models sufficient to evaluate the combined effects of climate change, sea-level rise, and restoration actions.
FRV	Large-scale habitat mapping	L	This mapping would include South Florida/Caribbean Network vegetation mapping
FRV	Mapping of invasive species	L	Aid in determining the effectiveness of integrated nonnatives management. This mapping would include South Florida/ Caribbean Network invasive plant corridor mapping.

Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV, OIRV, or Key Issue?	Data and GIS Needs	Priority (H, M, L)	Notes, Including Which Planning Need This Data Need Relates To
FRV	Measurements of saltwater intrusion	L	This would include more groundwater wells with salinity measurements (particularly in coastal areas) and airborne resistivity measurements of below ground salinity (ARM).
FRV	Monitoring and research of populations and conditions of native plants and animals (ongoing)	L	This monitoring would provide data on changes in plant and animal populations and communities with consideration of responses to restoration and major threats including climate change and invasive nonnative species.
FRV	Phytoplankton and nutrient monitoring and understanding causes of harmful algae blooms	L	
FRV	Research and monitoring program of ecological system (ongoing)	L	
FRV	Shapefile data with buffer zone for archeological sites	L	Currently park only has point data.
FRV	Soil elevation change monitoring	L	Relates to peat collapse. Would include mangroves. Collaborate with South Florida/Caribbean Network Inventory and Monitoring Network, U.S. Geological Survey, and South Florida Natural Resources Center.
FRV	Soil mapping	L	Would include depth and composition, including in Florida Bay.
FRV	South Florida/Caribbean Inventory and Monitoring Network research activities (ongoing)	L	Long-term data to inform long-term changes in park ecosystem.
FRV	Traffic data	L	These data would inform parking and transportation plan. Traffic data would be collected throughout the park using traffic counters.
FRV	Submerged archeological sites inventory on Gulf Coast side of park	L	Along park's mangrove shoreline of the Gulf of Mexico.



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Photo Credits

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Pages: front cover, 3, 85, 87 by Glenn Gardner

Page: 6 by Brian Call

Appendixes

Appendix A: Enabling Legislation and Legislative Acts for Everglades National Park

816 73d CONGRESS. SESS. II. CHS. 370, 371. MAY 29, 30, 1934.

	[CHAPTER 371.]	AN ACT
May 30, 1934. [H.R. 2837.] [Public, No. 267.]	To provide for the establishment of the Everglades National Park in the State of Florida and for other purposes.	
Everglades National Park, Fla. Establishment, when title to lands is vested in United States. Area, location, etc.	<i>Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,</i> That when title to all the lands within boundaries to be determined by the Secretary of the Interior within the area of approximately two thousand square miles in the region of the Everglades of Dade, Monroe, and Collier Counties, in the State of Florida, recommended by said Secretary, in his report to Congress of December 3, 1930, pursuant to the Act of March 1, 1929 (45 Stat., pt. 1, p. 1443), shall have been vested in the United States, said lands shall be, and are hereby, established, dedicated, and set apart as a public park for the benefit and enjoyment of the people and shall be known as the Everglades National Park: <i>Provided</i> , That the United States shall not purchase by appropriation of public moneys any land within the aforesaid area, but such lands shall be secured by the United States only by public or private donation.	
Vol. 45, p. 1443.	SEC. 2. The Secretary of the Interior is hereby authorized, in his discretion and upon submission of evidence of title satisfactory to him, to accept on behalf of the United States, title to the lands referred to in the previous section hereof as may be deemed by him necessary or desirable for national-park purposes: <i>Provided</i> , That no land for said park shall be accepted until exclusive jurisdiction over the entire park area, in form satisfactory to the Secretary of the Interior, shall have been ceded by the State of Florida to the United States.	
<i>Proviso.</i> Lands secured only by donation.	SEC. 3. The administration, protection, and development of the aforesaid park shall be exercised under the direction of the Secretary of the Interior by the National Park Service, subject to the provisions of the Act of August 25, 1916 (39 Stat. 535), entitled "An Act to establish a National Park Service, and for other purposes", as amended: <i>Provided</i> , That the provisions of the Act approved June 10, 1920, known as the Federal Water Power Act, shall not apply to this park: <i>Provided further</i> , That nothing in this Act shall be construed to lessen any existing rights of the Seminole Indians which are not in conflict with the purposes for which the Everglades National Park is created: <i>And provided further</i> , That the United States shall not expend any public moneys for the administration, protection, or development of the aforesaid park within a period of five years from the date of approval of this Act.	
Acceptance of title.	SEC. 4. The said area or areas shall be permanently reserved as a wilderness, and no development of the project or plan for the entertainment of visitors shall be undertaken which will interfere with the preservation intact of the unique flora and fauna and the essential primitive natural conditions now prevailing in this area.	
<i>Proviso.</i> Restriction, until exclusive jurisdiction over entire area is ceded.	Approved, May 30, 1934.	
National Park Service to administer, etc.		
Vol. 39, p. 535.		
<i>Provisos.</i> Water Power Act not applicable. Vol. 41, p. 1063. Rights of Indians.		

NATIONAL PARKS

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6. Everglades

An Act to authorize additional appropriations for the acquisition of lands and interests in lands within the Sawtooth National Recreation Area in Idaho. (92 Stat. 3467) (P.L. 95-625)

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

TITLE IV—WILDERNESS

SEC. 401. The following lands are hereby designated as wilderness in accordance with section 3(c) Wilderness Act (78 Stat. 890; 16 U.S.C. 1132(c)), and shall be administered by the Secretary in accordance with applicable provisions of the Wilderness Act:

* * * * *

(3) Everglades National Park, Florida, wilderness comprising approximately one million two hundred and ninety-six thousand five hundred acres and potential wilderness additions comprising approximately eighty-one thousand nine hundred acres, depicted on a map entitled "Wilderness Plan, Everglades National Park, Florida", numbered 160-20,011 and dated June 1974, to be known as the Everglades Wilderness.

SEC. 402. A map and description of the boundaries of the areas designated in this title shall be on file and available for public inspection in the office of the Director of the National Park Service, Department of the Interior, and in the Office of the Superintendent of each area designated in this title. As soon as practicable after this Act takes effect, maps of the wilderness areas and descriptions of their boundaries shall be filed with the Committee on Interior and Insular Affairs of the House of Representatives and the Committee on Energy and Natural Resources of the United States Senate, and such maps and descriptions shall have the same force and effect as if included in this Act: *Provided*, That correction of clerical and typographical errors in such maps and descriptions may be made.

SEC. 403. Any lands which represent potential wilderness additions in this title, upon publication in the Federal Register of a notice by the Secretary that all uses thereon prohibited by the Wilderness Act have ceased, shall thereby be designated wilderness. Lands designated as potential wilderness additions shall be managed by the Secretary insofar as practicable as wilderness until such time as said lands are designated as wilderness.

SEC. 404. The areas designated by this Act as wilderness shall be administered by the Secretary of the Interior in accordance with the applicable provisions of

the Wilderness Act governing areas designated by that Act as wilderness, except that any reference in such provisions to the effective date of the Wilderness Act shall be deemed to be a reference to the effective date of this Act, and, where appropriate, any reference to the Secretary of Agriculture shall be deemed to be a reference to the Secretary of the Interior.

SEC. 405. Nothing in this title shall be construed to diminish the authority of the Coast Guard, pursuant to sections 2 and 81 of title 14, United States Code, and title 1 of the Ports and Waterways Safety Act of 1972 (33 U.S.C. 1221), or the Federal Aviation Administration to use the areas designated wilderness by this Act within the Everglades National Park, Florida; and the Gulf Islands National Seashore, Florida and Mississippi, for navigational and maritime safety purposes.

* * * * *

Approved November 10, 1978.

103 STAT. 1946

PUBLIC LAW 101-229—DEC. 13, 1989

Public Law 101-229
101st Congress

An Act

Dec. 13, 1989
 [H.R. 1727]

Everglades
 National Park
 Protection and
 Expansion Act of
 1989.
 Florida.
 16 USC 410r-5
 note.

To modify the boundaries of the Everglades National Park and to provide for the protection of lands, waters, and natural resources within the park, and for other purposes.

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 “Everglades National Park Protection and Expansion Act of 1989”.

**TITLE I—EVERGLADES NATIONAL PARK
 EXPANSION**

16 USC 410r-5.

SEC. 101. FINDINGS, PURPOSES AND DEFINITION OF TERMS.

(a) **FINDINGS.**—The Congress makes the following findings:

(1) The Everglades National Park is a nationally and internationally significant resource and the park has been adversely affected and continues to be adversely affected by external factors which have altered the ecosystem including the natural hydrologic conditions within the park.

(2) The existing boundary of Everglades National Park excludes the contiguous lands and waters of the Northeast Shark River Slough that are vital to long-term protection of the park and restoration of natural hydrologic conditions within the park.

(3) Wildlife resources and their associated habitats have been adversely impacted by the alteration of natural hydrologic conditions within the park, which has contributed to an overall decline in fishery resources and a 90 percent population loss of wading birds.

(4) Incorporation of the Northeast Shark River Slough and the East Everglades within the park will limit further losses suffered by the park due to habitat destruction outside the present park boundaries and will preserve valuable ecological resources for use and enjoyment by future generations.

(5) The State of Florida and certain of its political subdivisions or agencies have indicated a willingness to transfer approximately 35,000 acres of lands under their jurisdiction to the park in order to protect lands and water within the park, and may so transfer additional lands in the future.

(6) The State of Florida has proposed a joint Federal-State effort to protect Everglades National Park through the acquisition of additional lands.

(b) **PURPOSE.**—The purposes of this Act are to—

(1) increase the level of protection of the outstanding natural values of Everglades National Park and to enhance and restore

the ecological values, natural hydrologic conditions, and public enjoyment of such area by adding the area commonly known as the Northeast Shark River Slough and the East Everglades to Everglades National Park; and

(2) assure that the park is managed in order to maintain the natural abundance, diversity, and ecological integrity of native plants and animals, as well as the behavior of native animals, as a part of their ecosystem.

(c) **DEFINITIONS.**—As used in this Act:

(1) The term “Secretary” means the Secretary of the Interior.

(2) The term “addition” means the approximately 107,600 acre area of the East Everglades area authorized to be added to Everglades National Park by this Act.

(3) The term “park” means the area encompassing the existing boundary of Everglades National Park and the addition area described in paragraph (2).

(4) The term “project” means the Central and Southern Florida Project.

SEC. 102. BOUNDARY MODIFICATION.

16 USC 410r-6.

(a) **AREA INCLUDED.**—The park boundary is hereby modified to include approximately 107,600 acres as generally depicted on the map entitled “Boundary Map, Everglades National Park Addition, Dade County, Florida”, numbered 160-20,013B and dated September 1989. The map shall be on file and available for public inspection in the offices of the National Park Service, Department of the Interior.

Public
information.

(b) **BOUNDARY ADJUSTMENT.**—The Secretary may from time to time make minor revisions in the boundaries of the park in accordance with section 7(c) of the Land and Water Conservation Fund Act of 1965 (16 U.S.C. 4601-4 and following). In exercising the boundary adjustment authority the Secretary shall ensure all actions will enhance resource preservation and shall not result in a net loss of acreage from the park.

(c) **ACQUISITION.**—(1) Within the boundaries of the addition described in subsection (a), the Secretary may acquire lands and interests in land by donation, purchase with donated or appropriated funds, or exchange. For purposes of acquiring property by exchange, the Secretary may, notwithstanding any other provision of law, exchange the approximately one acre of Federal land known as “Gilberts’ Marina” for non-Federal land of equal value located within the boundaries of the addition. Any lands or interests in land which are owned by the State of Florida or any political subdivision thereof, may be acquired only by donation.

(2) It is the express intent of Congress that acquisition within the boundaries of the addition shall be completed not later than 5 years after the date of enactment of this section. The authority provided by this section shall remain in effect until all acquisition is completed.

Termination
date.

(d) **ACQUISITION OF TRACTS PARTIALLY OUTSIDE BOUNDARIES.**—When any tract of land is only partly within boundaries referred to in subsection (a), the Secretary may acquire all or any portion of the land outside of such boundaries in order to minimize the payment of severance costs. Land so acquired outside of the boundaries may be exchanged by the Secretary for non-Federal lands within the boundaries, and any land so acquired and not utilized for exchange shall be reported to the General Services Administration for disposal

103 STAT. 1948

PUBLIC LAW 101-229—DEC. 13, 1989

under the Federal Property and Administrative Services Act of 1949 (63 Stat. 377).

(e) **OFFERS TO SELL.**—In exercising the authority to acquire property under this Act, the Secretary shall give prompt and careful consideration to any offer made by any person owning property within the boundaries of the addition to sell such property, if such owner notifies the Secretary that the continued ownership of such property is causing, or would result in undue hardship.

(f) **AUTHORIZATION OF APPROPRIATIONS.**—(1) Subject to the provisions of paragraph (2), there are hereby authorized to be appropriated such sums as may be necessary to carry out the provisions of this Act.

(2) With respect to land acquisition within the addition, not more than 80 percent of the cost of such acquisition may be provided by the Federal Government. Not less than 20 percent of such cost shall be provided by the State of Florida.

(g) **ASSISTANCE.**—Upon the request of the Governor of the State of Florida, the Secretary is authorized to provide technical assistance and personnel to assist in the acquisition of lands and waters within the Kissimmee River/Lake Okeechobee/Everglades Hydrologic Basin, including the Big Cypress Swamp, through the provision of Federal land acquisition personnel, practices, and procedures. The State of Florida shall reimburse the Secretary for such assistance in such amounts and at such time as agreed upon by the Secretary and the State. Notwithstanding any other provision of law, reimbursement received by the Secretary for such assistance shall be retained by the Secretary and shall be available without further appropriation for purposes of carrying out any authorized activity of the Secretary within the boundaries of the park.

16 USC 410r-7.

SEC. 103. ADMINISTRATION.

(a) **IN GENERAL.**—The Secretary shall administer the areas within the addition in accordance with this Act and other provisions of law applicable to the Everglades National Park, and with the provisions of law generally applicable to units of the national park system, including the Act entitled “An Act to establish a National Park Service, and for other purposes”, approved August 25, 1916 (39 Stat. 535; 16 U.S.C. 1-4). In order to further preserve and protect Everglades National Park, the Secretary shall utilize such other statutory authority as may be available to him for the preservation of wildlife and natural resources as he deems necessary to carry out the purposes of this Act.

(b) **PROTECTION OF ECOSYSTEM.**—The Secretary shall manage the park in order to maintain the natural abundance, diversity, and ecological integrity of native plants and animals, as well as the behavior of native animals, as a part of their ecosystem.

(c) **PROTECTION OF FLORA AND FAUNA.**—The park shall be closed to the operation of airboats—

(1) except as provided in subsection (d); and

(2) except that within a limited capacity and on designated routes within the addition, owners of record of registered airboats in use within the addition as of January 1, 1989, shall be issued nontransferable, nonrenewable permits, for their individual lifetimes, to operate personally-owned airboats for non-commercial use in accordance with rules prescribed by the Secretary to determine ownership and registration, establish

Boating.

uses, permit conditions, and penalties, and to protect the biological resources of the area.

(d) **CONCESSION CONTRACTS.**—The Secretary is authorized to negotiate and enter into concession contracts with the owners of commercial airboat and tour facilities in existence on or before January 1, 1989, located within the addition for the provision of such services at their current locations under such rules and conditions as he may deem necessary for the accommodation of visitors and protection of biological resources of the area.

(e) **VISITOR CENTER.**—The Secretary is authorized and directed to expedite the construction of the visitor center facility at Everglades City, Florida, as described in the Development Concept Plan, Gulf Coast, dated February 1989, and upon construction shall designate the visitor center facility as “The Marjory Stoneman Douglas Center” in commemoration of the vision and leadership shown by Mrs. Douglas in the protection of the Everglades and Everglades National Park.

Marjory
Stoneman
Douglas.

SEC. 104. MODIFICATION OF CERTAIN WATER PROJECTS.

16 USC 410r-8.

(a) **IMPROVED WATER DELIVERIES.**—(1) Upon completion of a final report by the Chief of the Army Corps of Engineers, the Secretary of the Army, in consultation with the Secretary, is authorized and directed to construct modifications to the Central and Southern Florida Project to improve water deliveries into the park and shall, to the extent practicable, take steps to restore the natural hydrological conditions within the park.

(2) Such modifications shall be based upon the findings of the Secretary's experimental program authorized in section 1302 of the 1984 Supplemental Appropriations Act (97 Stat. 1292) and generally as set forth in a General Design Memorandum to be prepared by the Jacksonville District entitled “Modified Water Deliveries to Everglades National Park”. The Draft of such Memorandum and the Final Memorandum, as prepared by the Jacksonville District, shall be submitted as promptly as practicable to the Committee on Energy and Natural Resources and the Committee on Environment and Public Works of the United States Senate and the Committee on Interior and Insular Affairs and the Committee on Public Works and Transportation of the United States House of Representatives.

(3) Construction of project modifications authorized in this subsection and flood protection systems authorized in subsections (c) and (d) are justified by the environmental benefits to be derived by the Everglades ecosystem in general and by the park in particular and shall not require further economic justification.

(4) Nothing in this section shall be construed to limit the operation of project facilities to achieve their design objectives, as set forth in the Congressional authorization and any modifications thereof.

(b) **DETERMINATION OF ADVERSE EFFECT.**—(1) Upon completion of the Final Memorandum referred to in subsection (a), the Secretary of the Army, in consultation with the South Florida Water Management District, shall make a determination as to whether the residential area within the East Everglades known as the “Eight and One-Half Square Mile Area” or adjacent agricultural areas, all as generally depicted on the map referred to in subsection 102(a), will be adversely affected by project modifications authorized in subsection (a).

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commodities.

103 STAT. 1950

PUBLIC LAW 101-229—DEC. 13, 1989

(2) In determining whether adjacent agricultural areas will be adversely affected, the Secretary of the Army shall consider the impact of any flood protection system proposed to be implemented pursuant to subsection (c) on such agricultural areas.

(c) FLOOD PROTECTION; EIGHT AND ONE-HALF SQUARE MILE AREA.—If the Secretary of the Army makes a determination pursuant to subsection (b) that the “Eight and One-Half Square Mile Area” will be adversely affected, the Secretary of the Army is authorized and directed to construct a flood protection system for that portion of presently developed land within such area.

(d) FLOOD PROTECTION; ADJACENT AGRICULTURAL AREA.—(1) If the Secretary of the Army determines pursuant to subsection (b) that an adjacent agricultural area will be adversely affected, the Secretary of the Army is authorized and directed to construct a flood protection system for such area. Such determination shall be based on a finding by the Secretary of the Army that:

(A) the adverse effect will be attributable solely to a project modification authorized in subsection (a) or to a flood protection system implemented pursuant to subsection (c), or both; and

(B) such modification or flood protection system will result in a substantial reduction in the economic utility of such area based on its present agricultural use.

(2) No project modification authorized in subsection (a) which the Secretary of the Army determines will cause an adverse effect pursuant to subsection (b) shall be made operational until the Secretary of the Army has implemented measures to prevent such adverse effect on the adjacent agricultural area: *Provided*, That the Secretary of the Army or the South Florida Water Management District may operate the modification to the extent that the Secretary of the Army determines that such operation will not adversely affect the adjacent agricultural area: *Provided further*, That any preventive measure shall be implemented in a manner that presents the least prospect of harm to the natural resources of the park.

(3) Any flood protection system implemented by the Secretary of the Army pursuant to this subsection shall be required only to provide for flood protection for present agricultural uses within such adjacent agricultural area.

(4) The acquisition of land authorized in section 102 shall not be considered a project modification.

(e) PERIODIC REVIEW.—(1) Not later than 18 months after the completion of the project modifications authorized in subsection (a), and periodically thereafter, the Secretary of the Army shall review the determination of adverse effect for adjacent agricultural areas.

(2) In conducting such review, the Secretary of the Army shall consult with all affected parties, including, but not limited to, the Secretary, the South Florida Water Management District and agricultural users within adjacent agricultural areas.

(3) If, on the basis of such review, the Secretary of the Army determines that an adjacent agricultural area has been, or will be adversely affected, the Secretary of the Army is authorized and directed, in accordance with the provisions of subsection (d), to construct a flood protection system for such area: *Provided*, That the provisions of subsection (d)(2) shall be applicable only to the extent that the Secretary, in consultation with the Secretary of the Army, determines that the park will not be adversely affected.

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commodities.

(4) The provisions of this subsection shall only be applicable if the Secretary of the Army has previously made a determination that such adjacent agricultural area will not be adversely affected.

(f) **CURRENT CANAL OPERATING LEVELS.**—Nothing in this section shall be construed to require or prohibit the Secretary of the Army or the South Florida Water Management District from maintaining the water level within any project canal below the maximum authorized operating level as of the date of enactment of this Act.

(g) **NO LIMITATION ON OTHER CLAIMS.**—If the Secretary of the Army makes a determination of no adverse effect pursuant to subsection (b), such determination shall not be considered as a limitation or prohibition against any available legal remedy which may otherwise be available.

(h) **COORDINATION.**—The Secretary and the Secretary of the Army shall coordinate the construction program authorized under this section and the land acquisition program authorized in section 102 in such a manner as will permit both to proceed concurrently and as will avoid unreasonable interference with property interests prior to the acquisition of such interests by the Secretary under section 102.

(i) **WEST DADE WELLFIELD.**—No Federal license, permit, approval, right-of-way or assistance shall be granted or issued with respect to the West Dade Wellfield (to be located in the Bird Drive Drainage Basin, as identified in the Comprehensive Development Master Plan for Dade County, Florida) until the Secretary, the Governor of the State of Florida, the South Florida Water Management District and Dade County, Florida enter into an agreement providing that the South Florida Water Management District's water use permit for the wellfield, if granted, must include the following limiting conditions: (1) the wellfield's peak pumpage rate shall not exceed 140,000,000 gallons per day; (2) the permit shall include reasonable, enforceable measures to limit demand on the wellfield in times of water shortage; and (3) if, during times of water shortage, the District fails to limit demand on the wellfield pursuant to (2), or if the District limits demand on the wellfield pursuant to (2), but the Secretary certifies that operation of the wellfield is still causing significant adverse impacts on the resources of the Park, the Governor shall require the South Florida Water Management District to take necessary actions to alleviate the adverse impact, including, but not limited to, temporary reductions in the pumpage from the wellfield.

(j) **PROTECTION OF NATURAL VALUES.**—The Secretary of the Army is directed in analysis, design and engineering associated with the development of a general design memorandum for works and operations in the "C-111 basin" area of the East Everglades, to take all measures which are feasible and consistent with the purposes of the project to protect natural values associated with Everglades National Park. Upon completion of a general design memorandum for the area, the Secretary shall prepare and transmit a report to the Committee on Energy and Natural Resources and the Committee on Environment and Public Works of the United States Senate and the Committee on Interior and Insular Affairs and the Committee on Public Works and Transportation of the United States House of Representatives on the status of the natural resources of the C-111 basin and functionally related lands.

Reports.

111 STAT. 1540

PUBLIC LAW 105-82—NOV. 13, 1997

Public Law 105-82
105th Congress

An Act

Nov. 13, 1997
[S. 931]

To designate the Marjory Stoneman Douglas Wilderness and the Ernest F. Coe Visitor Center.

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 “Marjory Stoneman Douglas Wilderness and Ernest F. Coe Visitor Center Designation Act”.

SEC. 2. FINDINGS AND PURPOSE.

(a) FINDINGS.—Congress finds that—

(1)(A) Marjory Stoneman Douglas, through her book, “The Everglades: River of Grass” (published in 1947), defined the Everglades for the people of the United States and the world;

(B) Mrs. Douglas’s book was the first to stimulate widespread understanding of the Everglades ecosystem and ultimately served to awaken the desire of the people of the United States to restore the ecosystem’s health;

(C) in her 107th year, Mrs. Douglas is the sole surviving member of the original group of people who devoted decades of selfless effort to establish the Everglades National Park;

(D) when the water supply and ecology of the Everglades, both within and outside the park, became threatened by drainage and development, Mrs. Douglas dedicated the balance of her life to the defense of the Everglades through extraordinary personal effort and by inspiring countless other people to take action;

(E) for these and many other accomplishments, the President awarded Mrs. Douglas the Medal of Freedom on Earth Day, 1994; and

(2)(A) Ernest F. Coe (1886–1951) was a leader in the creation of Everglades National Park;

(B) Mr. Coe organized the Tropic Everglades National Park Association in 1928 and was widely regarded as the father of Everglades National Park;

(C) as a landscape architect, Mr. Coe’s vision for the park recognized the need to protect south Florida’s diverse wildlife and habitats for future generations;

(D) Mr. Coe’s original park proposal included lands and waters subsequently protected within the Everglades National Park, the Big Cypress National Preserve, and the Florida Keys National Marine Sanctuary; and

Marjory
Stoneman
Douglas
Wilderness and
Ernest F. Coe
Visitor Center
Designation Act.
16 USC 410r-5
note.
16 USC 410r-7
note.

(E)(i) Mr. Coe's leadership, selfless devotion, and commitment to achieving his vision culminated in the authorization of the Everglades National Park by Congress in 1934;

(ii) after authorization of the park, Mr. Coe fought tirelessly and lobbied strenuously for establishment of the park, finally realizing his dream in 1947; and

(iii) Mr. Coe accomplished much of the work described in this paragraph at his own expense, which dramatically demonstrated his commitment to establishment of Everglades National Park.

(b) **PURPOSE.**—It is the purpose of this Act to commemorate the vision, leadership, and enduring contributions of Marjory Stoneman Douglas and Ernest F. Coe to the protection of the Everglades and the establishment of Everglades National Park.

SEC. 3. MARJORY STONEMAN DOUGLAS WILDERNESS.

16 USC 1132
note.

(a) **REDESIGNATION.**—Section 401(3) of the National Parks and Recreation Act of 1978 (Public Law 95-625; 92 Stat. 3490; 16 U.S.C. 1132 note) is amended by striking “to be known as the Everglades Wilderness” and inserting “to be known as the Marjory Stoneman Douglas Wilderness, to commemorate the vision and leadership shown by Mrs. Douglas in the protection of the Everglades and the establishment of the Everglades National Park”.

(b) **NOTICE OF REDESIGNATION.**—The Secretary of the Interior shall provide such notification of the redesignation made by the amendment made by subsection (a) by signs, materials, maps, markers, interpretive programs, and other means (including changes in signs, materials, maps, and markers in existence before the date of enactment of this Act) as will adequately inform the public of the redesignation of the wilderness area and the reasons for the redesignation.

(c) **REFERENCES.**—Any reference in any law, regulation, document, record, map, or other paper of the United States to the “Everglades Wilderness” shall be deemed to be a reference to the “Marjory Stoneman Douglas Wilderness”.

SEC. 4. ERNEST F. COE VISITOR CENTER.

(a) **DESIGNATION.**—Section 103 of the Everglades National Park Protection and Expansion Act of 1989 (16 U.S.C. 410r-7) is amended by adding at the end the following new subsection:

“(f) **ERNEST F. COE VISITOR CENTER.**—On completion of construction of the main visitor center facility at the headquarters of Everglades National Park, the Secretary shall designate the visitor center facility as the ‘Ernest F. Coe Visitor Center’, to commemorate the vision and leadership shown by Mr. Coe in the establishment and protection of Everglades National Park”.

SEC. 5. CONFORMING AND TECHNICAL AMENDMENTS.

Section 103 of the Everglades National Park Protection and Expansion Act of 1989 (16 U.S.C. 410r-7) is amended—

(1) in subsection (c)(2), by striking “personally-owned” and inserting “personally-owned”; and

(2) in subsection (e), by striking “VISITOR CENTER” and inserting “MARJORY STONEMAN DOUGLAS VISITOR CENTER”.

Approved November 13, 1997.

Public Law 105–313
105th Congress

An Act

Oct. 30, 1998
[H.R. 3055]

To deem the activities of the Miccosukee Tribe on the Miccosukee Reserved Area to be consistent with the purposes of the Everglades National Park, and for other purposes.

Miccosukee
Reserved Area
Act.
Native
Americans.
Florida.
16 USC 410 note.
16 USC 410 note.

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 “Miccosukee Reserved Area Act”.

SEC. 2. FINDINGS.

Congress finds the following:

(1) Since 1964, the Miccosukee Tribe of Indians of Florida have lived and governed their own affairs on a strip of land on the northern edge of the Everglades National Park pursuant to permits from the National Park Service and other legal authority. The current permit expires in 2014.

(2) Since the commencement of the Tribe’s permitted use and occupancy of the Special Use Permit Area, the Tribe’s membership has grown, as have the needs and desires of the Tribe and its members for modern housing, governmental and administrative facilities, schools and cultural amenities, and related structures.

(3) The United States, the State of Florida, the Miccosukee Tribe, and the Seminole Tribe of Florida are participating in a major intergovernmental effort to restore the South Florida ecosystem, including the restoration of the environment of the Park.

(4) The Special Use Permit Area is located within the northern boundary of the Park, which is critical to the protection and restoration of the Everglades, as well as to the cultural values of the Miccosukee Tribe.

(5) The interests of both the Miccosukee Tribe and the United States would be enhanced by a further delineation of the rights and obligations of each with respect to the Special Use Permit Area and to the Park as a whole.

(6) The amount and location of land allocated to the Tribe fulfills the purposes of the Park.

(7) The use of the Miccosukee Reserved Area by the Miccosukee Tribe does not constitute an abandonment of the Park.

16 USC 410 note. **SEC. 3. PURPOSES.**

The purposes of this Act are as follows:

(1) To replace the special use permit with a legal framework under which the Tribe can live permanently and govern the Tribe's own affairs in a modern community within the Park.

(2) To protect the Park outside the boundaries of the Miccosukee Reserved Area from adverse effects of structures or activities within that area, and to support restoration of the South Florida ecosystem, including restoring the environment of the Park.

SEC. 4. DEFINITIONS.

16 USC 410 note.

In this Act:

(1) **ADMINISTRATOR.**—The term “Administrator” means the Administrator of the Environmental Protection Agency.

(2) **EVERGLADES.**—The term “Everglades” means the areas within the Florida Water Conservation Areas, Everglades National Park, and Big Cypress National Preserve.

(3) **FEDERAL AGENCY.**—The term “Federal agency” means an agency, as that term is defined in section 551(1) of title 5, United States Code.

(4) **MICCOSUKEE RESERVED AREA; MRA.**—

(A) **IN GENERAL.**—The term “Miccosukee Reserved Area” or “MRA” means, notwithstanding any other provision of law and subject to the limitations specified in section 6(d) of this Act, the portion of the Everglades National Park described in subparagraph (B) that is depicted on the map entitled “Miccosukee Reserved Area” numbered NPS-160/41,038, and dated September 30, 1998, copies of which shall be kept available for public inspection in the offices of the National Park Service, Department of the Interior, and shall be filed with appropriate officers of Miami-Dade County and the Miccosukee Tribe of Indians of Florida.

(B) **DESCRIPTION.**—The description of the lands referred to in subparagraph (A) is as follows: “Beginning at the western boundary of Everglades National Park at the west line of sec. 20, T. 54 S., R. 35 E., thence E. following the Northern boundary of said Park in T. 54 S., Rs. 35 and 36 E., to a point in sec. 19, T. 54 S., R. 36 E., 500 feet west of the existing road known as Seven Mile Road, thence 500 feet south from said point, thence west paralleling the Park boundary for 3,200 feet, thence south for 600 feet, thence west, paralleling the Park boundary to the west line of sec. 20, T. 54 S., R. 35 E., thence N. 1,100 feet to the point of beginning.”

(5) **PARK.**—The term “Park” means the Everglades National Park, including any additions to that Park.

(6) **PERMIT.**—The term “permit”, unless otherwise specified, means any federally issued permit, license, certificate of public convenience and necessity, or other permission of any kind.

(7) **SECRETARY.**—The term “Secretary” means the Secretary of the Interior or the designee of the Secretary.

(8) **SOUTH FLORIDA ECOSYSTEM.**—The term “South Florida ecosystem” has the meaning given that term in section 528(a)(4) of the Water Resources Development Act of 1996 (Public Law 104-303).

112 STAT. 2966

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(9) **SPECIAL USE PERMIT AREA.**—The term “special use permit area” means the area of 333.3 acres on the northern boundary of the Park reserved for the use, occupancy, and governance of the Tribe under a special use permit before the date of the enactment of this Act.

(10) **TRIBE.**—The term “Tribe”, unless otherwise specified, means the Miccosukee Tribe of Indians of Florida, a tribe of American Indians recognized by the United States and organized under section 16 of the Act of June 18, 1934 (48 Stat. 987; 25 U.S.C. 476), and recognized by the State of Florida pursuant to chapter 285, Florida Statutes.

(11) **TRIBAL.**—The term “tribal” means of or pertaining to the Miccosukee Tribe of Indians of Florida.

(12) **TRIBAL CHAIRMAN.**—The term “tribal chairman” means the duly elected chairman of the Miccosukee Tribe of Indians of Florida, or the designee of that chairman.

16 USC 410 note. **SEC. 5. TRIBAL RIGHTS AND AUTHORITY ON THE MICCOSUKEE RESERVED AREA.**

(a) **SPECIAL USE PERMIT TERMINATED.**—

(1) **TERMINATION.**—The special use permit dated February 1, 1973, issued by the Secretary to the Tribe, and any amendments to that permit, are terminated.

(2) **EXPANSION OF SPECIAL USE PERMIT AREA.**—The geographical area contained in the former special use permit area referred to in paragraph (1) shall be expanded pursuant to this Act and known as the Miccosukee Reserved Area.

(3) **GOVERNANCE OF AFFAIRS IN MICCOSUKEE RESERVED AREA.**—Subject to the provisions of this Act and other applicable Federal law, the Tribe shall govern its own affairs and otherwise make laws and apply those laws in the MRA as though the MRA were a Federal Indian reservation.

(b) **PERPETUAL USE AND OCCUPANCY.**—The Tribe shall have the exclusive right to use and develop the MRA in perpetuity in a manner consistent with this Act for purposes of the administration, education, housing, and cultural activities of the Tribe, including commercial services necessary to support those purposes.

(c) **INDIAN COUNTRY STATUS.**—The MRA shall be—

(1) considered to be Indian country (as that term is defined in section 1151 of title 18, United States Code); and

(2) treated as a federally recognized Indian reservation solely for purposes of—

(A) determining the authority of the Tribe to govern its own affairs and otherwise make laws and apply those laws within the MRA; and

(B) the eligibility of the Tribe and its members for any Federal health, education, employment, economic assistance, revenue sharing, or social welfare programs, or any other similar Federal program for which Indians are eligible because of their—

(i) status as Indians; and

(ii) residence on or near an Indian reservation.

(d) **EXCLUSIVE FEDERAL JURISDICTION PRESERVED.**—The exclusive Federal legislative jurisdiction as applied to the MRA as in effect on the date of the enactment of this Act shall be preserved. The Act of August 15, 1953, 67 Stat. 588, chapter 505 and the amendments made by that Act, including section 1162 of title

18, United States Code, as added by that Act and section 1360 of title 28, United States Code, as added by that Act, shall not apply with respect to the MRA.

(e) **OTHER RIGHTS PRESERVED.**—Nothing in this Act shall affect any rights of the Tribe under Federal law, including the right to use other lands or waters within the Park for other purposes, including, fishing, boating, hiking, camping, cultural activities, or religious observances.

SEC. 6. PROTECTION OF EVERGLADES NATIONAL PARK.

16 USC 410 note.

(a) ENVIRONMENTAL PROTECTION AND ACCESS REQUIREMENTS.—

(1) **IN GENERAL.**—The MRA shall remain within the boundaries of the Park and be a part of the Park in a manner consistent with this Act.

(2) **COMPLIANCE WITH APPLICABLE LAWS.**—The Tribe shall be responsible for compliance with all applicable laws, except as otherwise provided by this Act.

(3) PREVENTION OF DEGRADATION; ABATEMENT.—

(A) **PREVENTION OF DEGRADATION.**—Pursuant to the requirements of the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.), the Tribe shall prevent and abate degradation of the quality of surface or groundwater that is released into other parts of the Park, as follows:

(i) With respect to water entering the MRA which fails to meet applicable water quality standards approved by the Administrator under the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.), actions of the Tribe shall not further degrade water quality.

(ii) With respect to water entering the MRA which meets applicable water quality standards approved by the Administrator under the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.), the Tribe shall not cause the water to fail to comply with applicable water quality standards.

(B) **PREVENTION AND ABATEMENT.**—The Tribe shall prevent and abate disruption of the restoration or preservation of the quantity, timing, or distribution of surface or groundwater that would enter the MRA and flow, directly or indirectly, into other parts of the Park, but only to the extent that such disruption is caused by conditions, activities, or structures within the MRA.

(C) **PREVENTION OF SIGNIFICANT PROPAGATION OF EXOTIC PLANTS AND ANIMALS.**—The Tribe shall prevent significant propagation of exotic plants or animals outside the MRA that may otherwise be caused by conditions, activities, or structures within the MRA.

(D) **PUBLIC ACCESS TO CERTAIN AREAS OF THE PARK.**—The Tribe shall not impede public access to those areas of the Park outside the boundaries of the MRA, and to and from the Big Cypress National Preserve, except that the Tribe shall not be required to allow individuals who are not members of the Tribe access to the MRA other than Federal employees, agents, officers, and officials (as provided in this Act).

(E) **PREVENTION OF SIGNIFICANT CUMULATIVE ADVERSE ENVIRONMENTAL IMPACTS.**—

112 STAT. 2968

PUBLIC LAW 105-313—OCT. 30, 1998

Deadline.

(i) **IN GENERAL.**—The Tribe shall prevent and abate any significant cumulative adverse environmental impact on the Park outside the MRA resulting from development or other activities within the MRA.

(ii) **PROCEDURES.**—Not later than 12 months after the date of the enactment of this Act, the Tribe shall develop, publish, and implement procedures that shall ensure adequate public notice and opportunity to comment on major tribal actions within the MRA that may contribute to a significant cumulative adverse impact on the Everglades ecosystem.

(iii) **WRITTEN NOTICE.**—The procedures in clause (ii) shall include timely written notice to the Secretary and consideration of the Secretary's comments.

(F) **WATER QUALITY STANDARDS.**—

Deadline.

(i) **IN GENERAL.**—Not later than 12 months after the date of the enactment of this Act, the Tribe shall adopt and comply with water quality standards within the MRA that are at least as protective as the water quality standards for the area encompassed by Everglades National Park approved by the Administrator under the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.).

(ii) **TRIBAL WATER QUALITY STANDARDS.**—The Tribe may not adopt water quality standards for the MRA under clause (i) that are more restrictive than the water quality standards adopted by the Tribe for contiguous reservation lands that are not within the Park.

(iii) **EFFECT OF FAILURE TO ADOPT OR PRESCRIBE STANDARDS.**—In the event the Tribe fails to adopt water quality standards referred to in clause (i), the water quality standards applicable to the Everglades National Park, approved by the Administrator under the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.), shall be deemed to apply by operation of Federal law to the MRA until such time as the Tribe adopts water quality standards that meet the requirements of this subparagraph.

(iv) **MODIFICATION OF STANDARDS.**—If, after the date of the enactment of this Act, the standards referred to in clause (iii) are revised, not later than 1 year after those standards are revised, the Tribe shall make such revisions to water quality standards of the Tribe as are necessary to ensure that those water quality standards are at least as protective as the revised water quality standards approved by the Administrator.

(v) **EFFECT OF FAILURE TO MODIFY WATER QUALITY STANDARDS.**—If the Tribe fails to revise water quality standards in accordance with clause (iv), the revised water quality standards applicable to the Everglades Park, approved by the Administrator under the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.) shall be deemed to apply by operation of Federal law to the MRA until such time as the Tribe adopts water quality standards that are at least as protective as

the revised water quality standards approved by the Administrator.

(G) NATURAL EASEMENTS.—The Tribe shall not engage in any construction, development, or improvement in any area that is designated as a natural easement.

(b) HEIGHT RESTRICTIONS.—

(1) RESTRICTIONS.—Except as provided in paragraphs (2) through (4), no structure constructed within the MRA shall exceed the height of 45 feet or exceed 2 stories, except that a structure within the Miccosukee Government Center, as shown on the map referred to in section 4(4), shall not exceed the height of 70 feet.

(2) EXCEPTIONS.—The following types of structures are exempt from the restrictions of this section to the extent necessary for the health, safety, or welfare of the tribal members, and for the utility of the structures:

(A) Water towers or standpipes.

(B) Radio towers.

(C) Utility lines.

(3) WAIVER.—The Secretary may waive the restrictions of this subsection if the Secretary finds that the needs of the Tribe for the structure that is taller than structures allowed under the restrictions would outweigh the adverse effects to the Park or its visitors.

(4) GRANDFATHER CLAUSE.—Any structure approved by the Secretary before the date of the enactment of this Act, and for which construction commences not later than 12 months after the date of the enactment of this Act, shall not be subject to the provisions of this subsection.

(5) MEASUREMENT.—The heights specified in this subsection shall be measured from mean sea level.

(c) OTHER CONDITIONS.—

(1) GAMING.—No class II or class III gaming (as those terms are defined in section 4 (7) and (8) of the Indian Gaming Regulatory Act (25 U.S.C. 2703 (7) and (8)) shall be conducted within the MRA.

(2) AVIATION.—

(A) IN GENERAL.—No commercial aviation may be conducted from or to the MRA.

(B) EMERGENCY OPERATORS.—Takeoffs and landings of aircraft shall be allowed for emergency operations and administrative use by the Tribe or the United States, including resource management and law enforcement.

(C) STATE AGENCIES AND OFFICIALS.—The Tribe may permit the State of Florida, as agencies or municipalities of the State of Florida to provide for takeoffs or landings of aircraft on the MRA for emergency operations or administrative purposes.

(3) VISUAL QUALITY.—

(A) IN GENERAL.—In the planning, use, and development of the MRA by the Tribe, the Tribe shall consider the quality of the visual experience from the Shark River Valley visitor use area, including limitations on the height and locations of billboards or other commercial signs or other advertisements visible from the Shark Valley visitor center, tram road, or observation tower.

(B) EXEMPTION OF MARKINGS.—The Tribe may exempt markings on a water tower or standpipe that merely identify the Tribe.

(d) EASEMENTS AND RANGER STATION.—Notwithstanding any other provision of this Act, the following provisions shall apply:

(1) NATURAL EASEMENTS.—

(A) IN GENERAL.—The use and occupancy of the MRA by the Tribe shall be perpetually subject to natural easements on parcels of land that are—

(i) bounded on the north and south by the boundaries of the MRA, specified in the legal description under section 4(4); and

(ii) bounded on the east and west by boundaries that run perpendicular to the northern and southern boundaries of the MRA, as provided in the description under subparagraph (B).

(B) DESCRIPTION.—The description referred to in subparagraph (A)(ii) is as follows:

(i) Easement number 1, being 445 feet wide with western boundary 525 feet, and eastern boundary 970 feet, east of the western boundary of the MRA.

(ii) Easement number 2, being 443 feet wide with western boundary 3,637 feet, and eastern boundary 4,080 feet, east of the western boundary of the MRA.

(iii) Easement number 3, being 320 feet wide with western boundary 5,380 feet, and eastern boundary 5,700 feet, east of the western boundary of the MRA.

(iv) Easement number 4, being 290 feet wide with western boundary 6,020 feet, and eastern boundary 6,310 feet, east of the western boundary of the MRA.

(v) Easement number 5, being 290 feet wide with western boundary 8,170 feet, and eastern boundary 8,460 feet, east of the western boundary of the MRA.

(vi) Easement number 6, being 312 feet wide with western boundary 8,920 feet, and eastern boundary 9,232 feet, east of the western boundary of the MRA.

(2) EXTENT OF EASEMENTS.—The aggregate extent of the east-west parcels of lands subject to easements under paragraph (1) shall not exceed 2,100 linear feet, as depicted on the map referred to in section 4(4).

(3) USE OF EASEMENTS.—At the discretion of the Secretary, the Secretary may use the natural easements specified in paragraph (1) to fulfill a hydrological or other environmental objective of the Everglades National Park.

(4) ADDITIONAL REQUIREMENTS.—In addition to providing for the easements specified in paragraph (1), the Tribe shall not impair or impede the continued function of the water control structures designated as “S-12A” and “S-12B”, located north of the MRA on the Tamiami Trail and any existing water flow ways under the Old Tamiami Trail.

(5) USE BY DEPARTMENT OF THE INTERIOR.—The Department of the Interior shall have a right, in perpetuity, to use and occupy, and to have vehicular and airboat access to, the Tamiami Ranger Station identified on the map referred to in section 4(4), except that the pad on which such station is constructed shall not be increased in size without the consent of the Tribe.

SEC. 7. IMPLEMENTATION PROCESS.

16 USC 410 note.

(a) **GOVERNMENT-TO-GOVERNMENT AGREEMENTS.**—The Secretary and the tribal chairman shall make reasonable, good faith efforts to implement the requirements of this Act. Those efforts may include government-to-government consultations, and the development of standards of performance and monitoring protocols.

(b) **FEDERAL MEDIATION AND CONCILIATION SERVICE.**—If the Secretary and the tribal chairman concur that they cannot reach agreement on any significant issue relating to the implementation of the requirements of this Act, the Secretary and the tribal chairman may jointly request that the Federal Mediation and Conciliation Service assist them in reaching a satisfactory agreement.

(c) **60-DAY TIME LIMIT.**—The Federal Mediation and Conciliation Service may conduct mediation or other nonbinding dispute resolution activities for a period not to exceed 60 days beginning on the date on which the Federal Mediation and Conciliation Service receives the request for assistance, unless the Secretary and the tribal chairman agree to an extension of period of time.

(d) **OTHER RIGHTS PRESERVED.**—The facilitated dispute resolution specified in this section shall not prejudice any right of the parties to—

(1) commence an action in a court of the United States at any time; or

(2) any other resolution process that is not prohibited by law.

SEC. 8. MISCELLANEOUS.

16 USC 410 note.

(a) **NO GENERAL APPLICABILITY.**—Nothing in this Act creates any right, interest, privilege, or immunity affecting any other Tribe or any other park or Federal lands.

(b) **NONINTERFERENCE WITH FEDERAL AGENTS.**—

(1) **IN GENERAL.**—Federal employees, agents, officers, and officials shall have a right of access to the MRA—

(A) to monitor compliance with the provisions of this Act; and

(B) for other purposes, as though it were a Federal Indian reservation.

(2) **STATUTORY CONSTRUCTION.**—Nothing in this Act shall authorize the Tribe or members or agents of the Tribe to interfere with any Federal employee, agent, officer, or official in the performance of official duties (whether within or outside the boundaries of the MRA) except that nothing in this paragraph may prejudice any right under the Constitution of the United States.

(c) **FEDERAL PERMITS.**—

(1) **IN GENERAL.**—No Federal permit shall be issued to the Tribe for any activity or structure that would be inconsistent with this Act.

(2) **CONSULTATIONS.**—Any Federal agency considering an application for a permit for construction or activities on the MRA shall consult with, and consider the advice, evidence, and recommendations of the Secretary before issuing a final decision.

(3) **RULE OF CONSTRUCTION.**—Except as otherwise specifically provided in this Act, nothing in this Act supersedes any requirement of any other applicable Federal law.

(d) **VOLUNTEER PROGRAMS AND TRIBAL INVOLVEMENT.**—The Secretary may establish programs that foster greater involvement by the Tribe with respect to the Park. Those efforts may include internships and volunteer programs with tribal schoolchildren and with adult tribal members.

(e) **SAVING ECOSYSTEM RESTORATION.**—

(1) **IN GENERAL.**—Nothing in this Act shall be construed to amend or prejudice the authority of the United States to design, construct, fund, operate, permit, remove, or degrade canals, levees, pumps, impoundments, wetlands, flow ways, or other facilities, structures, or systems, for the restoration or protection of the South Florida ecosystem pursuant to Federal laws.

(2) **USE OF NONEASEMENT LANDS.**—

(A) **IN GENERAL.**—The Secretary may use all or any part of the MRA lands to the extent necessary to restore or preserve the quality, quantity, timing, or distribution of surface or groundwater, if other reasonable alternative measures to achieve the same purpose are impractical.

(B) **SECRETARIAL AUTHORITY.**—The Secretary may use lands referred to in subparagraph (A) either under an agreement with the tribal chairman or upon an order of the United States district court for the district in which the MRA is located, upon petition by the Secretary and finding by the court that—

(i) the proposed actions of the Secretary are necessary; and

(ii) other reasonable alternative measures are impractical.

(3) **COSTS.**—

(A) **IN GENERAL.**—In the event the Secretary exercises the authority granted the Secretary under paragraph (2), the United States shall be liable to the Tribe or the members of the Tribe for—

(i) cost of modification, removal, relocation, or reconstruction of structures lawfully erected in good faith on the MRA; and

(ii) loss of use of the affected land within the MRA.

(B) **PAYMENT OF COMPENSATION.**—Any compensation paid under subparagraph (A) shall be paid as cash payments with respect to taking structures and other fixtures and in the form of rights to occupy similar land adjacent to the MRA with respect to taking land.

(4) **RULE OF CONSTRUCTION.**—Paragraphs (2) and (3) shall not apply to a natural easement described in section 6(d)(1).

(f) **PARTIES HELD HARMLESS.**—

(1) **UNITED STATES HELD HARMLESS.**—

(A) **IN GENERAL.**—Subject to subparagraph (B) with respect to any tribal member, tribal employee, tribal contractor, tribal enterprise, or any person residing within the MRA, notwithstanding any other provision of law, the United States (including an officer, agent, or employee of the United States), shall not be liable for any action or failure to act by the Tribe (including an officer, employee, or member of the Tribe), including any failure to perform any of the obligations of the Tribe under this Act.

(B) **RULE OF CONSTRUCTION.**—Nothing in this paragraph shall be construed to alter any liability or other obligation that the United States may have under the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450 et seq.).

(2) **TRIBE HELD HARMLESS.**—Notwithstanding any other provision of law, the Tribe and the members of the Tribe shall not be liable for any injury, loss, damage, or harm that—

(A) occurs with respect to the MRA; and

(B) is caused by an action or failure to act by the United States, or the officer, agent, or employee of the United States (including the failure to perform any obligation of the United States under this Act).

(g) **COOPERATIVE AGREEMENTS.**—Nothing in this Act shall alter the authority of the Secretary and the Tribe to enter into any cooperative agreement, including any agreement concerning law enforcement, emergency response, or resource management.

(h) **WATER RIGHTS.**—Nothing in this Act shall enhance or diminish any water rights of the Tribe, or members of the Tribe, or the United States (with respect to the Park).

(i) **ENFORCEMENT.**—

(1) **ACTIONS BROUGHT BY ATTORNEY GENERAL.**—The Attorney General may bring a civil action in the United States district court for the district in which the MRA is located, to enjoin the Tribe from violating any provision of this Act.

(2) **ACTION BROUGHT BY TRIBE.**—The Tribe may bring a civil action in the United States district court for the district in which the MRA is located to enjoin the United States from violating any provision of this Act.

Approved October 30, 1998.

LEGISLATIVE HISTORY—H.R. 3055 (S. 1419):

HOUSE REPORTS: No. 105-708, Pt. 1 (Comm. on Resources).

SENATE REPORTS: No. 105-361 accompanying S. 1419 (Comm. on Indian Affairs).

CONGRESSIONAL RECORD, Vol. 144 (1998):

Oct. 12, considered and passed House.

Oct. 15, considered and passed Senate.

Public Law 108-483
108th Congress

An Act

To authorize the exchange of certain land in Everglades National Park.

Dec. 23, 2004
[H.R. 3785]

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

Florida.

SECTION 1. EVERGLADES NATIONAL PARK.

Section 102 of the Everglades National Park Protection and Expansion Act of 1989 (16 U.S.C. 410r-6) is amended—

(1) in subsection (a)—

(A) by striking “The park boundary” and inserting the following:

“(1) IN GENERAL.—The park boundary”;

(B) by striking “The map” and inserting the following:

“(2) AVAILABILITY OF MAP.—The map”; and

(C) by adding at the end the following:

“(3) ACQUISITION OF ADDITIONAL LAND.—

“(A) IN GENERAL.—The Secretary may acquire from 1 or more willing sellers not more than 10 acres of land located outside the boundary of the park and adjacent to or near the East Everglades area of the park for the development of administrative, housing, maintenance, or other park purposes.

“(B) ADMINISTRATION; APPLICABLE LAW.—On acquisition of the land under subparagraph (A), the land shall be administered as part of the park in accordance with the laws (including regulations) applicable to the park.”; and

(2) by adding at the end the following:

“(h) LAND EXCHANGES.—

“(1) DEFINITIONS.—In this subsection:

“(A) ADMINISTRATOR.—The term ‘Administrator’ means the Administrator of General Services.

“(B) COUNTY.—The term ‘County’ means Miami-Dade County, Florida.

“(C) COUNTY LAND.—The term ‘County land’ means the 2 parcels of land owned by the County totaling approximately 152.93 acres that are designated as ‘Tract 605-01’ and ‘Tract 605-03’.

“(D) DISTRICT.—The term ‘District’ means the South Florida Water Management District.

“(E) DISTRICT LAND.—The term ‘District land’ means the approximately 1,054 acres of District land located in the Southern Glades Wildlife and Environmental Area and identified on the map as ‘South Florida Water Management District Exchange Lands’.

118 STAT. 3920

PUBLIC LAW 108-483—DEC. 23, 2004

“(F) GENERAL SERVICES ADMINISTRATION LAND.—The term ‘General Services Administration land’ means the approximately 595.28 acres of land designated as ‘Site Alpha’ that is declared by the Department of the Navy to be excess land.

“(G) MAP.—The term ‘map’ means the map entitled ‘Boundary Modification for C-111 Project, Everglades National Park’, numbered 160/80,007A, and dated May 18, 2004.

“(H) NATIONAL PARK SERVICE LAND.—The term ‘National Park Service land’ means the approximately 1,054 acres of land located in the Rocky Glades area of the park and identified on the map as ‘NPS Exchange Lands’.

“(2) EXCHANGE OF GENERAL SERVICES ADMINISTRATION LAND AND COUNTY LAND.—The Administrator shall convey to the County fee title to the General Services Administration land in exchange for the conveyance by the County to the Secretary of fee title to the County land.

“(3) EXCHANGE OF NATIONAL PARK SERVICE LAND AND DISTRICT LAND.—

“(A) IN GENERAL.—As soon as practicable after the completion of the exchange under paragraph (2), the Secretary shall convey to the District fee title to the National Park Service land in exchange for fee title to the District land.

“(B) USE OF NATIONAL PARK SERVICE LAND.—The National Park Service land conveyed to the District shall be used by the District for the purposes of the C-111 project, including restoration of the Everglades natural system.

“(C) BOUNDARY ADJUSTMENT.—On completion of the land exchange under subparagraph (A), the Secretary shall modify the boundary of the park to reflect the exchange of the National Park Service land and the District land.

“(4) AVAILABILITY OF MAP.—The map shall be on file and available for public inspection in the appropriate offices of the National Park Service.”.

SEC. 2. BIG CYPRESS NATIONAL PRESERVE.

Subsection (d)(3) of the first section of Public Law 93-440 (16 U.S.C. 698f) is amended by striking “The amount described

Appendix B: Inventory of Administrative Commitments

Title/Agency/ Organization	Purpose/Description	Expiration Date	Responsible Party
Arrangement			
Loan approval of national 20% recreation fee / concession franchise fee funds for leaseholder surrender interest	Approval of loan and terms and conditions.	9/30/2026	Deputy Superintendent
Legal			
Consent decree between the United States and the State of Florida	Protect Everglades National Park and Loxahatchee National Wildlife Refuge from detrimental effects of nutrient enrichment on ecosystem resources.	None	Superintendent
Cooperative Agreements			
Agreement between United States Department of Interior (DOI) National Park Service (NPS), Biscayne National Park (BISC), Everglades National Park (EVER), and Greater Miami Service Corps	For the National Park Service to employ local, urban youth and young adults (ages 18 through 25).	10/4/2021	Chief, Resource Education and Interpretation
Agreement between NPS and Fish and Wildlife Research Institute (FWRI)	Conduct inventory, monitoring, mapping, and outreach activities to better understand and protect ecosystem resources.	7/19/2021	Chief, Biological Resources
Agreement between NPS and South Florida Water Management District	Specific objectives are to provide hydrologic, water quality, and ecological information to support the Modified Waters Delivery project.	6/14/2020	Science Coordinator
Special Designations			
World Heritage Listing of Everglades National Park by United Nations Educational, Scientific and Cultural Organization (UNESCO)	Designation as World Heritage Site and "in danger." Listing as internationally significant because of its unique ecosystems and in danger due to condition of natural resources.	None	Director, South Florida Natural Resources Center
Convention on wetlands of international importance listing (Ramsar wetland designation)	Added to Montreux Record (6/12/93) because of significant changes to natural system.	None	Director, South Florida Natural Resources Center

Title/Agency/ Organization	Purpose/Description	Expiration Date	Responsible Party
Special Designations (continued)			
East Everglades protection by Miami-Dade Code of Ordinances	Intended to protect public health, safety, and welfare by assuring orderly development and minimal degradation.	None	Director, South Florida Natural Resources Center
Man and the Biosphere listing of EVER and Dry Tortugas National Parks (DRTO) under UNESCO	The Man and the Biosphere program achieves conservation, development, logistic support; stakeholder focus; education; resource diverse, World Network of Biosphere Reserves.	None	Director, South Florida Natural Resources Center
Audubon Important Bird Areas	The Everglades Important Bird Area is primarily intended to reestablish colonies of wading birds.	None	Chief, Biological Resources
Friends Group Agreements			
EVER/BISC DRTO/Big Cypress National Preserve (BICY) NPS/South Florida National Parks Trust	Provides the legal and policy framework for work between the Trust, EVER, DRTO, BISC, and BICY.	6/29/2019	Chief, Resource Education and Interpretation
Interagency Agreements			
Federal Bureau of Prisons	Use of inmate labor.	None	Facility Manager
CERP interim goals between DOI, U.S. Army Corps of Engineers and State of Florida	Describes restoration goals for implementation of Comprehensive Everglades Restoration Plan (CERP).	Full CERP implementation (~2038)	Director, South Florida Natural Resources Center
NPS – Environmental Protection Agency Agreement	Funding to support water quality and quantity improvements, marsh and treatment area assessments, restoration and consent decree issues from implementation of restoration projects.	9/30/2021	Chief, Water Quality
Land Exchange Agreements			
Land exchange between the National Park Service and Florida Power & Light Company (FPL)	Agreement covers land exchange intended to support park ecosystem restoration. Among its responsibilities, NPS will monitor for FPL compliance with agreement's restrictive covenants, and terms and conditions to insure lands are being managing as intended.	None	Superintendent
U.S. Geological Survey	USGS access to the Gasboy pumping system for fuel at Flamingo and Key Largo.	9/30/2017 (renewed annually)	Budget and Finance Officer

Title/Agency/ Organization	Purpose/Description	Expiration Date	Responsible Party
Memorandums of Agreement			
Immigration and customs enforcement (U.S. Department of Homeland Security)	Radio frequency use.	5/2/2018	Chief Ranger
NPS Southeast Archeological Center	Radio frequency use.	8/18/2023	Chief Ranger
U.S. Geological Survey, Water Resources Division	Radio frequency use.	9/21/2018	Chief Ranger
Smart destinations	Electronic park passes.	3/11/2018	Revenue and Fee Supervisor
Florida Department of Corrections	Canine tracking.	4/2/2018	Law Enforcement Specialist
Florida Department of Law Enforcement	Criminal justice user agreements.	1/31/2019	Law Enforcement Specialist
Miami-Dade County	Structural fire-emergency medical services-search and rescues.	2/13/2019	Law Enforcement Specialist
Establish independent scientific review panel for progress of Comprehensive Everglades Restoration Plan	Establish independent scientific review panel for progress of comprehensive Everglades restoration.	4/27/2020	Deputy Director, DOI Office of Everglades Restoration Initiatives
National Park Foundation (NPF) – Hole In the Donut (HID)	NPF funds HID personnel, travel, transportation, utilities, flying, training/conference, supplies, equipment, agreements.	1/31/2035	Natural Restoration Program Manager
Memorandums of Understanding			
EVER BISC/City of Homestead	Guideline for parks partnership with city to provide free public trolley transportation to EVER and BISC.	12/31/2020	Chief, Resource Education and Interpretation
NPS/EVER/Fairchild Tropical Botanic Garden	To further the two entities' mission of research, education, and outreach to benefit both the park and garden.	2/26/2029	Chief, Resource Education and Interpretation
NPS/EVER/Artists in Residence in Everglades, Inc.	To advance the mutual mission of operating and administering the park Artist-in-Residence-in-Everglades program.	7/31/2021	Chief, Resource Education and Interpretation

Title/Agency/ Organization	Purpose/Description	Expiration Date	Responsible Party
Memorandums of Understanding (continued)			
EVER/Florida Department of Highway Safety and Motor Vehicles	Driver and vehicle information database system.	2/28/2022	Chief Ranger
EVER/Florida Highway Safety and Motor Vehicles	Electronic access (e.g., National Crime Information Center).	6/22/2019	Chief Ranger
EVER/Everglades Association	Agreement between EVER and Everglades Association for information technology support.	12/3/2017	Chief, Information Technology
EVER/Zoo Miami Foundation/Zoo Miami Miami-Dade County Parks, Recreation, and Open Spaces Department	Seeks to advance the mission of research, education, and outreach shared between Zoo Miami Foundation, Zoo Miami, and park.	4/17/2019	Chief, Resource Education and Interpretation
2015 Cape Sable seaside sparrow memorandum of understanding – NPS U.S. Fish and Wildlife Service (USFWS)/USGS	Implementation actions for recovery of Cape Sable seaside sparrow.	2/26/2025	Director, South Florida Natural Resources Center
Agreement between NPS, USFWS, and Florida Forest Service for mutual response to wildland fire	Provides cooperation toward prevention, detection, suppression, and investigation of wildfires.	1/31/2022	Chief, Fire and Aviation
Everglades Cooperative Invasive Species Management Area (ECISMA)	Establishes ECISMA, steering committee, information exchange, and other collaborative efforts.	Expired (work continues informally)	Director, South Florida Natural Resources Center
National Water-Quality Assessment Program	NPS will cooperate with USGS in water quality assessments.	1/25/2019	Chief, Water Quality
NPS and USFWS memorandum of understanding regarding protection of migratory birds	Encourages NPS to partner with other agencies and nongovernmental organizations for the benefit of migratory birds.	4/12/2020	Director, South Florida Natural Resources Center
Partner park declaration: Everglades National Park and Pantanal National Park (Brazil)	Agreement between the two parks to encourage cooperation to strengthen conservation, management, and sustainable use.	10/14/2017	Superintendent
Sister park arrangement between EVER and Cienaga de Zapata National Park, Cuba	Cooperative relationship to facilitate science, stewardship, and management of marine protected areas.	1/19/2022	Superintendent

Title/Agency/ Organization	Purpose/Description	Expiration Date	Responsible Party
Military Interagency Purchase Request			
U.S. Army Corps of Engineers – military interdepartmental purchase request, CSSS population monitoring	Fiscal year 2016 NPS/ENP Cape Sable seaside sparrow (CSSS) rangewide population monitoring.	9/30/2021	Chief, Biological Resources
Donor Recognition			
Donor recognition plan	Required donor recognition for programs that receive or are likely to receive donations.	4/13/2019	Chief, Resource Education and Interpretation
Reimbursable Agreements			
Cooperative research and monitoring, shared research facilities with SFWMD	Establishment of research and monitoring projects, development of shared facilities, and operation of mesocosm facility.	9/30/2018	Chief, Biological Resources
Water quality monitoring in Everglades National Park with SFWMD	Collection and analysis of water quality data to support water quality consent decree.	9/30/2021	Chief, Physical Resources
Right-of-Way Permits			
CenturyLink right-of-way permit	Land use for operations of communications facility.	2/10/2019	Facility Manager
Florida Power and Light right-of-way permit	Right-of-way in the maintenance yard in Flamingo.	7/28/2026	Facility Manager
Verizon Wireless right-of-way permit	Land use for operation of wireless communications facility at Dr. Bill Robertson Center.	6/21/2026	Facility Manager
South Florida Natural Resources Center			
South Florida Natural Resources Center	Established in 1978 by Department of the Interior for Everglades science.	None	Director, South Florida Natural Resources Center
Special Warranty Deeds			
Special warranty deed	EVER Expansion Tract # 231-06.	6/10/2036	Superintendent
Special warranty deed	Salem radio properties.	6/10/2036	Superintendent

Appendix C: Basics for Wilderness Stewardship

This wilderness character narrative qualitatively describes what is unique and special about the Marjory Stoneman Douglas Wilderness in terms of the five qualities of wilderness character. It is a foundational document intended to convey the current and foreseeable future condition of the wilderness, identify fundamental wilderness resources, and acknowledge important intangible values associated with the wilderness.

Introduction

A wilderness character narrative is intended to be a qualitative description and positive affirmation of the unique attributes of a wilderness area. Representatives from each of the four wilderness managing agencies developed a national framework to monitor wilderness character using five qualities: untrammeled, natural, undeveloped, opportunities for solitude or primitive and unconfined recreation, and other features of value. These qualities are defined in brief as follows:

- **Untrammeled.** Wilderness is essentially unhindered and free from modern human control or manipulation.
- **Natural.** Wilderness maintains ecological systems that are substantially free from the effects of modern civilization.
- **Undeveloped.** Wilderness retains its primeval character and influence, and is essentially without permanent improvements or modern human occupation.
- **Solitude or Primitive and Unconfined Recreation.** Wilderness provides outstanding opportunities for solitude or a primitive and unconfined type of recreation.
- **Other Features of Value.** Other tangible features of scientific, educational, scenic, or historical value.

The following wilderness character narrative is intended to familiarize readers with the tangible and intangible resources and values that combine to create the Marjory Stoneman Douglas Wilderness at Everglades National Park. The document was created through collaboration among NPS staff and is a record of the shared understanding of wilderness character exemplified by the Marjory Stoneman Douglas Wilderness.

This narrative serves as a framework for a wilderness stewardship plan, fosters integration among different staff and program areas that need to function together to effectively preserve wilderness character, and serves as a starting point for discussion with the public about the current and future state of the wilderness. Other more analytical documents, such as wilderness character baseline and wilderness character monitoring measures, may be derived from the qualitative description and threats to wilderness character identified by this wilderness character narrative.



Overview Of The Marjory Stoneman Douglas Wilderness

At the southern tip of the peninsula that is the State of Florida lies the Marjory Stoneman Douglas Wilderness. Fully encompassed within Everglades National Park, this area was considered wilderness long before the Wilderness Act was signed into law. As stated in the enabling legislation for the park, this area “shall be permanently reserved as a wilderness, and no development of the project or plan for the entertainment of visitors shall be undertaken which will interfere with the preservation intact of the unique flora and fauna and the essential primitive natural conditions now prevailing in this area” (16 USC 410c). Though signed 30 years prior to the Wilderness Act, the park’s enabling legislation is analogous in its fundamental aims.

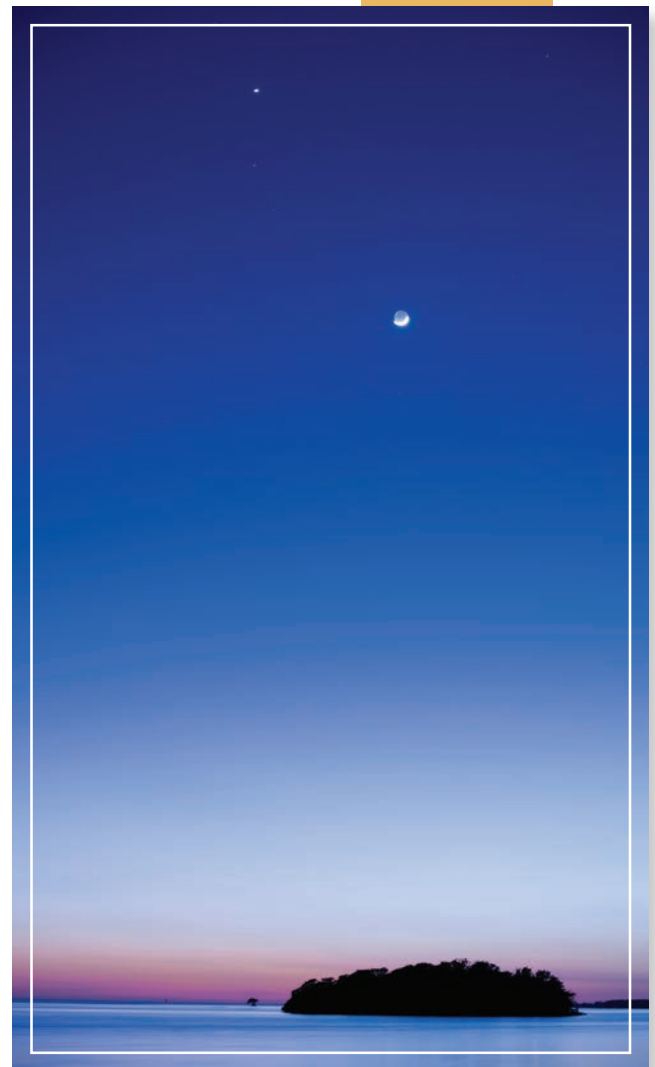
The Marjory Stoneman Douglas Wilderness is the largest unit of the National Wilderness Preservation System east of the Rocky Mountains. In character, it harks back to a primordial time full of mystery and intrigue. It is a wet, hot, and humid environment teeming with mosquitoes, hazardous wildlife, and poisonous plants and is both unforgiving and inhospitable. There is no debating these facts; however, if given the chance, visitors will find that this area is also wondrous, enchanting, and beautiful.

The wilderness is a vast complex of seasonally or permanently flooded ecosystems interspersed with isolated patches of dry ground that one may explore with few signs of modern human presence. It is a unique, subtropical wetland that connects central Florida’s freshwater ecosystem with the marine systems of Florida Bay and the Gulf of Mexico. The Everglades is an outstanding and subtle landscape, one that seems both bountiful in resources and spectacular in its never-ending waterways, diverse wildlife, and sprawling scenic views. Visitors to the wilderness have the opportunity to enjoy a relatively undeveloped and wild landscape, where they can view numerous threatened and endangered species, slog through backcountry sloughs, and sleep under starlit skies, all within a stone’s throw of a major metropolitan area.

Besides affording outstanding recreational benefits, the Marjory Stoneman Douglas Wilderness serves as an essential recharge for South Florida’s water supply, a natural line of defense against the impacts of tropical storms and a vital nursing ground for numerous aquatic and avian species. It also harbors an extensive array of cultural resources. Many have been documented and determined eligible for listing in the National Register of Historic Places, whereas others are still to be identified and evaluated for significance. These include archaeological and ethnographic resources, historic and prehistoric structures, and cultural landscapes.

The importance of the Marjory Stoneman Douglas Wilderness is reflected in its designations as an International Biosphere Reserve, a World Heritage Site, and a Ramsar Wetland of International Importance. This combination of distinctions is unmatched anywhere else in the United States.

The following narrative describes in more detail what is unique and special about the Marjory Stoneman Douglas Wilderness, while noting some of the major threats to the area’s wilderness character. It is organized by the five tangible and measurable qualities of wilderness character, namely, the untrammeled, natural, and undeveloped qualities, opportunities for solitude or primitive and unconfined recreation, and other features of value.



Untrammeled

Definition: Wilderness is essentially unhindered and free from modern human control or manipulation. This quality represents the “wild,” in “wilderness.” Any intentional or unintentional, authorized or unauthorized treatment or action that manipulates the wilderness degrades this quality. Perpetuating the untrammeled quality requires managers to restrain themselves, rather than restraining the wilderness. Often, upholding the untrammeled quality can detract from another wilderness quality, such as “naturalness,” or vice-versa. For example, nonnative species may be removed in order to attain natural species composition, which would in turn be a manipulation of the current wilderness.

As anyone venturing into the heart of the wilderness can attest, this vast wetland “appears to have been affected primarily by the forces of nature” and to the average visitor seems to be an area where the “earth and its community of life are untrammeled by man.” However, the story of the Everglades cannot be told without also taking note of the attempts of humans to manipulate and cultivate its landscape. In the decades leading up to the dedication of Everglades National Park, numerous attempts were made to exploit the region’s resources. Canals intended to expedite drainage were constructed both within and outside of the modern wilderness boundary. These changes caused widespread damage to the land and its ecological systems. Inflow patterns from the upper watershed were altered dramatically, as were hydrologic flow within the wilderness itself. These flows must now be intentionally manipulated to perpetuate the natural conditions for which Everglades National Park was established. The result is long-term degradation of the untrammeled quality of wilderness character, even as the natural quality is maintained or enhanced.

Despite efforts to tame the land, biophysical processes remain the predominant features of the landscape. The cycle of life here continues mostly unfettered. The fascinating and diverse wildlife, including fish, birds, and all other forms, are free to roam and forage unimpeded by human-caused restrictions. Likewise, most natural creeks and rivers openly flow through estuarine areas to the sea without impedance from artificial plugs or dams. Wildfires, which clear and rejuvenate the landscape, are generally allowed to burn unsuppressed and contribute to the natural cycle of succession. Perennial dynamic forces—violent storms, flood and drought, fire, and coastal wave action—continue to shape the region, and do so freely.



As wild as this wilderness appears, there are a variety of threats to the untrammeled quality. Most trammeling actions that threaten the wilderness center around three activities—environmental restoration, fire, and exotic species control— all of which are typically undertaken to preserve the natural quality of wilderness character. Water control structures on the periphery of the wilderness boundary are manually operated to counteract the effects of past actions. Additionally, smaller-scale active manipulation to restore natural conditions (e.g., restoring disturbed sites such as former agricultural fields or residential sites, or repairing seagrass beds damaged by motor boat groundings or propeller scarring in Florida Bay and other shallow-water areas) impact this quality. Even though naturally ignited fires generally burn unimpeded within the wilderness, the application of prescribed fire to the landscape results in trammeling; however, trammeling in the near-term enhances the long-term opportunity for future wildfires to go unsuppressed as more natural habitat regimes are established. Similarly, unauthorized ignitions enacted with the intent to alter the earth and its community of life also degrade the untrammeled quality. Finally, the removal of exotic plant and animal species, whether by mechanical or chemical means, qualifies as a trammeling of the wilderness even when conducted using nonmechanized means.

Natural

Definition: Wilderness maintains ecological systems that are substantially free from the effects of modern civilization.

The amazing abundance of unique natural features was the primary reason the area of the Marjory Stoneman Douglas Wilderness was established as a national park. As President Truman stated during his dedication speech (1947), “Here are no lofty peaks seeking the sky, no mighty glaciers or rushing streams wearing away the uplifted land. Here is land, tranquil in its quiet beauty, serving not as the source of water but as the last receiver of it.” The headwaters of the Everglades, originating in central Florida, are generally considered to lie in Shingle Creek, some 170 miles north of the northernmost boundary of the wilderness. From this point, water, the lifeblood of the Everglades, flows ever so slowly southward, gradually expanding laterally across much of the state and permeating the natural features traditionally associated with this iconic landscape. It is a subtle place where earth, water, and sky blend in a low green landscape, where mere inches of elevation produce substantial changes in vegetation, and where a great wealth of birds and other wildlife find refuge.

This wilderness is at the interface between temperate and subtropical America, sheltering a rich juxtaposition of species, many at the limit of their ranges. The interdependent mosaic of habitats supports an incomparable level of richness, ranging from microscopic organisms to matchless megafauna. Thirty-seven federally listed species have been recorded from within the wilderness, including the American alligator (*Alligator mississippiensis*) and crocodile (*Crocodylus acutus*), Florida panther (*Felis concolor coryi*), West Indian manatee (*Trichechus manatus*), smalltooth sawfish (*Pristis pectinata*), and Cape Sable seaside sparrow (*Ammodramus maritima mirabilis*). Historically, the Marjory Stoneman Douglas Wilderness was part of the most significant breeding ground for wading birds in North America. More than 300 species of birds have been recorded here, seven of them rare or endangered.

Perhaps the Everglades’ best known feature, the one for which it was dubbed the “River of Grass,” is a horizon-wide expanse of sawgrass prairie punctuated by hundreds of scattered “islands.” This, the largest continuous stand of sawgrass prairie in North America, characterizes the landscape over much of the interior of the wilderness. Within this area, the vegetation of the deeper ponds and drainage-courses includes a profusion of aquatic plants surrounded by a dense growth of willows and pond-apple trees. The small “islands” exhibit dense, low, tangled forest groves composed of the relatively few tree species that are adapted to low, swampy sites overlying deep deposits of peat. In contrast, hardwood hammocks contain a greater variety of trees that form a dense, subtropical “jungle” of tall trees and a profusion of ferns, vines, epiphytic orchids, and bromeliads. More than 750 native plant species have been found within the wilderness area, including an astonishing 39 orchid and 120 tree species. Fifty-nine of the plant species within the wilderness are considered to be critically imperiled in South Florida.



The sawgrass prairie dominates the landscape, but it encompasses only one of the many diverse ecosystems within this wilderness. Centrally located within the wilderness is a relatively small and increasingly rare ecosystem composed of pine vegetation. This area, known as Long Pine Key, preserves the chief surviving example in southern Florida of pine rockland and its slash-pine vegetation type. Most other examples outside of the wilderness have been destroyed and replaced as a result of human dominance over the landscape. The importance of fire in the preservation of this vegetation type is critical.

Along the western and southern fringes of the South Florida coastline, where the fresh water becomes brackish, is the largest mangrove ecosystem in the Western Hemisphere. The coastline is cut by islands and estuaries where, in the words of President Truman, “deep rivers, giant groves of colorful mangrove trees, prairie marshes and innumerable lakes and streams” can be found. This area supports a variety of fish and wildlife, including the endangered small tooth sawfish, which is totally dependent on the aquatic medium of these fresh to brackish waters.

To the west, beyond the mangroves are the open waters of the Gulf of Mexico. To the south is the broad expanse of Florida Bay, with its numerous and scattered keys, extensive seagrass meadows, mud banks, and basins. The bay is a shallow depression from less than one to no more than 10 feet in depth. Given the shallow waters and the profusion of motorboat use above the submerged marine land wilderness, seagrass scarring from vessel groundings is a persistent threat to this resource. Although not included in the wilderness designation, the water column, in combination with the submerged vegetation in this warm, favorable environment, produces food for a large and diverse population of fish and birds. The shallow grass-and-mud banks are submerged at high tide to a depth of about 2 feet; however, during low tide, some are partially exposed, providing a primary feeding ground for certain wading birds, as well as pelicans, eagles, and ospreys. The keys of Florida Bay are low islands, usually ringed with mangrove trees and supporting a variety of tropical hardwoods, shrubs, and grasses within their interior. Many species of birds utilize the various keys for roosting and nesting.

Though unique and diverse, the Marjory Stoneman Douglas Wilderness faces a number of threats, both internal and external, that diminish the natural quality of wilderness character. The composition of natural communities within the wilderness is threatened by a long-term disruption of the natural fire regime, as well as an abundant variety of nonnative plants and animals. The continued presence of such invasive species as the Burmese python and melaleuca (Australian paperbark tree) severely alters the structure and function of the ecosystem. Major changes to the hydrologic regime of the park, beginning more than 100 years ago, are the result of the construction of a vast and effective system of canals, levees, weirs, and pumps located outside park boundaries. This water management system provides flood protection and water supply to the agricultural and urban areas of South Florida; however, disruption of the quality, quantity, timing, and duration of water within the wilderness has had dramatic and lasting effects on the landscape’s form, function, and species composition, on both small and large scales. Some of these changes have resulted in the risk of losing valuable species such as the Cape Sable seaside sparrow. Vegetation loss has occurred in Florida Bay and other shallow-water backcountry areas, where many motorboat grounding and propeller-scarring incidents occur annually and increased salinity from diminished freshwater flows has damaged seagrass beds in submerged marine land wilderness. In the coming decades, the large-scale threats imposed by climate change and sea-level rise also have the potential to reshape the wilderness as we know it.

The importance of this environment cannot be denied, but it is extremely dynamic by nature and not intended to be frozen as a static landscape. However, this dynamism, including the striking contrasts of land and sea, fresh water and salt water, excess rainfall and drought, fire and the absence of fire, stormy weather and calm weather, has created an environment both fascinating and beautiful.

Undeveloped

Definition: Wilderness retains its primeval character and influence, and is essentially without permanent improvements or modern human occupation.

As the largest designated wilderness area east of the Rocky Mountains, the Marjory Stoneman Douglas Wilderness has the appearance and feel of an undeveloped wilderness landscape, a place “where man himself is a visitor who does not remain.” Sweeping views across the Everglades are mostly unobstructed by human development and allow spectacular sights of the region’s unique flora and fauna. The southern part of the park is dotted with remote keys, few of which have experienced modern development. The interior reaches of the wilderness are mostly inaccessible, deterring the desire and feasibility of any form of modern improvement.

When compared to adjacent lands to the east, there is a stark contrast between the wilderness boundary and the sprawling urbanization and development that saturates the area. This contrast makes the undeveloped landscape that much more apparent to the casual observer. Historic development within the modern wilderness boundary was largely prevented by the vast shallow waters and extreme weather characteristic of the region. However, some pre-designation developmental traces do exist, including hunting camps within the East Everglades Addition, areas of past agricultural activity, and canals constructed in the early 20th century. The canals, particularly those on Cape Sable, pose difficult management issues with regard to preserving wilderness character and have resulted in the construction of artificial plugs designed to assist in the preservation of the natural quality.



For the most part, agency-authorized development within the wilderness takes one of two forms—installations and mechanical transport. The use of these measures, although generally prohibited by section 4c of the Wilderness Act, is largely owing to a paradox inherent in the preservation of wilderness character. Installations that support scientific inquiry or park communication degrade the undeveloped quality of wilderness but also provide information essential for protecting and enhancing the natural quality. The data gained from many scientific installations are often the best available indicator of the condition of the natural quality. This is particularly true of data collected in connection with ongoing environmental restoration efforts in South Florida. Data collected for this purpose are crucial for park management when negotiating with stakeholders at the landscape level, many of whom have priorities that differ from the park's goal of enhancing the natural quality. Furthermore, due to the expansive nature of the wilderness, combined with its extreme environmental conditions, much of the wilderness is inaccessible by traditional means within the requisite constraints of most data collection efforts. As a result, the large scale use and landing of helicopters within the wilderness is permitted. Airboats are extensively used primarily along existing trails, but off-trail use is permitted in some circumstances and leads to the creation and perpetuation of features that could be considered equivalent to temporary roads. Other forms of temporary roads can be found in the Long Pine Key area where fire breaks form a network of paths throughout the area.

Limited infrastructure can also be found within the marine environs of the wilderness. Through the special designation of submerged marine wilderness, Congress authorized the continued use of motorboats within the waters that overlie these lands. Natural and dredged channels and various aids to navigation facilitate safe boating operations and resource protection of shallow-water flats within these areas and reduce the occurrence and spread of resource damage from grounding impacts in Florida Bay, Ten Thousand Islands, and mangrove backcountry areas inland from the Gulf of Mexico. Similarly, hiking and canoe trails in other parts of the wilderness are periodically cleared and utilize small markers to accomplish similar goals.

On balance, the individual installations within this wilderness are generally small and mostly unnoticeable. Although helicopter use often pervades the wilderness, its effects are typically isolated and short-lived. As long as restoration efforts are ongoing in South Florida, impacts on the undeveloped quality can be expected. These impacts are generally acceptable in the short term so long as managers strive to minimize the threat imposed by cumulative impacts.

Solitude Or Primitive And Unconfined Recreation

Definition: Wilderness provides outstanding opportunities for solitude or a primitive and unconfined type of recreation. This quality is primarily about the opportunity for people to experience wilderness, and is influenced by settings that affect these opportunities.

The ecological diversity of the Marjory Stoneman Douglas Wilderness provides an equally diverse array of recreational opportunities. Visitors to this wilderness can experience solitude, a deep connection with nature, discovery, revitalization, freedom from the pressures of society, and personal challenge and self-reliance. When delivering the invocation at the dedication ceremony for the park, Deaconess Harriett Beadell referred to this area as “a haven not only for the wildlife, but where [visitors] may find the beauties and peace of nature—where they may go apart from the hurry and anxieties of this life.” More than one million visitors visit Everglades National Park annually, but the vast majority never leaves the few access roads or developed trails within the park to enter the wilderness.

Located adjacent to the sprawling Miami metropolis and within two hours of many other municipalities, this wilderness is widely accessible, and experiences can vary as much as the visitors themselves. It is a particularly challenging environment for self-reliant recreation, and it provides a unique blend of risks and hazards that contribute to the wilderness experience. Hiking and “slogging” opportunities are boundless. Visitors can depart the road constrained only by the challenges of the wilderness environment itself, including jagged pinnacle rock, deep peat, dense vegetation, and perilous wildlife, all while being surrounded by and immersed in water. Likewise, there are almost endless opportunities for unconfined paddling. Marked canoe trails exist, but visitors are not restricted to their confines and may explore at their leisure. Paddling coastal areas among the mangroves can provide some of the richest experiences in this wilderness.

Although paddlers may choose to spend the night in their watercraft, primitive camping is generally limited to designated backcountry campsites in order to preserve the natural quality. Use of these sites requires a backcountry camping permit in order to resolve capacity issues. Primitive campsites include beach and other ground sites, but the most numerous sites come in the form of “chickees”—elevated camping platforms strategically placed throughout the submerged marine wilderness areas. Chickees constitute visitor use facilities in wilderness, but their use is justified by two considerations. First, this watery wilderness is expansive, and fully accessing it by primitive forms of transportation would not be possible without high and dry waypoints at which to stop for the night. Second, much of the coastline is dominated by mangroves. These areas are not suitable for ground camping and clearing them for that purpose would significantly impact both the natural and untrammelled qualities.

Backcountry camping provides opportunities to experience a side of the wilderness that cannot be encountered during daylight hours. In contrast to urbanized areas in which many visitors reside, the wilderness provides relatively clear viewing of the night sky with little haze and light pollution that plagues many cities. For those who rarely depart metropolitan confines, the enormity and stark contrast of the night sky can be striking. Furthermore, the nighttime soundscape provides an eclectic array of chirps, croaks, grunts, and bellows that can be both fascinating and eerie in the absence of light. With morning comes the sunrise and the dance of color low across the vast horizon, rejuvenating the day as well as any who observe it. These settings provide an opportunity for self-reflection and can lead to revelations regarding significance and self-worth.

Visitors will find ample opportunities to experience solitude when recreating in this wilderness. If they so wish, they can lose themselves in the vastness, avoiding contact with others for days at a time. Here visitors have the opportunity to commune with nature on a fundamental level unlike anywhere else. Whether secluded in a hardwood hammock as a flock of wading birds flies low overhead, every beat of their wings heard on the wind, or drifting along surrounded by a tangle of mangrove trees consumed by the tranquil sounds of nature, this wilderness provides settings that allow the burdens of everyday life to fade away. Visitors can return home with a refreshed spirit and a greater appreciation of the majesty and beauty of this wilderness.

Even so, visitors will almost certainly encounter some actions and practices that diminish this quality. Reminders of modern civilization (e.g., installations, structures, motorized equipment) affect the setting visitors associate with the wilderness, regardless of the utility these tools have for preserving other elements of wilderness character. The visual and auditory presence of motorboats, although allowed above the submerged marine land wilderness, influences the wilderness setting, as do routine aircraft overflights and specialized helicopter operations, which are typically authorized for research and monitoring. Airboat use for research, monitoring, law enforcement, and recreation (the latter limited to parts of the East Everglades Addition) also impacts opportunities for solitude. The impacts of these motorized activities can be difficult to ignore. Likewise, “chickees” affect both the natural setting and recreational experience, despite having become part of the Everglades culture and an expected part of the visitor experience. The very duality of this quality (i.e., solitude and primitive/unconfined recreation) can often be at odds. Backcountry permitting and designated campsites impose a confinement on recreation but help facilitate opportunities for solitude. Appropriate management of this quality, as with the other qualities, requires a delicate balance of action and restraint.

Other Features Of Value

Definition: This quality covers those values and features that are not fully covered in the other four qualities, including ecological, geological, scientific, educational, scenic, or historical value. This feature is unique to an individual wilderness based on the features that are inside that wilderness.

American Indians have interacted with and shaped this landscape for more than 5,000 years. The earliest known human occupation within this area took place on interior tree islands and hardwood hammocks. In the Ten Thousand Islands region, humans constructed many of today's land-based islands from shell debris, primarily oyster shells. Over time, the accumulation of debris (shell and soil middens) and the intentional construction of raised platforms, ridges, high mounds, crescents, canals, and inundated courtyards have significantly altered the topography of these locations. These human-constructed landscape elements support numerous plant and animal habitats that would not exist in their current numbers and locations without the agency of American Indians.

The Mud Lake Canal on Cape Sable is an aboriginal canal that may have been constructed as early as 1,250 years ago by ancestors of the Tequesta people and is associated with the Bear Lake Mound district. The canal extends about four miles, linking Bear Lake and the waters of Whitewater Bay with Florida Bay. The prehistoric canal likely provided safer navigation passage, easy access to aquatic resources, and a route to facilitate exchange and tribute among groups. The canal was designated a national historic landmark in 2006, exhibiting exceptional national significance as the best-preserved example of a rare prehistoric engineering feature.

More recently, human interaction with the wilderness includes exploration and recreation, subsistence activities, resource extraction, agricultural undertakings, homesteading, engineered canals, military excursions (with associated development of camps and forts), large-scale hydrological modifications, and ecological restoration. It is noteworthy that the remains of the thousands of people who lived and died in the wilderness are still present in burial mounds, cemeteries, and burial grounds. Human presence on this landscape is integral to fully understanding and defining this wilderness.



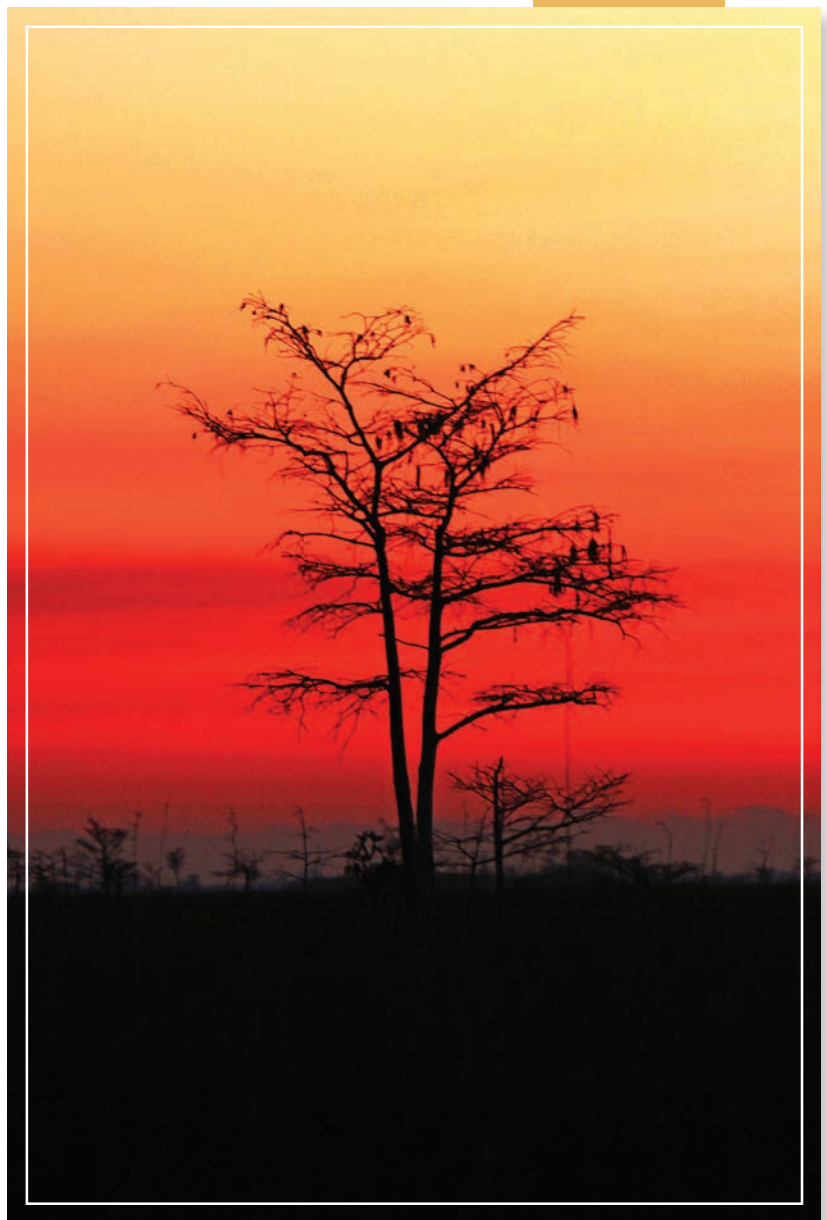
Until establishment of Everglades National Park in 1947, American Indians who identify today with the Miccosukee Tribe of Indians of Florida, Seminole Tribe of Florida, Council of the Original Miccosukee Simanolee Nation Aboriginal Peoples, and Independents were living in camps and practicing traditional activities. After establishment of the park, there was a decline in the American Indian presence, but traditional activities continue today. These traditions include arts, crafts, social institutions, hunting, fishing, gathering plants, practicing religious ceremonies, and burying their dead in the wilderness. The land and resources comprising the wilderness are linked to their cultural practices and beliefs. For American Indians the landscape holds deeply embedded heritage values important in maintaining and continuing their cultural identity.

Based on documented activities within the wilderness, historical archeological resources include fishing and hunting camps, fish processing facilities and ice plants, tannic acid plants, charcoal production sites, road construction camps, military outposts, sugar cane mill sites, farmsteads, private recreational development, homesteads, ecological restoration, and oil exploration sites. Archeological features associated with historic sites include the remnants of houses, outbuildings, cisterns, and gardens. Associated artifacts commonly include ceramic and glass fragments, metal hardware, tools, and personal items. The location, integrity, and cultural significance of most of these historic archeological resources are currently unknown.

In the early 1900s, canals were constructed as part of the draining of the landscape for agricultural purposes and permanent settlement of the area. These canals were plugged in the 1950s and 1960s as part of the ecological restoration of the wilderness environment.

In East Everglades, several hunting camps (including bunkhouses, sheds, outhouses, and other features) are present on interior tree islands and hardwood hammocks. One of particular note is Duck Camp, constructed around 1950, which was formerly used by the Miami Rod and Gun Club.

Threats to other resources of value include weathering, vandalism, sea level rise, and park management actions, including those associated with Everglades restoration.



Appendix D: Past and Ongoing Park Planning and Data Collection Efforts

Planning Efforts	Year
Master Plan For Everglades National Park Mission 66 Edition Volume I. Master Plan Narrative.	1961
<i>Wilderness Study Everglades National Park, Florida. Draft.</i> Denver, CO. Restricted Access	1972
<i>Wilderness Recommendation: Everglades National Park.</i> Homestead, FL. Restricted Access	1974
<i>Department of the Interior Final Environmental Statement: Proposed Wilderness Recommendation - Everglades National Park, Florida.</i> Denver, CO.	1978
<i>Final Environmental Statement Master Plan: Everglades National Park, Florida.</i> Denver, CO.	1979
<i>Backcountry Management Plan Everglades National Park.</i> Homestead, FL. Restricted Access	1981
<i>Everglades National Park Statement for Management (revised).</i> Homestead, FL. Restricted Access	1982
<i>Land Protection Plan Everglades National Park.</i> Homestead, FL.	1985
<i>Annual Statement for Interpretation Everglades National Park, FY 1986.</i> Homestead, FL.	1986
<i>Statement for Management Everglades National Park - Revised Draft.</i> Homestead, FL. Restricted Access	1986
<i>Land Protection Plan. Everglades National Park, Update.</i> Homestead, FL.	1990
<i>Land Protection Plan: East Everglades Addition, Everglades National Park.</i> Homestead, FL.	1991
<i>Statement for Management - Everglades National Park, Revised.</i> Homestead, FL. Restricted Access	1991
<i>Fire Management Plan and Environmental Assessment, Everglades National Park.</i> Atlanta, GA.	1991
<i>Statement for Interpretation: Everglades National Park.</i> Homestead, FL.	1995
<i>A Comprehensive Plan for the Restoration of the Everglades.</i> Homestead, FL.	1996
<i>Everglades National Park Strategic Plan 2001-2005.</i> Homestead, FL. Restricted Access	2001
<i>Environmental Assessment: Flamingo Potable Water System Improvement Project, Everglades National Park.</i> Homestead, FL.	2002
<i>Environmental Assessment Flamingo Wastewater System Improvements, Everglades National Park.</i> Homestead, FL. Restricted Access	2003
<i>Environmental Assessment Pine Island Wastewater System Improvements Everglades National Park.</i> Homestead, FL.	2003
<i>Wesley, J., and S. Pawlowski. Everglades National Park - Archives Survey and Records Management Report.</i> Denver, CO. Restricted Access	2005
<i>The Road Inventory of Everglades National Park EVER - 5280.</i> Sterling, VA.	2005

Planning Efforts	Year
<i>Climate Friendly Parks Everglades National Park Action Plan.</i> Homestead, FL.	2005
<i>Jordan, T., M. Madden, and L. Manglass. Airboat/ORV Trail Inventory for the East Everglades Addition Lands.</i> Athens, GA.	2006
<i>Pilot Spreader Swale Project: Environmental Assessment.</i> Homestead, FL.	2008
<i>Cape Sable Canals Dam Restoration Project Environmental Assessment/ Assessment of Effect.</i>	2009
<i>Flamingo Master Plan and Design Program.</i> Homestead, FL. Restricted Access	2010
<i>The Road Inventory of Everglades National Park EVER - 5280, Cycle 4.</i> Sterling, VA.	2010
<i>Everglades National Park Tamiami Trail Modifications: Next Steps. Final Environmental Impact Statement.</i> Homestead, FL.	2010
<i>Florida Bay, Everglades National Park: Draft Seagrass Habitat Restoration Management Plan.</i> Miami, FL.	2013
<i>Everglades National Park EVER Cycle 5 Report.</i> Sterling, VA.	2014
<i>Everglades National Park Environmental Assessment - Fire Management Plan.</i> Homestead, FL.	2014
<i>Everglades National Park: Final General Management Plan/ East Everglades Wilderness Study / Environmental Impact Statement.</i> Homestead, FL.	2015
<i>Everglades National Park Fire Management Plan.</i> Homestead, FL.	2015
<i>Acquisition of Florida Power & Light Company Land in the East Everglades Expansion Area. Final Environmental Impact Statement.</i> Homestead, FL.	2015
<i>Compendium of Designations, Closures, Requests, Requirements and Other Restrictions imposed under the discretionary authority of the Superintendent.</i> Content downloaded from park website.	2016



Select Data Collection Efforts	Year
Cultural Resources	
Paige, J.C. <i>Historic Resource Study for Everglades National Park</i> . Homestead, FL.	1986
<i>National Register of Historic Places (Continuation Sheet) - Nike Missile Site HM-69</i> . Washington, D.C.	2004
<i>National Historic Landmark Nomination: Mud Lake Canal/Bear Lake Canal/Bear Lake Archeological District</i> . Tallahassee, FL.	2005
Smith, G.C., Ph.D., RPA. <i>Phase I Archaeological Survey for a 6-Mile Florida Power & Light Corridor, Everglades National Park</i> . St. Augustine, FL. Archeology Access	2009
<i>National Park Service Cultural Landscapes Inventory: HM-69 Nike Missile Site Landscape, Everglades National Park</i> . Washington, D.C.	2011
<i>Flamingo Mission 66 Developed Area, Everglades National Park, Florida: Historic Structures Report</i> . Homestead, FL. Restricted Access	2011
<i>Everglades National Park List of Classified Structures</i> . Content downloaded from InsideNPS.	2016
Natural Resources	
Roelke, M.E., Schultz, D.P., Facemire, C.F., Sundlof, S.F., Royals, H.E. <i>Mercury Contamination in Florida Panthers</i> . Report of the Florida Panther Technical Subcommittee to the Florida Panther Interagency Committee.	1991
Sundlof, S.F., Spalding, M.G., Wentworth, J.D., Steible, C.K. <i>Mercury in livers of wading Birds (Ciconiiformes) in Southern Florida</i> . Archives of Environmental Contamination and Toxicology 27 (3): 299–305.	1994
Jackson, L.J., et al. <i>Biogeochemical Study of the Pinelands in Everglades National Park, Florida</i> . Denver, CO.	1995
<i>Baseline Water Quality Data Inventory and Analysis, Everglades National Park Volumes I through III</i> . Ft. Collins, CO. Restricted Access	1996
Rumbold, D.G., Fink, L.E., Laine, K.A., Niemczyk, S L., Chandrasekhar, T., Wankel, S.D., Kendall, C. <i>Levels of mercury in alligators (Alligator mississippiensis) collected along a transect through the Florida Everglades</i> . Science of the Total Environment 297 (1–3): 239–252.	2002
Kohut R.J. 2004. <i>Ozone Risk Assessment for South Florida/Caribbean Network</i> . National Park Service. Fort Collins, Colorado.	2004
Miller, R.L., et al. <i>Water Quality in Big Cypress National Preserve and Everglades National Park - Trends and Spatial Characteristics of Selected Constituents</i> . St. Petersburg, FL.	2004
Slater, G.L. <i>Avian Restoration in Everglades National Park: An Evaluation of the Brown-Headed Nuthatch and Eastern Bluebird Reintroduction Program During the 2-year Post-translocation Period (2002-2003)</i> . Mount Vernon, WA.	2004
Rumbold, D.G. <i>A probabilistic risk assessment of the effects of methylmercury on great egrets and bald eagles foraging at a constructed wetland in South Florida relative to the Everglades</i> . Human and Ecological Risk Assessment 11 (2): 365–388.	2005
Ugarte, C.A., Rice, K.G., Donnelly, M.A. <i>Variation of total mercury concentrations in pig frogs (Rana grylio) across the Florida Everglades, USA</i> . Science of the Total Environment 345 (1–3): 51–59.	2005

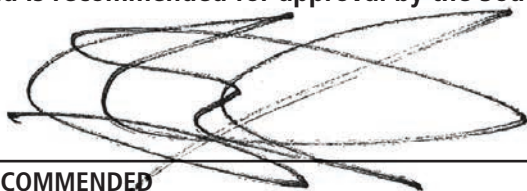
Select Data Collection Efforts	Year
Natural Resources (continued)	
Thornberry-Ehrlich, T. <i>Everglades National Park Geologic Resource Evaluation Report. Natural Resource Report NPS/NRPC/GRD/NRR—2008/047</i> . National Park Service, Denver, Colorado.	2008
National Park Service, Geologic Resources Division. <i>Digital Geologic Map of Everglades National Park and vicinity, Florida (NPS, GRD, GRE, EVER)</i> . NPS Geologic Resources Inventory Program. Lakewood, CO.	2008
National Park Service. <i>Patterns of Propeller Scarring of Seagrass in Florida Bay: Associations with Physical and Visitor Use Factors and Implications for Natural Resource Management</i> . Homestead, FL.	2008
National Park Service. <i>Everglades and Dry Tortugas National Parks: Acoustical Monitoring Snapshot</i> . Ft. Collins, CO.	2008
National Park Service. <i>Everglades National Park Geologic Resource Evaluation Report</i> . Denver, CO. Restricted Access	2008
Gann, G.D., et al. <i>Rare Plant Monitoring and Restoration on Long Pine Key, Everglades National Park</i> . Miami, FL.	2009
National Park Service. <i>Everglades National Park Acoustical Monitoring Snapshot, Winter 2009</i> . Ft. Collins, CO.	2009
Krabbenhoft, D.P. <i>Mercury bioaccumulation in Everglades pythons</i> . Poster, Greater Everglades Ecosystem Restoration Conference: July 12–16, 2010. Naples, FL.	2010
Toscano, M.A., J.P. Kenworthy, and V.L. Santucci. <i>Paleontological Resource Inventory and Monitoring—South Florida / Caribbean Network</i> . Natural Resource Technical Report NPS/NRPC/NRTR—2010/335. National Park Service, Fort Collins, Colorado.	2010
Leong, K.M. <i>Everglades National Park Mosquito Risk Assessment Pilot: Results of Focus Groups and Interviews</i> . Ft. Collins, CO.	2010
Sullivan, T.J., G.T. McPherson, T.C. McDonnell, S.D. Mackey, D. Moore. <i>Evaluation of the Sensitivity of Inventory and Monitoring National Parks to Nutrient Enrichment Effects from Atmospheric Nitrogen Deposition: South Florida/ Caribbean Network (SFCN)</i> . Natural Resource Report NPS/NRPC/ARD/NRR—2011/332. National Park Service, Denver, Colorado.	2011
Sullivan, T.J., McDonnell, T.C., McPherson, G.T., Mackey, S.D., Moore, D. <i>Evaluation of the Sensitivity of Inventory and Monitoring National Parks to Acidification Effects from Atmospheric Sulfur and Nitrogen Deposition: South Florida/Caribbean Network (SFCN)</i> . Natural Resource Report NPS/NRPC/ARD/NRR—2011/377. National Park Service, Denver, Colorado.	2011
Pomacea Project, Inc. <i>Literature Review of Florida Apple Snails and Snail Kites, and Recommendations for their Adaptive Management</i> . Pensacola, FL.	2013
Shamblin, R.B., and K.R.T. Whelan. <i>SFCN Corridors of Invasiveness Data Summary Report - Everglades National Park, East Region, 2012</i> . Palmetto Bay, FL.	2013
<i>Climate Change Resource Brief: Recent Climate Change Exposure of Everglades National Park</i> . Ft. Collins, CO.	2014
Shamblin, R.B., K R.T. Whelan, and R.M. Vargas. <i>SFCN Corridors of Invasiveness Data Summary Report - Everglades National Park, West Region, 2014</i> . Palmetto Bay, FL.	2014

Select Data Collection Efforts	Year
Natural Resources (continued)	
U.S. Geological Survey. <i>Predicted Surface Water Methylmercury Concentrations in National Park Service Inventory and Monitoring Program Parks</i> . U.S. Geological Survey. Wisconsin Water Science Center, Middleton, WI. Accessed March 26, 2015.	2015
National Park Service. <i>Park Visitation and Climate Change Park-Specific Brief. Everglades National Park: How Might Future Warming Alter Visitation?</i> Ft. Collins, CO.	2015
Howington, T.M. <i>Biodiversity of Birds in Everglades National Park: An Updated Species List with Habitat Associations</i> . Homestead, FL.	2015
Howington, T M. <i>Biodiversity of Fish in Everglades National Park: An Updated Species List with Habitat Associations</i> . Homestead, FL.	2015
Howington, T.M. <i>Biodiversity of Mammals in Everglades National Park: An Updated Species List with Habitat Associations</i> . Homestead, FL.	2015
Howington, T M. <i>Biodiversity of Reptiles and Amphibians in Everglades National Park: An updated species list with habitat associations</i> . Homestead, FL.	2015
National Park Service. <i>A Natural Resource Condition Assessment for Everglades National Parks</i> . Natural Resource Report NPS/EVER/NRR—2015/XXX. National Park Service, Fort Collins, Colorado.	2015
National Park Service. <i>Everglades National Park (EVER) Species Full List with Details</i> . Content downloaded from InsideNPS.	2016
National Park Service. <i>Everglades Vegetation Map</i> .	In progress
National Park Service, Air Resources Division. <i>Air Quality Conditions & Trends by NPS Units: For Everglades NP</i> . National Park Service. Denver, CO.	Ongoing
NPSpecies, <i>Ozone Sensitive Species in Everglades National Park (EVER)</i> . IRMA Portal version. National Park Service.	Ongoing
Visitor Use	
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Southeast Region Foundation Document Recommendation Everglades National Park

September 2017

This Foundation Document has been prepared as a collaborative effort between park and regional staff and is recommended for approval by the Southeast Regional Director.



RECOMMENDED

Pedro M. Ramos, Superintendent, Everglades National Park

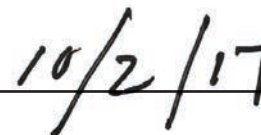


Date



APPROVED

Stan Austin, Regional Director, Southeast Region



Date



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 historic 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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