

Chapter 1

Purpose of and Need For Action



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EVERGLADES NATIONAL PARK
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FLAMINGO COMMERCIAL SERVICES PLAN/ENVIRONMENTAL ASSESSMENT



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PURPOSE OF AND NEED FOR ACTION

INTRODUCTION

The largest developed area within Everglades National Park (hereafter “the park”) is the Flamingo area, located at the southernmost mainland point of the park, at the end of a 38-mile paved road that extends southwest from the main visitor center near Homestead, Florida (see Figure 1-1 – South Florida Location Map and Figure 1-2 – Flamingo Area Location Map). In 2005, the Flamingo area sustained heavy infrastructural damage as a result of two consecutive hurricanes. These storms caused overwhelming impacts to already aged facilities, and many of the visitor uses and services in Flamingo had to be shut down or reduced. The Flamingo Lodge, cottages, restaurant, gift shop, and cafe were closed due to the damage caused by strong winds and six to eight foot storm surges from Hurricanes Katrina and Wilma. Historically, Flamingo was the only area providing overnight accommodations, beyond tent and recreational vehicle (RV) camping, to park visitors.

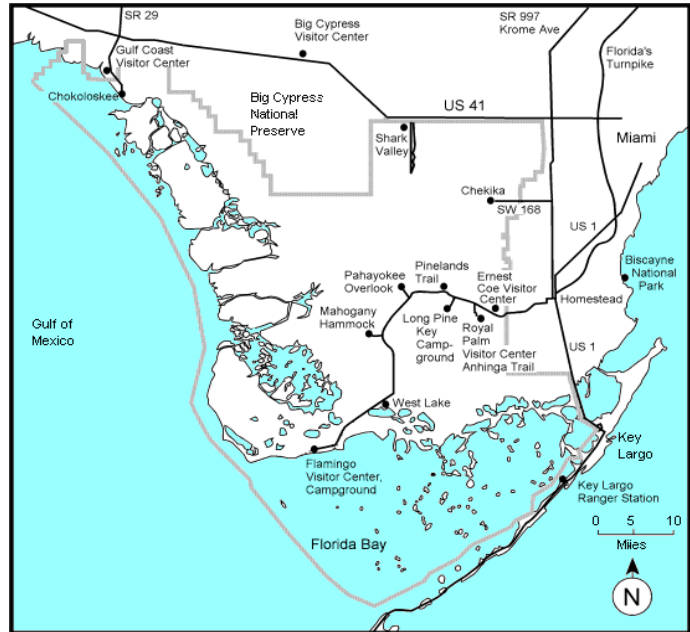


Figure 1-1 – South Florida Project Location Map
Image provided by Everglades National Park

Due to the loss of available services and accommodations at Flamingo, the National Park Service (NPS) was asked by the public to expedite the process for determining the site’s future. As a result, the park embarked on a planning process in October 2006, through the development of a Commercial Services Plan and Environmental Assessment (CSP/EA), to identify options and make decisions about Flamingo.

The CSP will determine necessary and appropriate commercial services for the Flamingo area in accordance with all applicable laws and policies, while providing a viable long-term business opportunity for the concessioner(s) ultimately selected to operate the facilities. The selected alternative (or Final Commercial Services Plan), will consider the public comment received on this draft CSP/EA and will be incorporated into the General Management Plan (GMP), which is currently in the planning process and scheduled for completion in 2009. Implementation of the CSP will begin as funding becomes available.

The conditions at Flamingo present a unique opportunity to rethink and perhaps redesign how Flamingo functions as a gateway to Florida Bay and the Wilderness Waterway. The plan will integrate principles of sustainability in site and facility design and energy conservation; identify ways to minimize impacts to natural and cultural resources; and seek to have Flamingo function in a more efficient and pedestrian-friendly way.

This EA analyzes the impacts that would result from implementation of three alternatives: two alternatives that would rebuild/redevelop the Flamingo area in different ways, and the no action alternative that represents the current management condition. The project area includes the immediate Flamingo area and those areas from which commercial services originate and areas accessed by visitors



Figure 1-2 – Flamingo Area Location Map
 Image provided by Everglades National Park

from the Flamingo area (e.g., Florida Bay, Whitewater Bay, Cape Sable, and nearby canoe and walking trails). See “Study Area and Scope of the Analysis” section in this chapter for more detail. The majority of construction activities would occur within the original development footprint with the exception of two in-water chickees proposed for construction in Florida Bay.

This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and implementing regulations, 40 CFR 1500-1508, and NPS Director’s Order 12 and Handbook, *Conservation Planning, Environmental Impact Analysis, and Decision-making* (NPS 2001a). Compliance with Section 106 of the National Historic Preservation Act of 1966 is occurring separately of the NEPA process.

PURPOSE OF AND NEED FOR ACTION

PURPOSE OF THE PLAN

“Purpose” is an overarching statement of what the plan must do to be considered a success. The purpose of this project is to develop a plan for necessary and appropriate commercial visitor services in the Flamingo area.

NEED FOR ACTION

“Need for Action” describes why action is required. It summarizes the most important points of the planning issues, and provides the reasons the plan is needed at this time. A commercial services plan is needed to:

- Address strong public sentiment to reestablish visitor use, including overnight lodging, in the Flamingo area that was lost as a result of the substantial damage caused during the 2005 hurricane season.

- Provide necessary and appropriate commercial visitor services at Flamingo for visitors to better experience the park.
- Determine which commercial visitor services being considered at Flamingo are financially feasible.

OBJECTIVES IN TAKING ACTION

Objectives are “what must be achieved to a large degree for the action to be considered a success” (*Director’s Order 12*). All alternatives selected for detailed analysis must meet project objectives to a large degree, and resolve the purpose and need for action. Objectives must be grounded in the park’s enabling legislation, purpose, significance, and mission goals and be compatible with direction and guidance provided by the park’s general management plan, strategic plan, and/or other management guidance. The following are the objectives related to the development of a commercial services plan for the Flamingo area. The objectives are grouped by subject and are based on the needs previously presented.

PLANNING GUIDANCE OBJECTIVES

- Ensure that any future commercial services facilities at Flamingo give strong consideration to the unique location and environmental conditions that affect development. This includes emphasis on NPS policies regarding sustainable design principles, “green” environmental practices, and safety and accessibility requirements, building code requirements for high-hazard flood zones, consideration of climate change in this vulnerable area of South Florida, and recognition of intense seasonal weather conditions.
- Provide concessioner(s) with a reasonable opportunity to earn a profit at Flamingo.
- Work with a broad range of stakeholders in order to increase the likelihood of successfully implementing the Flamingo CSP.

VISITOR USE AND EXPERIENCE OBJECTIVES

- Allow for a wide range of appropriate visitor uses that may restore and expand the types of services, visitor capacity, and/or season of services available to the public in the Flamingo area.
- Ensure that the Flamingo CSP identifies the types and levels of visitor activities and services, consistent with protecting park resources and providing quality visitor experiences that are consistent with the purposes for which the park was established.
- Enhance visitor understanding, enjoyment, and appreciation of park resources through commercial services provided at the Flamingo area.

PARK RESOURCES OBJECTIVES

- Develop a CSP for Flamingo that minimizes impacts to the natural and cultural resources of the park.

PARK OPERATIONS OBJECTIVES

- Develop a CSP for Flamingo that maximizes operational efficiencies for both the NPS and the concessioner(s).

PURPOSE AND SIGNIFICANCE OF EVERGLADES NATIONAL PARK

ENABLING LEGISLATION

Authorized as a unit of the NPS on May 30, 1934, the park is one of 391 units of the National Park System administered by the NPS. Congress authorized the establishment of Everglades National Park to be "...wilderness where no development...or plan for the entertainment of visitors shall be undertaken which will interfere with the preservation of the unique flora and fauna of the essential primitive natural conditions now prevailing in the area." Dubbed by opponents as the "alligator and snake swamp bill," the legislation stalled during the Great Depression and World War II. Finally, on December 6, 1947, President Harry S. Truman dedicated Everglades National Park (American Park Network 2006).

PURPOSE AND SIGNIFICANCE

The following provides the purpose and significance for Everglades National Park, which must be taken into account in any park planning.

Purpose — Everglades National Park is a public park for the benefit of the people. It is set aside as a permanent wilderness preserving essential primitive conditions including the natural abundance, diversity, behavior, and ecological integrity of its flora and fauna.

Significance — Significance statements capture the essence of the park's importance to our country's natural and cultural heritage. Significance statements represent the park's distinctiveness and help to place the park within its regional, national, and international context.

Everglades National Park is nationally and internationally significant because:

- It is the only place in the United States designated a World Heritage site, an International Biosphere Reserve, and a Wetland of International Significance.
- It comprises the largest designated subtropical wilderness reserve on the North American continent (1,296,000 acres). The park contains vast subtropical upland and marine ecosystems, including freshwater marshes, tropical hardwood, rock pineland, extensive mangroves and seagrass ecosystems that support world-class fisheries.
- It serves as a sanctuary for the protection of more than 20 federal- and 70 state-listed rare, threatened and endangered species.
- It provides important foraging and breeding habitat for more than 400 species of birds (including homeland to world-renowned wading bird populations), and functions as a major corridor for migratory bird populations.
- It includes archeological and historical resources spanning about 5,000 years of human history. These range from prehistoric sites revealing a fishing-hunting-gathering adaptation to a tropical environment (unique within the continental United States), to surviving structures from a Nike missile installation constructed in the early 1960s as a part of South Florida's Cold War defenses.

- It preserves natural and cultural resources associated with the past and present homeland of Native Americans of Florida (including the Miccosukee Tribe of Indians of Florida, the Independent Traditional Seminole Nation of Florida, the Seminole Tribe of Florida, and the Seminole Nation of Oklahoma).

REGULATORY AND PLANNING BACKGROUND

EVERGLADES NATIONAL PARK PLANNING DOCUMENTS

The purpose, need, and objectives should be, to a large degree, consistent with park planning documents. These documents include the *2006 Superintendent's Compendium*, the *Strategic Plan*, the *Everglades Business Plan*, and the *General Management Plan*, currently being drafted.

Superintendent's Compendium. Under the provisions of 16 U.S.C., Section 3, Title 36, Code of Federal Regulations, Chapter 1, Parts 1-7, the compendium details designated closures, permit requirements, and other restrictions imposed under the discretionary authority of the superintendent. The general provisions of the compendium (NPS 2006a) allow for closures and public use limits. In terms of commercial use and services, the compendium includes provisions for commercial guide fishing, filming, and video. Provisions for the Flamingo area specifically include speed limit (roads and waterways) designations; fishing regulations; boating regulations, anchoring, mooring, and docking regulations; and camping regulations.

2000 Strategic Plan, Fiscal Years 2000 – 2005. Everglades National Park's mission is accomplished through pursuit of the following "in perpetuity" mission goals. Mission Goals are essentially visions of the future. They describe the desired future conditions that would best fulfill the park purpose. They are broad descriptions expressed in terms of resource condition and visitor experience (NPS 2001b) and would be applied to any alternatives development when considering a CSP at Flamingo. The Mission Goals applicable to a commercial services plan include (NPS 2001b):

Goal Category I: Preserve Everglades National Park Resources

Goal Ia0. Hydrological conditions within Everglades National Park and the South Florida ecosystem are characteristic of the natural ecosystem prior to Euro-American intervention, including water quality, quantity, distribution and timing.

Park Mission Goal Ia1. Everglades National Park is restored and protected in ways that allow natural processes, functions, cycles, and biota to be reestablished and maintained in perpetuity, and that allow archeological and historical resources to be appropriately preserved.

Goal Category II: Provide for the Public Use and Enjoyment and Visitor Experience of Everglades National Park

Park Mission Goal IIa. Visitors to Everglades National Park have the opportunity to experience the park's unique subtropical wilderness values.

Park Mission Goal IIb. The public understands and appreciates Everglades National Park and its role in the South Florida ecosystem and provides support in achieving the park's purpose.

Goal Category III- Strengthen and Preserve Natural and Cultural Resources and Enhance Recreational Opportunities Managed by Partners

Park Mission Goal IIIa. The Seminole and Miccosukee Tribes have the opportunity to exercise their existing tribal rights within Everglades National Park to the extent and in such a manner that they do not conflict with the park purpose.

Goal Category IV- Ensure Organizational Effectiveness

Park Mission Goal IVa. Everglades National Park has a diverse, motivated, and professional workforce allowing it to be a responsive, efficient, safe, and accountable organization.

General Management Plan. Everglades National Park is in the process of developing the Draft GMP/East Everglades Wilderness Study/Environmental Impact Statement (GMP/EIS)—a 20-year vision for the park’s resource protection and management. As part of the GMP process, information has been collected from the general public and interested parties regarding future management concerns. The park is currently analyzing public input received in the summer of 2007 on the preliminary management alternatives and revising the alternatives for the park’s marine areas. Issues to improve resource protection and visitor enjoyment such as: enhanced education (perhaps mandatory), improved navigational aids and enforcement within the park, alternative transportation options including a safe hiking/bicycling trail between the park entrance and Flamingo are some of the key elements being considered in the GMP that have a close relationship to future management of Flamingo.

The scope of the GMP was expanded in 2006 to include a Wilderness Study for the East Everglades Expansion Area lands. The expanded GMP process will fully consider all legislated uses and designations and will result in a viable management plan for the entire park, including the expansion area. Once the Flamingo CSP is completed, the selected alternative will be incorporated into each of the GMP alternatives and carried forward in the draft GMP/EIS.

Everglades National Park Business Plan. The purpose of the 2001 *Business Plan* is to increase the financial management capabilities within the park; therefore, the plan analyzes and presents the functional responsibilities, operational standards, financial picture, and funding needs of Everglades National Park. The plan identifies resource gaps and shortfalls and then calculates the cost of closing these gaps. Within the plan there are five functional areas, including resource protection and visitor experience and enjoyment. The plan contains historical trends and strategies for improvement. The Everglades National Park Business Plan will provide guidance in developing the Flamingo CSP. In 2006 and 2007 a follow up to the *Business Plan* examined additional opportunities for integrating new management efficiencies and improved business practices within Everglades National Park. One of the fundamental needs is to continue to build better relationships between the park and community interests. Developing the CSP/EA with broad public involvement supports that principle.

NPS ORGANIC ACT AND MANAGEMENT POLICIES

In the National Park Service *Organic Act of 1916* (Organic Act), Congress directed the U.S. Department of Interior and the NPS to manage units “to conserve the scenery and the natural and historic objects and wildlife therein and to provide for the enjoyment of the same in such a manner and by such a means as will leave them unimpaired for the enjoyment of future generations” (16 U.S.C. § 1). Congress reiterated this mandate in the Redwood National Park Act of 1978 by stating that NPS must conduct its actions in a manner that will ensure no “derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress” (16 U.S.C. § 1a-1).

Despite these mandates, the Organic Act and its amendments afford the NPS latitude when making resource decisions that balance visitor recreation and resource preservation. By these acts Congress

“empowered [the National Park Service] with the authority to determine what uses of park resources are proper and what proportion of the park’s resources are available for each use” (*Bicycle Trails Council of Marin v. Babbitt*, 82 F.3d 1445, 1453 [9th Cir. 1996]).

Yet courts consistently interpreted the Organic Act and its amendments to elevate resource conservation above visitor recreation. *Michigan United Conservation Clubs v. Lujan*, 949 F.2d 202, 206 (6th Cir. 1991) states, “Congress placed specific emphasis on conservation.” The court in *National Rifle Ass’n of America v. Potter*, says “in the Organic Act Congress speaks of but a single purpose, namely, conservation.” The NPS *Management Policies* also recognize that resource conservation takes precedence over visitor recreation. The policy dictates that “when there is a conflict between conserving resources and values and providing for enjoyment of them, conservation is to be predominant” (NPS *Management Policies* 2006, 1.4.3).

Because conservation remains predominant, the NPS seeks to avoid or to minimize adverse impacts on park resources and values. Yet the NPS has discretion to allow negative impacts when necessary (*Management Policies* 2006, sec. 1.4.3). While some actions and activities cause impacts, the National Park Service cannot allow an adverse impact that constitutes resource impairment (*Management Policies* 2006, sec. 1.4.3). The Organic Act prohibits actions that permanently impair park resources unless a law directly and specifically allows for the action (16 U.S.C. 1a-1). An action constitutes an impairment when its impacts “harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values” (*Management Policies* 2006, sec. 1.4.5). To determine impairment, the NPS must evaluate “the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts” (*Management Policies* 2006, sec. 1.4.5).

Because the purposes for establishing national park units vary based on their enabling legislation, natural resources, cultural resources, and missions, management activities appropriate for each unit and for areas in each unit vary as well. An action appropriate in one unit could impair resources in another unit. Thus, the environmental assessment will analyze the context, duration, and intensity of impacts related to the implementation of a CSP for the Flamingo area of Everglades National Park, as well as the potential for resource impairment, as required by *Director’s Order 12: Conservation Planning, Environmental Impact Analysis and Decision-making*.

As related to commercial service planning, the NPS *Management Policies* acknowledge appropriate uses of the parks need to be defined to ensure the enjoyment of the parks and the appreciation and inspiration derived from the resources (*Management Policies* 2006, sec. 1.5). An “appropriate use” is a use that is suitable, proper, or fitting for a particular park, or to a particular location within a park. Not all uses are appropriate or allowable in units of the national park system, and what is appropriate may vary from one park to another and from one location to another within a park (*Management Policies* 2006, sec. 1.5). NPS *Management Policies* 2006 address commercial visitor services in Chapter 10. Specifically, in Section 10.2.2 Commercial Visitor Services Planning it states:

Commercial visitor services planning will identify the appropriate role of commercial operators in helping parks to provide opportunities for visitor use and enjoyment. The planning will be integrated into other plans and planning processes and will comply with all Service policies regarding planning and environmental analysis. The number, location, and sizes of facilities and sites assigned through concession authorizations will be the minimum necessary for proper and satisfactory operation of the facilities.

A park commercial services strategy must be in place to ensure that concession facilities and services are necessary and appropriate, financially viable, and addressed in an approved management plan. Commercial services plans may be developed to further implement a park’s concessions. A decision to authorize or expand a park concession will consider the

effect on, or need for, additional infrastructure and management of operations and be based on a determination that the facility or service:

- is consistent with enabling legislation,
- is complementary to a park's mission and visitor service objectives,
- is necessary and appropriate for the public use and enjoyment of the park in which it is located,
- is not, and cannot be, provided outside park boundaries,
- incorporates sustainable principles and practices in planning, design, siting, construction, and maintenance,
- adopts appropriate energy and water conservation, source reduction, and environmental purchasing standards and goals, and
- will not cause unacceptable impacts.

Prior to initiating new services authorized under a concession contract, a market and financial viability study/analysis will be completed to ensure that the overall contract is feasible.

Director's Order #2: Park Planning (1998, sunset 2002). *Director's Order #2: Park Planning* directs park units to take a comprehensive approach to planning for how resources, visitors, and facilities will be managed to carry out the mission of the NPS and each individual park. As stated above, the NPS has a mandate in its Organic Act and other legislation to preserve resources unimpaired for the enjoyment of future generations. NPS park planning will help define what types of resource conditions, visitor uses, and management actions will best achieve that mandate. Section 3.1.2 directs the NPS to use planning to bring logic, analysis, public involvement, and accountability into the decision-making process. More specifically, Section 3.1.2 states:

- *Logic* - Park planning and decision making will be conducted as a continuous, dynamic process that extends from broad visions shared with the public to individual, annual work assignments and evaluations. Each park will be able to demonstrate to decision makers, staff, and the public how decisions relate to one another in terms of a logical rationale.
- *Public Involvement* - Public participation in planning and decision making will ensure that the National Park Service fully understands and considers the public's interest in the parks as part of their national heritage, cultural traditions, and community surroundings. To the maximum extent possible, the National Park Service will actively seek out and consult with existing and potential visitors, neighbors, people with traditional cultural ties to park lands, scientists and scholars, concessioners, cooperating associations, other partners, and government agencies. The Park Service will work cooperatively with others to improve the condition of parks, to expand public service, and to integrate parks into sustainable ecological, cultural, and socioeconomic systems.
- *Accountability* - Management teams will be held accountable for identifying and accomplishing long-term goals and annual goals as incremental steps toward fully carrying out the park mission. Such planning will be a critical and essential part of the National Park Service performance management system that is designed to improve the agency's performance and results.

Under Director's Order #2, park planning should be conducted by an interdisciplinary team, including park managers and technical experts, who will consult with other knowledgeable persons inside and outside the agency and with the general public. Decisions will be based on a scientific and scholarly understanding of the park ecosystems and cultural contexts (both internal and external to the park boundaries). The analysis of plan alternatives will meet the program standards for NPS implementation of NEPA and related legislation, including the National Historic Preservation Act (NHPA). Section 3.3.1.7. of general management planning guidance states that public involvement will be adequate to learn about the concerns, issues, expectations, and values of existing and potential visitors, park neighbors, people with traditional cultural ties to lands within the park, concessioners, cooperating associations, other partners, scientists and scholars, and other government agencies. Through public involvement, the NPS will share information about the planning process, issues, and proposed management actions; learn about the values placed by other people and groups on the same resources and visitor experiences; and build support among local publics, visitors, Congress, and others for implementing the plan.

Director's Order #6: Interpretation and Education (2005). This Director's Order supplements the NPS *Management Policies* with the operational policies and procedures necessary to maintain effective, high-quality interpretive and educational programs (as provided in Reference Manual #6). This order supports goal categories I and II of the NPS Strategic Plan, which calls for "Preserving Park Resources" and "Providing for the Public Enjoyment and Visitor Experience of Parks."

Director's Order #12: Conservation Planning, Environmental Impact Analysis and Decision Making. This Director's Order and the accompanying Handbook set forth the policy and procedures by which the NPS carries out its responsibilities under NEPA. NEPA and the NPS Organic Act are recognized as the two pieces of "landmark" environmental legislation passed by Congress. Director's Order #12 and the Handbook lay the groundwork for a necessary evolution in the way the National Park Service approaches environmental analysis, public involvement, and making resource-based decisions. They set forth the direction in using interdisciplinary teams, incorporating scientific and technical information, and establishing a solid administrative record for park actions.

Director's Order #17: National Park Service Tourism (1999). This Director's Order sets forth the operating premises and policies of the National Park Service related to promoting and supporting sustainable, responsible, informed, and managed visitor use through cooperation and coordination with the tourism industry. This order details the NPS dedication to its mission and outlines how this can be partially achieved through a National Tourism Policy that addresses the needs and concerns of the National Park Service, park visitors, park neighbors, and the tourism industry (i.e., businesses that stage, transport, house, feed, and otherwise provide services to our actual and potential visitors).

Director's Order #28: Cultural Resource Management (1998). This Director's Order sets forth the guidelines for management of cultural resources, including cultural landscapes, archeological resources, historic and prehistoric structures, museum objects, and ethnographic resources. This order calls for the NPS to protect and manage cultural resources in its custody through effective research, planning, and stewardship in accordance with the policies and principles contained in the NPS *Management Policies*.

Director's Order #42: Accessibility for Visitors with Disabilities in National Park Service Programs and Services (2000). Director's Order #42 outlines the goals and objectives of the National Park Service to ensure that all people, including those with disabilities, have the highest level of accessibility that is reasonable to NPS programs, facilities, and services in conformance with applicable regulations and standards. The procedures in this Director's Order provides detailed guidance that the NPS seek to provide the highest level of accessibility that is reasonable, and not simply provide the minimum level that is required by law. The Director's Order outlines five objectives for the National Park Service to:

1. Incorporate the long range goal of providing the highest level of accessibility that is reasonable for people of all abilities in all facilities, programs, and services, instead of providing "separate" or "special" programs.
2. Implement this goal within the daily operation of the NPS, its policies, organizational relationships, and implementation strategies;
3. Provide further guidance and direction regarding the NPS interpretation of laws and policies;
4. Establish a framework for the effective implementation of actions necessary to achieve the highest level of accessibility that is reasonable; and,
5. Ensure the implementation of "universal design" principles within the national park system.

Director's Order #77: Natural Resource Protection. Director's Order #77 addresses Natural Resource Protection, with specific guidance provided in Reference Manual #77: Natural Resource Management. This Director's Order includes Director's Order #77-1: Wetland Protection and Director's Order #77-2: Floodplain Management, both of which will be considered during the development of a CSP for the Flamingo area due to its location in a floodplain and the proximity of wetlands to the area.

Director's Order #77-1, reissued in 2002, establishes policies, requirements, and standards for implementing Executive Order 11990: Protection of Wetlands. Under this order, the NPS adopts a goal of "no net loss of wetlands." In addition, the NPS will strive to achieve a long-term goal of net gain of wetlands Service-wide. For proposed new development or other new activities, plans, or programs that are either located in or otherwise have the potential for direct or indirect adverse impacts on wetlands, the NPS will employ a sequence of: avoiding adverse wetland impacts to the extent practicable, minimizing impacts that could not be avoided, and compensating for remaining unavoidable adverse wetland impacts by restoring degraded wetlands. If the preferred alternative will result in adverse impacts on wetlands, the NPS will prepare and approve a Statement of Findings (SOF) in accordance with procedures described in Procedural Manual 77-1: Wetland Protection.

Director's Order #77-2, approved in 2003, applies to all NPS proposed actions, including the direct and indirect support of floodplain development that could adversely affect the natural resources and functions of floodplains, including coastal floodplains, or increase flood risks. This Director's Order also applies to existing actions when they are the subjects of regularly occurring updates of NPS planning documents. Under Director's Order #77-2, it is NPS policy to preserve floodplain values and minimize potentially hazardous conditions associated with flooding. In managing floodplains on park lands, the NPS will (1) manage for the preservation of floodplain values; (2) minimize potentially hazardous conditions associated with flooding; and (3) comply with the NPS Organic Act and all other federal laws and Executive Orders related to the management of activities in flood-prone areas, including Executive Order 11988 (Floodplain Management), NEPA, applicable provisions of the Clean Water Act, and the Rivers and Harbors Appropriation Act of 1899. Specifically, the NPS will protect and preserve the natural resources and functions of floodplains; avoid the long- and short-term environmental effects associated with the occupancy and modification of floodplains; and avoid direct and indirect support of floodplain development and actions that could adversely affect the natural resources and functions of floodplains or increase flood risks. When it is not practicable to locate or relocate development or inappropriate human activities to a site outside and not affecting the floodplain, the NPS will prepare and approve a SOF, in accordance with procedures described in Procedural Manual #77-2: Floodplain Management, and take all reasonable actions to minimize the impact to the natural resources of floodplains. Due to the study area location within a floodplain, a SOF has been prepared in accordance with procedures described in Procedural Manual #77-2 (see Appendix C).

Director's Order 48A and 48B: Concession Management and Concession Use Authority. These Director's Orders are still under development and, therefore, were not available at the time of this writing.

OTHER FEDERAL LAWS, EXECUTIVE ORDERS, REGULATIONS, AND POLICIES

The NPS is also required to comply with the following laws, Executive Orders, regulations, and policies in developing this CSP.

National Environmental Policy Act, 1969, as Amended (NEPA). Section 102(2)(c) of this act requires that an EIS be prepared for proposed federal actions that may significantly affect the quality of the human environment or are major or controversial federal actions. NEPA is implemented through regulations of the Council on Environmental Quality (CEQ) (40 CFR 1500-1508). The NPS has in turn adopted procedures to comply with the act and the CEQ regulations, as found in *Director's Order 12: Conservation Planning, Environmental Impact Analysis, and Decision Making*, and its accompanying handbook (NPS 2001c). Section 102(2) (c) of this act requires that an EIS be prepared for proposed major federal actions that may significantly affect the quality of the human environment.

National Parks Omnibus Management Act of 1998 (NPOMA). NPOMA (16 U.S.C. 5901 et seq.) underscores NEPA in that both are fundamental to NPS park management decisions. Both acts provide direction for articulating and connecting the ultimate resource management decision to the analysis of impacts, using appropriate technical and scientific information. Both also recognize that such data may not be readily available and provide options for resource impact analysis in this case.

The establishment of a park can create many business opportunities. Private businesses provide a wide variety of visitor services, and also supply parks with necessary goods and services. As one of the means by which the public can be provided the facilities and services they need to enjoy national park areas, Congress established a Concession Program in the NPS through the passage of the 1965 Concession Policy Act, (Public Law 89-249). On November 13, 1998, the Concessions Policy Act was reformed with the passage of NPOMA.

To ensure private enterprise plays a complementary role, Congress defined concession activity and enacted the National Parks Omnibus Management Act of 1998 and the Title IV-National Park Service Concessions Management Improvement Act of 1998, under which the National Park Service authorizes park concession operations. It requires that development "...be limited to those that are necessary and appropriate for public use and enjoyment..." of the national park area in which they are located "and that are consistent to the highest practicable degree with the preservation and conservation of the areas..." (NPS 2006c).

The 1998 legislation increased the competitive environment for concessions contracts, specified what specific factors will be utilized in selecting a concessioner along with numerical weights for each factor, and provided a new method for protecting a concessioner's real property investment.

Redwood National Park Act of 1978, as Amended. All National Park System units are to be managed and protected as parks, whether established as a recreation area, historic site, or any other designation. This act states that the National Park Service must conduct its actions in a manner that will ensure no "derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress."

Code of Federal Regulations, Title 36 (1992). Title 36, Chapter 1 provides the regulations "for the proper use, management, government, and protection of persons, property, and natural and cultural resources within areas under the jurisdiction of the National Park Service." It states that "the National

Park Service has the authority to manage the wildlife in the parks in fulfillment of the Organic Act without the consent of the state and by methods contrary to state law” (16 U.S.C. 3).

36 CFR Part 5: Commercial and Private Operations. Section 5.3 of this regulation states that engaging in or soliciting any business in park areas, except in accordance with the provisions of a permit, contract, or other written agreement with the United States, except as such may be specifically authorized under special regulations applicable to a park area, is prohibited.

Endangered Species Act of 1973, as Amended. This act requires all federal agencies to consult with the Secretary of the Interior on all projects and proposals with the potential to impact federally endangered or threatened plants and animals. It also requires federal agencies to use their authorities in furtherance of the purposes of the Endangered Species Act by carrying out programs for the conservation of endangered and threatened species and to ensure that any agency action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat.

Migratory Bird Treaty Act of 1819. The Migratory Bird Treaty Act of 1819 implements various treaties and conventions between the U.S. and Canada, Japan, Mexico and the former Soviet Union for the protection of migratory birds. Under this act it is prohibited, unless permitted by regulations, to “pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention...for the protection of migratory birds...or any part, nest, or egg of any such bird” (16 U.S.C. 703). Subject to limitations in the Act, the Secretary of the Interior may adopt regulations determining the extent to which, if at all, hunting, taking, capturing, killing, possessing, selling, purchasing, shipping, transporting or exporting of any migratory bird, part, nest or egg will be allowed, having regard for temperature zones, distribution, abundance, economic value, breeding habits and migratory flight patterns.

National Historic Preservation Act of 1966, as Amended. Section 106 of this act requires federal agencies to consider the effects of their undertakings on properties listed or potentially eligible for listing on the National Register of Historic Places. All actions affecting the parks’ cultural resources must comply with this legislation.

Historic Sites Act of 1935. This act declares as national policy the preservation for public use of historic sites, buildings, objects, and properties of national significance. It authorizes the Secretary of the Interior and National Park Service to restore, reconstruct, rehabilitate, preserve, and maintain historic or prehistoric sites, buildings, objects, and properties of national historical or archaeological significance.

Marine Mammal Protection Act, 1972. The Marine Mammal Protection Act prohibits, with certain exceptions, the take of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the U.S. This act recognizes that some marine mammal species or stocks may be in danger of extinction or depletion as a result of human activities and that these species or stocks must not be permitted to be depleted. The act, as amended in 1994, provides for certain exceptions to the take prohibitions, such as for Alaska Native subsistence and permits and authorizations for scientific research; a program to authorize and control the taking of marine mammals incidental to commercial fishing operations; preparation of stock assessments for all marine mammal stocks in waters under U.S. jurisdiction; and studies of pinniped-fishery interactions.

Coastal Zone Management Act, 1966. The Coastal Zone Management Act (CZMA) (16 U.S.C. §§1451 et. seq.) seeks to preserve and protect coastal resources. Through the CZMA, states are encouraged to

develop coastal zone management programs (CZMPs) to allow economic growth that is compatible with the protection of natural resources, the reduction of coastal hazards, the improvement of water quality, and sensible coastal development. The CZMA provides financial and technical incentives for coastal states to manage their coastal zones in a manner consistent with CZMA standards and goals. CZMA Section 307 requires that federal agency activities that affect any land or water use or natural resource of the coastal zone must be consistent to the maximum extent practicable with the enforceable policies of the state CZMP. Federal agencies and applicants for federal approvals must consult with state CZMPs and must provide the CZMP with a determination or certification that the activity is consistent with the CZMP's enforceable policies, where those policies will have a possible effect on state coastal resources, as defined by the CZMP and local land use plans.

The Florida Coastal Management Program (FCMP), the State of Florida's federally approved management program, was approved by the National Oceanic and Atmospheric Administration in 1981. The FCMP consists of a network of 23 Florida Statutes administered by 11 state agencies and four of the five water management districts designed to ensure the wise use and protection of the state's water, cultural, historic, and biological resources; to minimize the state's vulnerability to coastal hazards; to ensure compliance with the state's growth management laws; to protect the state's transportation system; and to protect the state's proprietary interest as the owner of sovereign submerged lands.

The State of Florida's coastal zone includes the area encompassed by the state's 67 counties and its territorial seas. Therefore, federal actions occurring throughout the state are reviewed by the state for consistency with the FCMP. However, the state has limited its federal consistency review of federally licensed and permitted activities to the federal licenses or permits specified in Section 380.23(3)c, Florida Statutes.

Executive Order 11593 - Protection and Enhancement of the Cultural Environment. This Executive Order directs federal agencies to support the preservation of cultural properties and to identify and nominate to the National Register cultural properties in the park and to "exercise caution... to assure that any NPS-owned property that might qualify for nomination is not inadvertently transferred, sold, demolished, or substantially altered."

Executive Order 11988 - Floodplain Management. This Executive Order directs federal agencies to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.

Executive Order 11990 - Protection of Wetlands. This Executive Order directs federal agencies to avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative.

Executive Order 13112 – Invasive Species. This Executive Order requires federal agencies to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause.

Executive Order 13123 – Greening the Government Through Efficient Energy Management. This Executive Order defines requirements for federal agencies in meeting energy savings goals through the promotion of energy efficiency, water conservation, and the use of renewable energy products, and in helping foster markets for emerging technologies.

Executive Order 13148 – Greening the Government Through Leadership in Environmental Management. This Executive Order directs the head of each federal agency to be responsible for ensuring that all necessary actions are taken to integrate environmental accountability into agency day-to-day decision-making and long-term planning processes across all agency missions, activities, and functions. Consequently, environmental management considerations must be a fundamental and integral component of federal government policies, operations, planning, and management.

Executive Order 13186 – Responsibilities of Federal Agencies to Protect Migratory Birds. Migratory birds are of great ecological and economic value to this country and to other countries. They contribute to biological diversity and bring tremendous enjoyment to millions of Americans who study, watch, feed, or hunt these birds throughout the United States and other countries. The United States has recognized the critical importance of this shared resource by ratifying international, bilateral conventions for the conservation of migratory birds. Such conventions include the Convention for the Protection of Migratory Birds with Great Britain on behalf of Canada 1916, the Convention for the Protection of Migratory Birds and Game Mammals-Mexico 1936, the Convention for the Protection of Birds and Their Environment-Japan 1972, and the Convention for the Conservation of Migratory Birds and Their Environment-Union of Soviet Socialist Republics 1978. These migratory bird conventions impose substantive obligations on the United States for the conservation of migratory birds and their habitats; through the Migratory Bird Treaty Act, the United States has implemented these migratory bird conventions with respect to the United States. This Executive Order directs executive departments and agencies to take certain actions to further implement the Act.

Federal Building Code Standards for Accessibility. This document sets standards for facility accessibility by physically handicapped persons for Federal and federally-funded facilities. The document presents uniform standards for the design, construction and alteration of buildings so that physically handicapped persons will have ready access to and use of them in accordance with the Architectural Barriers Act, 42 U.S.C. 4151-4157. The document also embodies an agreement to minimize the differences between the standards previously used by four agencies (the General Services Administration, the departments of Housing and Urban Development and Defense, and the United States Postal Service) that are authorized to issue standards under the Architectural Barriers Act, and between those standards and the access standards recommended for facilities that are not federally funded or constructed.

ABAAS Standards for Accessible Design. This document sets guidelines for accessibility to places of public accommodation and commercial facilities by individuals with disabilities. These guidelines are to be applied during the design, construction, and alteration of such buildings and facilities to the extent required by regulations issued by federal agencies, including the Department of Justice, under the Architectural Barriers Act Accessibility Standards (ABAAS) issued by the General Services Administration in 2004.

STATE AND LOCAL LAWS, REGULATIONS, AND POLICIES

Florida Building Code. Monroe County was previously managed under the South Florida Building Codes; as of March 1, 2002, the *Florida Building Code* supersedes all local building codes which are developed and maintained by the Florida Building Commission. This code is updated every three years and may be amended annually to incorporate interpretations and clarifications. The *Florida Building Code* is based on national model building codes and national consensus standards, which are amended where necessary for Florida's specific needs. The Code incorporates all building construction-related regulations for public and private buildings in the State of Florida other than those specifically exempted by Section 553.73, Florida Statutes. It has been harmonized with the *Florida Fire Prevention Code*,

which is developed and maintained by the Department of Financial Services, Office of the State Fire Marshal, to establish unified and consistent standards. The code has incorporated the provisions from the South Florida Building Code into the state-wide code with the section on High Velocity Hurricane Zone provisions. Consistent with NPS Management Policies (Chapter 9 - Park Facilities), the park will design and construct facilities to the same code compliance regardless of origin (NPS, concessioner, contractor, other), including voluntarily complying with local state building codes as well as national building codes, particularly if the state code is more stringent. As such, the Monroe County code applies to the Flamingo area. The code identifies zones with varying requirements dependent on wind speed and exposure, for example. The Flamingo visitor area is located in the highest wind speed zone and exposure zone for hurricane/storm exposure.

Outstanding Florida Waters. All waters that are a part of Everglades National Park are defined as Outstanding Florida Waters (OFW). Section 403.061 (27), Florida Statutes, grants the Florida Department of Environmental Protection power to: Establish rules which provide for a special category of water bodies within the state, to be referred as “Outstanding Florida Waters,” which shall be worthy of special protection because of their natural attributes. In general, the Florida Department of Environmental Protection cannot issue permits for direct pollutant discharges to OFWs which would lower ambient (existing) water quality or indirect discharges which would significantly degrade the waters. Permits for new dredging and filling must be clearly in the public interest, taking into consideration whether the:

- activity will adversely affect the public health, safety, or welfare or property of others;
- activity will adversely affect the conservation of fish and wildlife, including endangered or threatened species, or their habitats;
- activity will adversely affect navigation or the flow of water or cause harmful erosion or shoaling;
- activity will adversely affect the fishing or recreational values or marine productivity in the vicinity of the activity;
- activity will be of a temporary or permanent nature;
- activity will adversely affect or will enhance significant historical and archaeological resources under the provisions of Sec. 267.061 F.S.; and
- current condition and relative value of functions being performed by areas affected by the proposed activity (373.414(1)(a), F.S.).

PARK BACKGROUND

Spanning the southern tip of the Florida peninsula and most of Florida Bay, Everglades National Park is the largest subtropical wilderness in North America. The park is only a portion of the Everglades fragile ecosystem. Everglades National Park provides a prime example of the systemic linkages between national parks, the larger ecosystem, and surrounding communities (NPS 2001b). The park’s original boundaries contained 460,000 acres; subsequent additions to the park have increased its size to 1,509,000 acres, including most of Florida Bay. The most recent addition came in 1989 when Congress added 109,506 acres in the East Everglades area of the park, including a portion of the Northeast Shark River Slough—a waterway critical for the protection of park resources and hydrologic restoration. The park stretches more than 60 miles north-to-south and 40 miles east-to-west. It holds the largest expanse of wilderness east of the Rocky Mountains. Congress designated 1,296,500 acres of this vast park as the Marjorie Stoneman

Douglas Wilderness to honor this conservation pioneer who brought the beauty and fragility of the Everglades to public attention in her 1947 book *The Everglades, River of Grass*.

Located at the interface of temperate and subtropical environments, the park has a great diversity of resources. These include more than 400 species of birds, 800 species of land and water vertebrates, 1,600 species of vascular plants, 125 species of fish, and 24 varieties of orchids. The park is home to more than 20 federally-listed species and 70 state-listed species. Because of its rich diversity and unique landscape, more than one million visitors come to experience the park each year. Popular activities include canoeing, camping, boating, wildlife observation, and fishing.

Visitors access information about the park via four main contact stations—the Ernest Coe Visitor Center in Homestead, the Flamingo Visitor Center, the Shark Valley Visitor Center, and the Gulf Coast Visitor Center in Everglades City. In 2005, the Flamingo area sustained heavy infrastructural damage as a result of Hurricanes Katrina and Wilma, and many of the visitor uses and services in Flamingo had to be shut down or reduced (see Figures 1-3, 1-4, and 1-5). The Flamingo Lodge, cottages, restaurant, gift shop and cafe were closed due to the damage caused by strong winds and storm surges. Historically, Flamingo was the only area providing overnight accommodations, beyond tent and RV camping, to park visitors. Lodging is now only available in communities that border the park, including Homestead, Florida City, Miami, Everglades City, and Chokoloskee. The Flamingo Visitor Center, the marina providing access to Florida Bay, Whitewater Bay and the backcountry, the marina store, and the gas station are still in operation.



Figure 1-3 – Aerial photo, Flamingo Lodge Post-Hurricane Wilma



Figure 1-4 – Recreation Building Storm Damage Post-Hurricane Wilma



Figure 1-5– Flamingo Cottages Storm Damage Post-Hurricane Wilma

FLAMINGO BACKGROUND

Flamingo began as a small coastal settlement on the eastern end of Cape Sable on the southern tip of the Florida Peninsula. It is the southernmost mainland point of Everglades National Park and the southern terminus of the 99-mile Wilderness Waterway, which winds northwest to Everglades City in the Ten

Thousand Islands. It lies at the end of the main park road (State Road 9336), which runs 38 miles from the Coe Visitor Center to Flamingo.

Early Settlers of Flamingo

Flamingo received its name in 1893, when settlers of the area had to choose a name for their new post office. The 1910 federal census record shows 49 people living in Flamingo and Cape Sable. Most listed their profession as farming, moonshining, gator hunting, etc. The settlers made a living by providing fish, fresh vegetables and charcoal to Key West. They lived in “weathered” stilt houses that sat eight to ten feet high on the eastern edge of a wet marl prairie (Davis 1998).

A turning point in the national conservation movement had roots in Everglades National Park and Flamingo. Due to the outrage at the killing of millions of birds and the threats of species extinction, in 1902 the Audubon Society and American Ornithologists Union hired Guy Bradley to protect wading bird populations in Florida that were being decimated by poachers and plume hunters. Bradley was murdered in 1905 near Flamingo and was buried nearby on Cape Sable; he was the first U.S. conservation officer killed in the line of duty.

In the early days, the only way to arrive at Flamingo or Chokoloskee was by boat. Supplies were shipped from Key West, Fort Meyers, or Tampa and cane syrup, fish, and produce were traded in return. When Royal Palm State Park was created in 1916, a road was built from Florida City to Royal Palm hammock. The Ingraham Highway, as it was eventually named, was later completed to Flamingo. The named highway gave more prominence to this road than it actually deserved. Often it could only be traveled in good weather and it was always full of ruts and mud holes (Everglades Area Chamber of Commerce 2006). The NPS gave it a gravel top in the late 1940s. Flamingo still marks the end of the main park road. The current alignment of the road, an extension of State Road 9336, formerly known as State Road 27, was built in 1956 when a portion of what was then known as Ingraham Highway was replaced with a more northward section. The road has been the subject of some controversy. Some scientists have claimed that the roadbed is a barrier to natural hydrologic flow to Florida Bay, while others have blocked culverts to hold freshwater back in the wetlands east of the road and north of Florida Bay (Stewart et al. 2004).

By the 1940s, a few fish houses lined the waterfront and fishing was successful. Anglers used either airboats or “wheel boats.” A “wheel boat is a boat with an inboard engine and underwater propellers or wheels.” Wheel boats were used for fishing mullet on the high tide whereas the airboat was used for fishing on the banks or channels (Davis 1998).

Flamingo Today

Cecil John Doty provided a conceptual site design for the Miami design firm to use to guide their facility designs for Everglades National Park at Flamingo. Although the design included a Park Service administration building, it also featured the lodge, restaurant, gas station, and an elaborate dock into Florida Bay with facilities for cruise boats. Buildings were modern—concrete block, flat roofs, swirling concrete ramps, and terraces supported by thin columns. Patterns of louvered windows and perforated concrete screens provided ornamentation. Flamingo Marina is a resort of



Figure 1-6 – Flamingo Visitor Center and Restaurant, 1958 (Photo by Jack E. Boucher; From Allaback 2000)

the type that became ubiquitous on the nation's beachfront in the 1950s and 1960s. Although Doty mentioned "a major change," reducing the size of the Park Service building at Flamingo and some alterations to the restaurant, the compound was built basically as designed. The marina project suggests that the Park Service began equipping parks with facilities to accommodate increasing numbers of visitors in the early fifties. As a development program, Mission 66 hoped to supply facilities to encourage public use, even if this meant boating in the Everglades and skiing in the Rockies (Allaback 2000).

The NPS currently operates a visitor center at Flamingo (see Figure 1-7 – Flamingo Visitor Center Complex Today). The Flamingo campground, located at the end of the main park road, offers 237 tent camping sites (A loop = 55, B loop = 58, C loop = 56, walk-in = 65, group sites = 3) and 66 RV sites. Cold water showers, two dump stations, picnic tables, and grills are provided; however, there are no electrical hookups for RVs. The amphitheater, which was available for winter programs prior to the 2005 storms, is funded for rehabilitation. Flamingo has several hiking trails and canoe trails, and opportunities for saltwater fishing are plentiful.



Figure 1-7 – Flamingo Visitor Center Complex Today

From 2000 to 2005, parkwide visitation was consistently about 1 million recreation visits per year; however, after the 2005 storms, visitation dropped to about 950,000 in 2006 (ERA 2007). Both the volume of tourism and levels of park personnel are typically higher during the winter months when climatic conditions are more favorable and mosquitoes are less of a nuisance. Approximately 50 percent of visitorship at the park is between January and April, with visitation numbers beginning their annual increase around the Thanksgiving holiday. Summer visitors are mainly international travelers and local anglers. The seasons for fishing and boating are determined to some extent by Florida Fish and Wildlife Conservation Commission Saltwater Fishing Regulations (2006) (see Section 3 – Visitor Use).

Xanterra Parks and Resorts is responsible for current commercial service operations at Flamingo. This includes the following:

- 900 square foot marina store—souvenirs and other themed merchandise, apparel, convenience items for campers and visitors, pre-prepared and packaged food items, beverages and bait, open daily
- Fuel service for vehicles and vessels—unleaded, premium unleaded, and diesel available for purchase 6:00 a.m. to 7:00 p.m. daily
- One tour boat—a backcountry boat cruise that conducts tours Thursdays through Mondays departing at 10:00 a.m., 1:00 p.m., and 3:30 p.m.
- Guided fishing charters—half-day and full-day charters available via outsourced fishing charters (Xanterra receives 20% of revenues)

- Canoe and motorboat rentals—available daily from 7:00 a.m. to 4:00 p.m., last rentals at 3:00 p.m. and all rentals must be returned to the marina by 4:00 p.m. (Xanterra has 30 canoes, five motor skiff boats)
- Bicycle rentals (seasonal)

Discontinued services at Flamingo Lodge and Marina due to the damages sustained in the 2005 storms include:

- Overnight Lodge and Cottage Accommodations—74 lodge rooms, 24 cabins sleeping up to six people each)
- 1,200 square foot gift shop—seasonal
- Buttonwood Café
- 125 seat full-service dining room and lounge
- Houseboat rentals—six boats sleeping 10 or 11, two-night minimum stay
- Dock / boat slip rental space at the marina
- Overnight dockage
- Florida Bay boat tour
- Kayak rentals

In addition, some services were discontinued over the years due to budget limitations and/or attrition, not due to storm damage. These include the swimming pool that was located near the former lodge, the boat hoist on the Buttonwood Canal, the Snake Bight Tram, and bicycle rentals.

During the peak season, Xanterra previously employed 150 seasonal staff; during the off-season, Xanterra's staff on site at Flamingo was approximately 50 employees (Herling, pers comm., July 26, 2007). Xanterra currently has a staff of 12-15 employees in the off season and 25-30 employees in the high season.

Xanterra has overseen concessions at Flamingo since 1982. When their contract expired in 1992, the park began issuing contract extensions on a yearly basis. In 2002, PriceWaterhouseCoopers LLP (PwC) conducted an analysis of concession operations at Flamingo and determined that it would not be possible to issue a new financially feasible contract because of:

- Limited opportunity for revenue generation due to a short peak season (4 months);
- High levels of initial personal and real property improvement investment required of a new concessioner; and
- Extensive deferred maintenance that would require high levels of annual reserve for real property and personal property maintenance.

PwC also reviewed the 2002 Flamingo operation and recommended financially feasible scenarios for extending the existing contract with Xanterra under a three-year contract extension. Following the 2005 storms, Xanterra has determined that it is no longer feasible to operate at Flamingo past March 2008. The park is developing a prospectus for a new concession contract that will provide many of the services provided by Xanterra until the Flamingo CSP is implemented.

Flamingo is also a destination for commercial use authorization (CUA) holders. Services provided by CUA holders include guided fishing, canoe and kayak tours, and birdwatching.

STUDY AREA AND SCOPE OF THE ANALYSIS

The focus of analysis is to develop a commercial services plan for the Flamingo area at Everglades National Park in South Florida. Therefore, the primary study area to be assessed includes the area from which commercial services originate and those areas accessed by visitors in the Flamingo area, including the area immediately surrounding the developed area of Flamingo where noise impacts from activities or construction of facilities might affect visitors or resources (see figures 1-8 and 1-9). Depending on the resource being assessed, the study area may also include areas accessed by visitors using commercial tours, skiffs, houseboats, kayaks, canoes, fishing and sailing charters, floating fish camps, etc.; and the backcountry chickees at Rankin and Johnson Keys, as these are overnight destination trips for canoes and kayaks leaving Flamingo. This expanded study area includes but is not limited to portions of Florida Bay, Whitewater Bay, Cape Sable, and nearby canoe trails (see figure 1-10).

The area of potential effect is defined for each resource described in Chapter 3. Figure 1-8 depicts the main features of the Flamingo developed area (pre-hurricanes), and figure 1-9 is an aerial photo-based map showing the primary study area used in this analysis with features labeled as they existed before the 2005 hurricanes. Figure 1-10 indicates the expanded study area beyond the immediate vicinity of Flamingo that may be considered in the analysis.

Everglades (Pre-Hurricane)

National Park
National Park Service
U.S. Department of the Interior



Everglades National Park

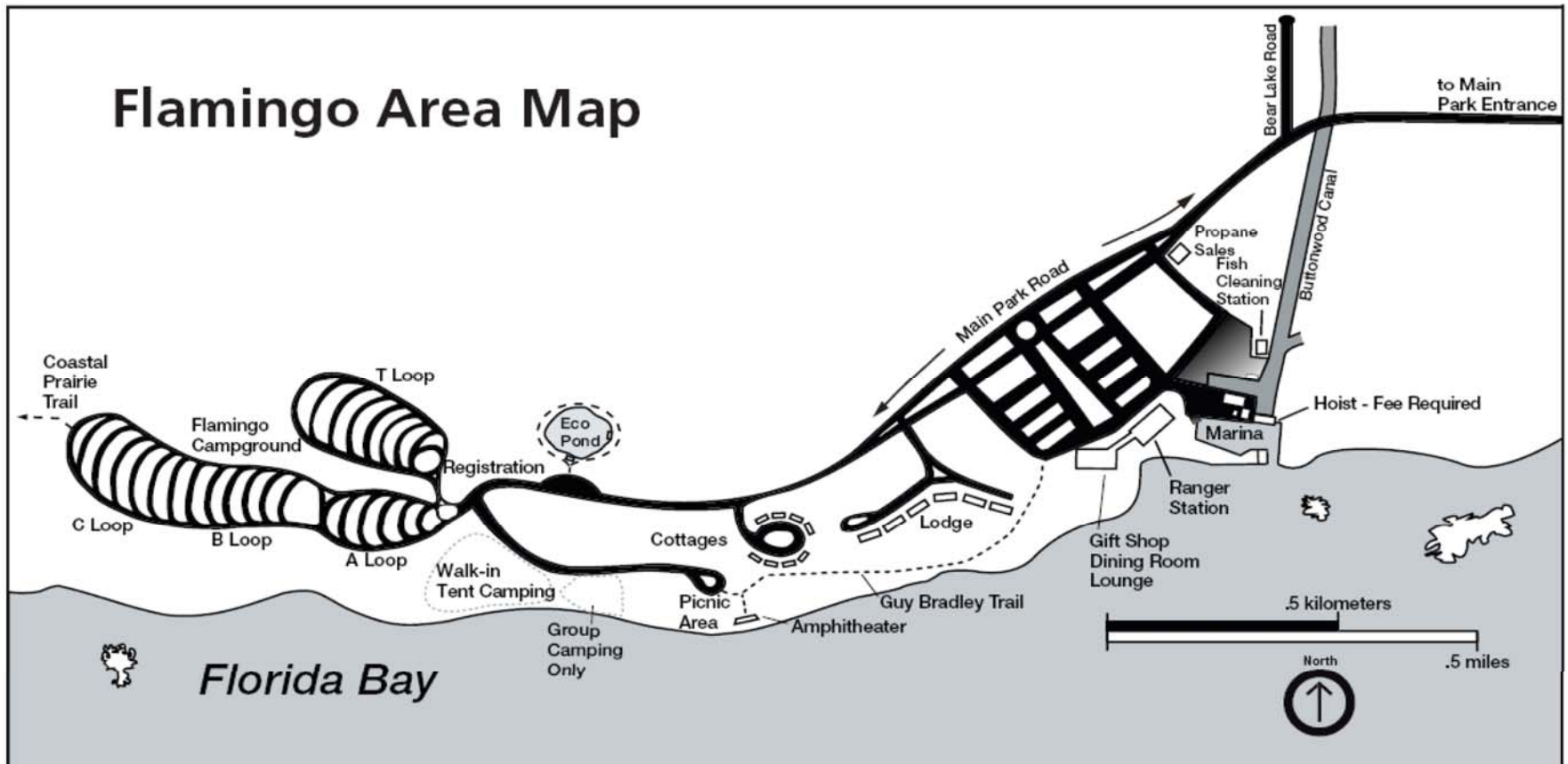


Figure 1-8 – Primary Study Area Map
Image provided by Everglades National Park

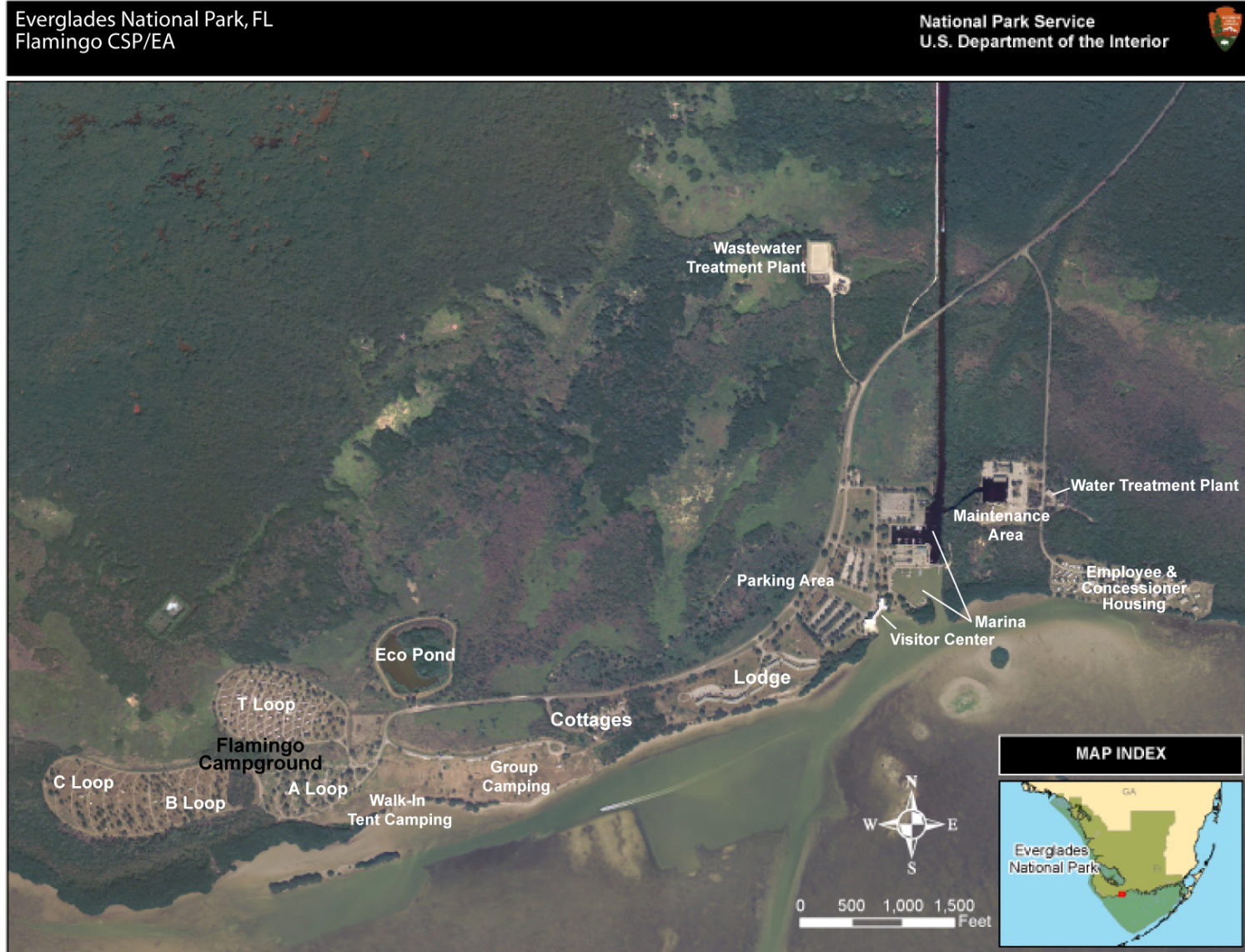


Figure 1-9 – Primary Study Area Aerial Photograph
(Photo courtesy of USGS, 2004 (Pre-Hurricane) – provided by Everglades National Park in January 2007)



Figure 1-10 – Expanded Study Area
Image provided by Everglades National Park

SCOPING AND PUBLIC INVOLVEMENT

Public scoping is an early and open process to solicit public and internal concerns relating to a proposed action. The Council on Environmental Quality (CEQ 1978) guidelines for implementing NEPA and the NPS guidelines in *Director's Order No. 12: Conservation Planning, Environmental Impact Analysis and Decision Making Handbook* (NPS 2001a) require that the NPS “make a ‘diligent’ effort to involve the interested and affected public (1506.6(2)) on a proposal for which an EA is prepared” (NPS 2001a). During the development of the CSP/EA, the park actively involved the public in the process. The park’s goals for public participation included: acceptance of the commercial services plan by the public; substantive and valuable input to help guide park decisions; and minimization of conflicts through dissemination of information and starting discussion.

The park elicited public participation in the discussion of issues, areas to be studied and potential alternatives. Four public scoping open house workshops were held on October 17, 2006, October 26, 2006, October 28, 2006, and November 9, 2006 at four different locations: the International Game Fish Association Hall of Fame in Dania Beach, the Key Largo Grande Resort in Key Largo, the Palmetto Golf Course in Miami, and the Coe Visitor Center at Everglades National Park in Homestead. The structure of the workshops allowed individuals interested in participating in the planning process to be directly involved. Chapter 4 – Consultation and Coordination – provides additional details about these meetings and the subsequent public comment received. Public comments were used to help formulate the alternatives and identify the issues and impact topics considered in this plan.

ISSUES AND IMPACT TOPICS

Issues describe problems or concerns associated with current impacts from environmental conditions or current operations, as well as problems that may arise from the potential future management of commercial services and related facilities at Flamingo. The development of issue statements often sheds light on previously unrealized management opportunities that, if enacted, could bring about a greater beneficial change. Issues and concerns related to the redevelopment of the Flamingo area were identified by the park staff with input from the public, partners, agencies, and tribal organizations. Issues are then grouped into areas of similar concerns, which can then be addressed as impact topics in the EA.

The following impact topics are discussed and analyzed in Chapter 3 – Affected Environment and Environmental Consequences. These topics are resources of concern that could be beneficially or adversely affected by the actions proposed under each alternative and are developed to ensure that the alternatives are evaluated and compared based on the most relevant topics. These impact topics were identified based on the following: issues raised during scoping, federal laws, regulations, executive orders, NPS 2001 *Management Policies*, and NPS knowledge of limited or easily impacted resources. A brief rationale for the selection of each impact topic is given as an issue statement that was developed by the team. For those topics that were dismissed from further consideration, an explanation is provided as to why they were dismissed.

GEOLOGICAL RESOURCES/SOILS

Boat wakes can accelerate erosion along the shoreline surrounding the Flamingo area. A majority of the developed area is fill material. In addition, existing roads and trails, such as Bear Lake Road and Guy Bradley Trail, respectively, have substantial areas of erosion.

Issue Statement: Disturbance from construction activities, dredge and fill activities associated with the potential redevelopment of the site, and/or rehabilitation of previously disturbed areas could alter

geological resources in the project area. In addition, dependent on the alternatives, the shoreline and/or bulkheads around Flamingo could be impacted by the plan. Other potential issues include impacts related to the removal of native soils and the possible introduction of non-native soils.

AIR QUALITY

Land and water-based vehicular traffic in the Flamingo area could impact local air quality. Recreational vehicles using the campground also typically use gas-powered generators. The park determined that potential impacts to air quality should be explored to determine if it is an issue of concern.

Issue Statement: Everglades National Park is located in an area classified by the U.S. Environmental Protection Agency as in attainment for all six criteria pollutants and as a Class I airshed. Despite being in compliance, the driving and idling of cars and boats, the use of gas-powered generators, and potential construction activities in the Flamingo area could create localized increases in air pollution potentially degrading visitor experience and human health.

SOUNDSCAPES

Commercial services in the Flamingo area bring visitors to the area to participate in a variety of recreational activities. Vehicular noise, including motorboat traffic, is currently a component of the soundscape at the park and could impact the quality of the park's soundscape. Generators used to power recreational vehicles in the campground also create noise. This may be considered by some as incompatible with other recreational uses such as bird watching or enjoying the solitude and natural soundscape of the park. Actions within Everglades National Park must preserve the natural soundscape consistent with the guidance in *Director's Order 47: Sound Preservation and Noise Management* and in the *NPS Management Policies 2006*.

Issue Statement: Some commercial services and visitor uses (e.g., motorized camping and boating) at the park could create noise levels that could impact park visitors, wildlife, and wildlife habitats through altering the natural quiet and natural soundscape of the park.

WATER RESOURCES

Water Quality

Waters in the park are designated Outstanding Florida Waters and, therefore, no degradation of surface water quality is permitted. The park has completed EAs for the construction and operation of a potable water plant and a wastewater treatment plant. There is currently no stormwater treatment within the Flamingo area, allowing pollutants and wastes to run off of boat ramps, fueling facilities, housing areas, and parking areas. However, the extent and magnitude of the run-off is estimated to be minimal. Current and potential future concerns for water quality include dredging activities that in the past were required for boat tours. A commercial services plan may require dredging. In addition, in the past, maintenance dredging has occurred around the boat ramps at Flamingo as a result of impacts from hurricanes and other storm events. These instances are rare and not likely to occur on a regular basis in the future. Any potential dredging activities that would occur at Flamingo raise concerns about turbidity and aesthetics, as the dredge material would probably be deposited on land and can be visually unattractive in the short-term.

Current recreational provisions at Flamingo include an area at the marina for boats to get fuel. Spill control kits are available to address potential impacts to water quality. However, an increase in the use of boats at the site could create more opportunities for an oil or gas release that impacts water quality.

Issue Statement: Increases in the number of motorized vehicles using area waters could negatively impact water quality. Construction at the site and/or stormwater runoff from buildings and facilities, as well as any potential future dredging activities, could contribute to potential impacts to surface water quality. Providing water and wastewater treatment will have a bearing on the level of use and the number of people that the system can handle. There are finite upper limits as to what these systems can handle. Issues related to access to backcountry, renting house boats, canoes and kayaks, may have an indirect effect on water quality. Additionally, potential beneficial impacts could occur through the implementation of stormwater management and sustainable development practices.

Wetlands

The majority of the land around the Flamingo area is classified as wetland habitat, an integral component of the Everglades National Park landscape. As much of the Flamingo area is located in wetland areas, any development outside the existing footprint has the potential to introduce fill material into the wetlands to allow for development on those sites. The addition of fill material at the Flamingo area would likely result in the introduction of exotic species, which could further impact wetland habitats. Wetlands that are not filled directly would have the potential to be impacted from stormwater runoff and erosion. These activities could increase the turbidity of a wetland, causing the system to no longer function as a wetland. Conversely, a more compact development scheme could allow the restoration of previously filled areas to functioning wetlands, with the removal of fill also aiding in the reduction of exotic species.

Issue Statement: Development at the Flamingo area has the potential for negative impacts to wetlands through fill activities, indirect impacts resulting in a loss of wetland functionality, or beneficial impacts by restoring previous wetland areas.

Floodplains

The entire Flamingo area is located within a designated floodplain. As seen by past hurricanes and other storm events, any buildings or other facilities located in this floodplain area have a high potential to be impacted by flood waters. The current disrepair of the buildings at Flamingo is a direct result of hurricanes Wilma and Katrina in 2005. The resulting impact of these storm events is flood debris that requires park labor resources to clean up and mitigate. This flood debris also can contain contaminants that would be a hazard to those involved in the clean up efforts.

Issue Statement: Incorporating structures at Flamingo that are appropriate for location in a floodplain has the potential for beneficial impacts to park staff by reducing maintenance requirements after storm events, reducing potential building replacement/repair costs, and reducing potential health hazards to maintenance personnel.

WILDERNESS AREAS

Everglades National Park is the largest designated wilderness area east of the Rocky Mountains (1,296,000 acres). Many visitors use Flamingo as a gateway to experience the park's vast wilderness, so maintaining and enhancing the park's wilderness values is critical to meeting park goals for protecting its wilderness resources and offering high-quality wilderness experiences.

The Flamingo area is surrounded by both submerged and terrestrial wilderness; however, the entire developed area and a sizeable buffer around it is excluded from any proposed or designated wilderness. The offshore submerged area includes the bottom of all marine areas below high tide, except the Florida Bay channel. As a result of this designation, as well as prohibitions against damaging natural features provided for in the Code of Federal Regulations, boats are prohibited from touching the bottom of this area. The increase in the use of boats at this area could result in an increased potential to disturb the submerged wilderness, including the potential for propellers to gouge sea grasses and increase turbidity. Most of the areas beyond the developed areas of Flamingo are designated terrestrial or freshwater wilderness, which could be affected by increased visitor use and associated noise and disturbance adjacent to and in these areas.

Issue Statement: Increased use and development at Flamingo and in surrounding waters could increase the potential for impacts to designated wilderness areas, including submerged wilderness.

THREATENED AND ENDANGERED SPECIES AND SPECIES OF SPECIAL CONCERN

Everglades National Park, including the Flamingo area, is a unique ecosystem that is home to numerous federal- and state-listed threatened and endangered species. The following federally-listed endangered animals are likely to be found within the Flamingo study area: green sea turtle (*Chelonia mydas*), Atlantic Ridley sea turtle (*Lepidochelys kempfi*), Atlantic hawksbill sea turtle (*Eretmochelys imbricata*), Atlantic leatherback sea turtle (*Dermochelys coriacea*), Cape Sable seaside sparrow (*Ammodramus maritima mirabilis*), Everglades snail kite (*Rostrhamus sociabilis plumbeus*), wood stork (*Mycteria americana*), West Indian manatee (*Trichechus manatus*), Florida panther (*Felis concolor coryi*), and smalltooth sawfish (*Pristis pectinata*). The following federally-listed threatened animals may be found within the Flamingo study area: loggerhead turtle (*Caretta caretta*), eastern indigo snake (*Orthalicus reses reses*), Stock Island tree snail (*Drymarchon corias couper*), and the American crocodile (*Crocodylus acutus*). Two federal candidate species, the Mangrove fox squirrel (*Sciurus niger*) and the Miami blue butterfly (*Cyclargus thomasi bethunebakeri*) may also be seen in this area. The Florida population of the American crocodile was down-listed from endangered to threatened on March 20, 2007 due to improvements in the species' status. It remains listed as endangered throughout the rest of its range. The bald eagle was removed from the list of threatened and endangered species on June 28, 2007. Table 3-4 in Chapter 3 provides a detailed listing of federally listed species that have the potential to occur in the Flamingo project area.

The Flamingo area is also home to many state-listed species of special concern, including 21 plants and nine birds. The birds include many common wading birds found in the area (various herons and egrets), as well as the osprey (*Pandion haliaetus*), white-crowned pigeon (*Columba leucophala*), and the brown pelican (*Pelecanus occidentalis*). Tables 3-5 and 3-6 in Chapter 3 describe the state-listed species of special concern with the potential to occur in the Flamingo area.

An increase in boat tours and other related activities at Flamingo could impact these species. One example would be including tours that would take visitors to the beach at Cape Sable, which could impact the nesting of loggerhead turtles and state-listed gopher tortoises. An increase in boat tours or other marine vessels in the marina or channels could increase impacts to manatees through boat strikes or entanglement in fishing lines and other marine debris. These same threats also exist for all species of turtles and crocodiles. Potential impacts to the American crocodile include disturbance to their nesting areas in the greater Flamingo area as it has historically been a site of increasing American crocodile nesting. The location of these nests would need to be determined, as any change in the development pattern of this area has the potential to impact these nesting sites. Increased visitation could result in

increased disturbance to crocodiles. This disturbance could result in nest abandonment or seeking alternative nesting sites. Alternative nesting sites could encroach on existing visitor uses, such as the campgrounds and road shoulders, causing further disturbance and conflict for the species.

These species also face indirect impacts from potential increased visitation. With increased visitation comes increased visitor waste, including food waste. Visitors also could feed wildlife. These activities could encourage increased populations of raccoons and other predators. Raccoons are a significant predator on crocodile and turtle nests; thus, increases in their population would be detrimental to the turtle populations. In addition, road kill is especially significant to amphibians and reptiles, and the likelihood of increases in mortality could result if visitation increases. Increased vehicular traffic is also a threat to the Florida panther and Mangrove fox squirrel. Increased visitation, especially from boaters, has the potential to impact nearby wading bird colonies, nesting eagles and ospreys.

In addition to animal species, the park also hosts numerous threatened and endangered plant species. At Flamingo, one of the specific issues related to threatened and endangered species includes the presence of state-listed orchids along the park trails in this area. Frequently, visitors walking along these trails see these flowers and will pick them to take home. An increase in visitation to Flamingo as a result of implementing the CSP could result in an increase in this type of disturbance, including increased morbidity and mortality.

The park has been attempting to reintroduce unique butterfly species into the area, which the CSP would take into account. Various butterfly conservation organizations have been working with the park to have Flamingo serve as a primary location for butterfly reintroduction efforts (particularly for species of concern) and premier butterfly viewing destination.

The Flamingo area is known to have a high occurrence of mosquitoes, and increased visitation could result in more pressure on park managers to take actions to reduce mosquitoes including the use of chemicals, or result in visitors conducting mosquito reduction activities themselves. These actions could have a detrimental impact on butterfly reintroduction activities.

Issue Statement: The Flamingo area of Everglades National Park contains federally protected animal species as well as numerous state-listed plant and animal species. Altering the development footprint, and changing the volume and nature of visitor use at the site, have the potential to impact these species through habitat modification and/or loss and increased levels of disturbance. In addition, an increase in visitor use at the Flamingo site has the potential to impact current and future species reintroduction efforts, as conflicts between visitor needs and species needs arise.

WILDLIFE AND WILDLIFE HABITATS

Wildlife and Vegetation

The Flamingo area provides important habitat for a number of species in the mangroves and coastal prairie. Mangrove forests are found in the coastal channels and winding rivers around the tip of South Florida and are comprised of red mangroves (*Rhizophora mangle*), black mangroves (*Avicennia germinans*), and white mangroves (*Laguncularia racemosa*). This habitat is home to many protected species, as well as shrimp and fish. The mangroves provide wading areas for birds in the dry months and the trees themselves provide nesting habitat. Also located in the Flamingo area are coastal prairie habitats. These habitats are located between the tidal mud flats of Florida Bay and the mangroves and marsh areas near the bay. Because these areas are periodically flooded by storms and hurricanes and subject to strong

winds, vegetative species found here are salt-tolerant, characterized by succulents and other low-growing plants that can withstand the harsh conditions.

The terrestrial habitats and vegetation at Flamingo support many wildlife species. Vegetative communities at Flamingo could be impacted though increased visitation as more visitors would be using the trails, creating more potential for off-trail use and trampling of vegetation in those areas accessible by foot.

The spread of exotic, or non-native, species is a concern at Everglades National Park as it can be detrimental to the survival of native species in the area. Non-native plant species can be spread by numerous means including transport on people or animals, introduction in fill material, or creation of new edge habitat. At the Flamingo area, concerns related to non-native species are a result of fill used during the development of wetland areas. Any seeds transported in this fill material have the potential to spread non-native species. Likewise, removal of previously filled areas could result in slowing down the spread of non-native species. The potential for increased visitation could also increase non-native species as visitors could bring their seeds in on their vehicles, clothes, pets, etc. Exotics must be included as part of the discussion of wildlife and vegetation.

Issue Statement: New development and an increase in visitor use within the Flamingo area has the potential to impact wildlife and vegetation (habitat) though increased water-based activities (boating and fishing) and a potential increase in trail and off-trail use. These disturbances to habitat and vegetation could negatively impact the wildlife that depends on these habitats. An increase in visitor use in the Flamingo area has the potential to increase the number and range of non-native species as existing invasive species are spread though new development and new ones are promoted though fill material or visitor introduction. Conversely, the removal of fill material in some areas may reduce the potential for exotics.

CULTURAL RESOURCES

Archeological Resources

Known archeological resources exist at the Bear Lake and Monroe Lake National Register Archeological Districts and the Mud Lake Canal National Historic Landmark as well as other significant archeological sites in the area. These resources could be impacted by increased visitor use in these areas through ground surface disturbance, potentially uncovering artifacts. Increased visitation could also increase the risk of intentional visitor damage from vandalism or looting.

Issue Statement: Archeological resources at Flamingo are located in areas with the potential for high land- and water-based recreation use. These uses could cause ground disturbance along the shoreline that could impact archeological resources. Increased visitation could also increase the risk of intentional visitor damage from vandalism or looting.

Historic Structures and Districts

Although not confirmed, the boat launches and piers on the Whitewater Bay side of the marina at Flamingo could be considered historic structures. As the Flamingo CSP moves towards completion, the exact designation of these structures will need to be determined. The buildings at Flamingo are part of the NPS Mission 66 architecture. The NPS is currently working with the State Historic Preservation Officer (SHPO) to determine the significance of these structures. To date, the park has completed a determination

of eligibility for the lodge, and cottages and has determined them not to be significant or eligible for listing in the National Register of Historic Places. The Florida SHPO concurred with this determination. Mission 66 facilities that are considered potentially eligible for the National Register of Historic Places include: Visitor Center, Service Station, original employee housing.

Issue Statement: Structures at Flamingo with the potential to be considered historic could be impacted, as new visitor uses may require modification or alterations to these structures to accommodate the increased use or new structures are constructed, potentially altering the historic landscape.

Cultural Landscapes

Although no cultural landscape has been designated for Flamingo, the Flamingo area is potentially eligible as a cultural landscape with respect to its Mission 66 construction. Many of the structures at Flamingo were part of the Mission 66 program. Mission 66 was a 10-year NPS program from 1955 to 1966 to address deteriorating park resources during a boom in domestic travel after World War II. Mission 66 involved construction of roads, camping and picnic areas, sanitary facilities, housing, and visitor centers. Museum exhibits, informational pamphlets, and audio-visual programs also were developed as a result of Mission 66. Before the 2005 storms, the NPS Southeast Region had advocated a National Register Historic District status for Flamingo based on the history of the locale, its role in the development of the park, and the Mission 66 program structures. The visitor center, the gas station, and some of the Modernist housing units may still be eligible for inclusion in a historic district.

Issue Statement: Redevelopment at Flamingo could have an impact on its potential eligibility as a cultural landscape, which is based on its Mission 66 construction.

Ethnographic Resources

As defined by the *NPS 2006 Management Policies*, ethnographic resources are the cultural and natural features of the park that are of traditional significance to traditionally associated peoples. These peoples are the contemporary park neighbors and ethnic or occupational communities that have been associated with the park for two or more generations (40 years), and whose interests in the park's resources began before the park's establishment. Living peoples of many cultural backgrounds—American Indians, Inuit (Eskimos), Native Hawaiians, African Americans, Hispanics, Chinese Americans, Euro-Americans, and farmers, ranchers, and anglers—may have a traditional association with a particular park. Traditionally associated peoples generally differ as a group from other park visitors in that they typically assign significance to ethnographic resources—places closely linked with their own sense of purpose, existence as a community, and development as ethnically distinctive peoples.

The history of Everglades National Park and the Flamingo area includes settlement and the use of waters for fishing for both sustenance and profit by both Native Americans and early settlers to the area. As stated by the NPS, "The 1910 federal census record shows 49 people living in Flamingo and Cape Sable. Most listed their profession as farming. There were ten heads of households, with 18 children and seven servants. Five people were cane farmers and one worked in charcoal making. (Charcoal was sold in 100 pound sacks at Key West.) Jobs that other individuals held were boatmen, farmer, hauling cane, cane farming (13) and one was retired. We also know from tradition that many, if not all, fished for cash and food" (NPS nd). As the development of the commercial services plan occurs, more research will need to occur to determine if the fishing community and fishing use of the Flamingo area are considered ethnographic resources that should be considered in a commercial services plan.

Issue Statement: The Miccosukee and Seminole tribes claim the Everglades as a homeland and traditional use area before the park's establishment. These tribes may have interest in potential impacts

to their traditional association to the area resulting from an increase in commercial operation. In addition, fishing for subsistence and profit has occurred at Flamingo since the early 1900s and may be considered an ethnographic use. However, since the law prohibits commercial fishing, this ethnographic use has been terminated.

VISITOR USE AND EXPERIENCE

The Flamingo area is an area of high visitor use within the Everglades National Park. Overall visitation in the park has increased in the past 10 years, with a general upward trend increasing from 820,466 visitors in 1995 to 1,233,837 in 2005. As the park as a whole has experienced upward trends in visitation, park staff have noted downward trends in visitation in the Flamingo area. This trend could be related to the reduction in visitor services over time, mostly related to loss of services from storm events in 2005. In addition to losing lodging facilities from flooding, the Flamingo area has also seen a loss of services such as boat tours and renting of house boats. Park staff noted a reduction in visitation when boat tours ceased, and an increase in visitation when they were reinstated. The peak visitation at Flamingo is roughly from November to mid-April.

Currently, the main visitor uses at Flamingo are fishing/boating and exploration (i.e. hiking and birding). Flamingo is currently considered a day-use area because it does not have the amenities that allow for a longer visit, such as a place to get a hot meal or overnight accommodations, although camping is available. Flamingo is located at least an hour's drive from similar services found outside the park, making that option inconvenient as well. Because of these conditions, visitors, such as birders, have difficulty getting to Flamingo early in the morning because of the lack of accommodations.

One visitor market that has been diminishing in recent years is visitors from Europe and Asia. Once lodging was no longer available at Flamingo, this group of visitors no longer came to the park in the numbers they came in previous years. Even for those visiting the park, many are generally unfamiliar with park resources and their significance. Currently, adequate educational opportunities do not exist to reach these park users. An increase in commercial services could provide these types of needed opportunities.

Issue Statement: Visitor use and experience at Flamingo has been negatively impacted over recent years with the loss of many of the site's amenities, resulting in the decline of visitor use of the site. Providing basic amenities, such as food services as well as other possible services such as lodging and tours, would increase visitor use opportunities and is expected to provide beneficial impacts to visitor use and experience.

NIGHT SKY

The Flamingo area of Everglades National Park is located in a remote area of the park away from other developed areas. One resource in this area to be considered in the development of a commercial services plan is the night sky. As stated in the 2006 NPS Management Policies:

The Service will preserve, to the greatest extent possible, the natural lightscapes of parks, which are natural resources and values that exist in the absence of human-caused light. The absence of light in caves and at the bottom of deep bodies of water influences biological processes and the evolution of species, such as the blind cave cricket. The phosphorescence of waves on dark nights helps hatchling sea turtles orient to the ocean. The stars, planets, and earth's moon that are visible during clear nights influence humans and many other species of animals, such as birds that

navigate by the stars or prey animals that reduce their activities during moonlit nights. Recognizing the roles that light and dark periods and darkness play in natural resource processes and the evolution of species, the Service will protect natural darkness and other components of the natural lightscape in parks. To prevent the loss of dark conditions and of natural night skies, the Service will seek the cooperation of park visitors, neighbors, and local government agencies to prevent or minimize the intrusion of artificial light into the night scene of the ecosystems of parks. The Service will not use artificial lighting in areas such as sea turtle nesting locations, where the presence of the artificial lighting will disrupt dark-dependent natural resource components of a park.

A commercial services plan that allows for increased lighting as part of lodging or other service provisions has the potential to impact the lightscape and night sky of the Flamingo area, and in turn, impact visitor experience and sea turtles which occasionally nest on Flamingo beaches. It also has the potential to manage artificial light better than it was managed in the past.

Issue Statement: Increased installation of lights visible at night at Flamingo has the potential to obscure the view of the clear night sky and impact park lightscapes, or it may minimize artificial lighting impacts so that high quality night sky and astronomy opportunities are available.

SOCIOECONOMICS

Flamingo is an area where commercial services were provided at various levels for many years and were in a declining trend in recent years. In 2005, an active hurricane season damaged most of the facilities at Flamingo, rendering them uninhabitable or largely unusable. Prior to the 2005 hurricanes, the concession services at Flamingo included 6 lodge buildings with 74 rooms, 24 cottages in 12 buildings, 127 seat restaurant, employee dining room/meeting room space, 1,200 square foot gift shop, patio and lower cost food alternative, two bars, marina with an 900 square foot retail store, houseboat rental fleet (4), rental skiffs, canoes, shuttle service to trail heads, two tour boats (one to Florida Bay, one to Whitewater Bay), overnight dockage and fuel provisions.. Currently, the only concession services provided at Flamingo are the marina store for souvenirs, apparel, groceries, bait, one tour boat, skiffs, canoes, slip rentals on the Florida Bay side of the marina and fuel. Bicycle rentals will be offered during the winter season.

Concessions at Flamingo are currently run by Xanterra, which has been operating at Flamingo since 1982. Their contract expired in 1992 and since then it has been continued on a yearly basis. The park began developing a prospectus for a new concessions contract in 2001 and hired Price Waterhouse Cooper for the evaluation. This evaluation included a financial feasibility analysis and concluded that the park could not issue a competitive contract for concessions at Flamingo because the existing operation was not financially feasible. Other factors such as downward trends in visitation, a high degree of seasonality, and deferred maintenance resulting in deteriorated infrastructure also contributed to this determination. Xanterra continued to provide concession services since this study but has decided not to operate after March 2008. To address the lack of concession services that will occur beginning in April 2008, the park is in the process of developing a new concessioner prospectus to find a new operator for the Flamingo concession until implementation of the CSP can occur.

In addition to concerns relating to the financial viability of the commercial operations at Flamingo, there were also discussions about effects of Flamingo redevelopment on the local/regional economy and especially on local businesses that are located near the park entrance/access road to Flamingo, which could be affected by the number of visitors going to and from the Flamingo area.

Issue Statement: Visitor services at Flamingo are currently being provided by a concessioner. However, visitor use levels are not high enough to make current concession operations viable. Identifying viable concession opportunities would provide beneficial impacts by increasing the number and range of commercial services available at Flamingo. In addition, there is interest as to how the redevelopment of Flamingo would affect the local economy and particularly local businesses and nearby communities.

Another issue related to the socioeconomics aspect of this project is the concern about potential sea level rise and global warming, and if the project takes into account the possibility of this affecting the newly proposed facilities. There is a substantial investment needed to rebuild or redesign Flamingo, and this plan needs to address the potential adverse economic effects of destruction by rising sea level or hurricanes and storms related to ocean warming. In 2007, the Intergovernmental Panel on Climate Change (IPCC) issued its Fourth Assessment Report, which stated that the concentration of carbon dioxide and methane in the atmosphere in the year 2005 far exceeded the normal range over the last 650,000 years and concluded that global warming is occurring (IPCC 2007). Since 1900, sea level has been rising ten times faster than over the past two millennia (IPCC 2007, in NPCA 2007). When sea level increases, shorelines, barrier islands and wetlands may adjust by moving in a landward direction. Unfortunately, the use of hard structures (jetties, groins, seawalls, etc.) to stabilize the shoreline makes landward movement impossible, causing the flooding and eventually the degradation or destruction of these ecosystems. Worldwide sea levels are expected to increase 15 to 25 inches by the year 2100 (NPS 2007). Given its low-lying topography and miles of coastline, Florida is particularly vulnerable to any rise in sea-level. With Florida's gradually-sloped shores, a 15-inch rise would equate into an approximate horizontal advance of water inland by as much as 250 feet, which could have severe irreversible impacts on low-lying areas of Florida's Everglades, including Flamingo (NWF and FWF 2006).

Along with rising sea levels, climate change may create more powerful hurricanes. Hurricanes get their energy from the ocean, and warmer oceans mean stronger storms. As sea surface temperature rises, hurricanes will likely become more intense and are likely to occur with greater frequency and with greater intensity. Apart from their powerful winds, much of a hurricane's damage comes from storm surge. Storm surge is water that is pushed toward the shore by the force of the winds swirling around a hurricane or tropical storm. When this surge is combined with the normal high tides, it creates a hurricane storm tide that can be much greater than a normal tide, and can increase inland flooding. As sea level rises, these surges will result in greater inland flooding.

Issue Statement: Due to naturally low topography, Flamingo has always been a high hazard flood zone and particularly vulnerable to storm surges from hurricanes and tropical storms. During the hurricanes of 2005, all existing structures in Flamingo, including the visitor center, lodge, restaurant, and cabins were severely damaged or destroyed by strong winds and flooding from storm surges. Recent climate simulations illustrate the complexity of the oceanic/atmospheric system and how difficult it can be to reach global conclusions about the relationship between climate change and hurricanes. What is certain, however, is that when intense hurricanes do occur, the storm surge flooding that often accompanies such storms will be exacerbated by sea level rise. The design of any future development will take into account the possible future rise in sea level, and also be designed to meet hurricane construction standards, to minimize economic losses at Flamingo.

ENERGY RESOURCES

With the exceptions of the water and wastewater systems, the existing infrastructure at Flamingo is inadequate and requires modernization. These systems include, but are not limited to, plumbing,

electrical, fire protection, building codes, and floodplain requirements. This aging infrastructure system is not energy efficient. In accordance with the NPS 2006 Management Policies, the NPS is directed to “conduct its activities in ways that use energy wisely and economically. Park resources and values will not be degraded to provide energy for NPS purposes. The Service will adhere to all federal policies governing energy and water efficiency, renewable resources, use of alternative fuels, and federal fleet goals as established in the Energy Policy Act of 1992. The Service will also comply with applicable Executive orders, including Executive Order 13123 (Greening the Government Through Effective Energy Management), Executive Order 13031 (Federal Alternative Fueled Vehicle Leadership), and Executive Order 13149 (Greening the Government Through Federal Fleet and Transportation Efficiency).”

Issue Statement: Much of the current infrastructure at Flamingo is not energy efficient nor is it in accordance with NPS guidance. The introduction of more energy efficient and sustainable resources at Flamingo as a result of a commercial services plan has the potential for beneficial impacts to energy resources.

PARK OPERATIONS AND MAINTENANCE

Flamingo is located in a remote area of Everglades National Park that is over an hour’s drive from other housing opportunities. Because of its location, in the past the concessioner has provided housing for its employees. For park staff living at Flamingo, there are limited amenities such as places for employees to gather socially and a lack of community spaces. This hinders recruitment and retention of both park and concessions staff at Flamingo. Additionally, park staff work spaces are inadequate, lacking the necessary administrative and storage space.

Implementation of a commercial services plan may result in a requirement for additional staff at Flamingo. With an increase in services and potential increase in visitation, more demands would be placed on all divisions to manage this increased use in relation to the resources, as well as to manage additional concessioners.

Issue Statement: An increase in services and potential increase in visitation to Flamingo could place an increased demand on park resources, requiring either reallocation of existing resources or hiring of additional staff. Lack of housing and other amenities for park staff limits recruitment and retention of park staff. Beneficial impacts could occur by improving conditions for park staff located at Flamingo and restoring opportunities for housing of seasonal staff.

ISSUES ELIMINATED FROM FURTHER CONSIDERATION

The following issues/impact topics were dismissed from further consideration. The rationale for dismissal is provided below.

- **Geohazards:** There are no known geohazards in the park that would be affected by the implementation of a commercial services plan.
- **Museum Collections:** Museum collections housed at the Flamingo area of Everglades National Park will continue to be maintained according to NPS standards and activities associated with the CSP would not impact these collections; therefore, this topic was not carried forward for further analysis.

- **Urban Quality and Gateway Communities:** Although Homestead, Florida City and the Redland area of South Miami-Dade County are located adjacent to the park and provide food and lodging for a number of park visitors, these communities are not officially-designated gateway communities for the park; however, it is recognized that the park and the services it provides can have an effect on local businesses and socioeconomic factors in these communities. Therefore, the potential socioeconomic impacts related to the Flamingo CSP on these communities and local businesses are addressed under the “Socioeconomics” impact topic, but a separate gateway communities’ impact topic was not included in this CSP/EA.
- **Environmental Justice:** Implementation of a commercial services plan is not expected to impact any minority or low income populations. These activities would take place within the park boundaries and would not directly impact these populations in surrounding communities.
- **Land Use:** The team had concerns that historical land use patterns at the Flamingo area have created a widely dispersed footprint on the site, which has resulted in difficulty accessing the site just by walking and a building pattern that is aesthetically unpleasing with related uses not being linked, which creates confusion for visitors and staff alike. However, the team recognized that the land use patterns would be part of the impacts addressed within other topics considered and analyzed, so that land use would not be needed to be addressed as a separate impact topic, which would create overlap and repetition. Therefore, land use was dropped as a separate impact topic.
- **Health and Safety:** The team noted some health and safety requirements, including ABAAS accessibility. The current facilities at Flamingo have health and safety concerns including being uninhabitable and containing hazardous materials. Planned replacement of these facilities would need to address these issues. However any actions taken would require adherence to federal, state, and local regulations that are in place and must be followed during construction or demolition of any facilities, as well as continued operation at Flamingo. Adherence to these regulations would result in negligible adverse effects. Safety issues relating to hurricanes and floodplain would be addressed in other impact topics and through the design of the facilities. Therefore, this was not carried forward as a separate impact topic.
- **Marine or Estuarine Resources:** The marine and estuarine resources of the Flamingo area include important park elements such as submerged aquatic vegetation (seagrass communities), mangroves, wading birds, crocodiles, manatees, and wetlands. These elements collectively form a valuable entity to be considered in the development of Flamingo, and “marine and estuarine resources” is a screening category to identify concerns during internal scoping. However, all of the key elements that comprise this category are addressed under other impact topics included in this EA (wildlife and wildlife habitat, endangered and threatened species, wetlands, water quality). Therefore “marine and estuarine resources” is not addressed as a separate topic in this EA.
- **Sediments:** the construction of the new chickees in the subtidal zones of Rankin and Johnson Keys would directly and permanently impact a very small area of marine sediments where pilings are installed, and there would be some temporary and again very limited disturbance of sediments in the area of construction. Since impacts to water quality and biota related to this disturbance are discussed under other topics of the EA, and because of the small area of sediments involved and the short-term impact of any disturbance to surrounding sediments, this topic was not analyzed in detail in the EA.

RELATIONSHIP TO OTHER PLANS, POLICIES, AND ACTIONS

NATIONAL PARK SERVICE PLANS, POLICIES, AND ACTIONS

Park and National Park Service plans, policies, and actions beyond those listed previously that may influence the development of a commercial services plan for Flamingo are provided below.

Everglades National Park

Comprehensive Interpretive Plan. A comprehensive interpretive plan identifies focal points by which the park can maximize visitor enjoyment while ensuring the protection of natural resources. The plan typically coincides with the park General Management Plan as well as the Strategic Management Plan. Comprehensive interpretive plans can assist in educating visitors on services, proper park etiquette, and practices to assist the park in conservation. In addition, this plan can be utilized by park staff to ensure a proper balance is made between visitor enjoyment and protection of resources (NPS 2005a). The Everglades Comprehensive Interpretive Plan began in January 2007. Interpretation is a large part of visitor experience at the park and often accompanies concessioner-run services.

Fire Management Plan. The park is currently completing NEPA documentation for the updated Everglades National Park Fire Management Plan. The presence of a critically-endangered species (Cape Sable seaside sparrow), threatened habitat (pine rockland savannas), human disturbance to buffer zones, and many drought years have required additional parameters be added to the original Fire Management Plan. Currently, prescribed burns are utilized for restoration of habitat, hazard fuel reduction, and special resource needs. However, this plan does not account for human impact to natural fire paths. The NPS proposes an update to the current plan to include a more objective view of prescribed burns, based on fire management needs and actions such as full suppression, limited suppression, or no suppression. Additional studies are proposed on management of threatened and endangered species and added as an appendix to the revised Fire Management Plan, scheduled for completion in 2008. Fire management actions are considered under cumulative impacts on such resource areas as air quality and vegetation under this plan.

Flamingo Potable Water System Improvement. In 2002, a Finding of No Significant Impact (FONSI) was determined for the Flamingo Potable Water System Improvements. The improvements included plugging and abandoning the existing (shallow, freshwater) wells and 16-mile transmission line, drilling two new (deeper, saltwater) wells near the existing water treatment plant, installing a reverse osmosis treatment system in the water treatment plant, and replacing the distribution system on an as-needed basis. The improvements ensure a safe and adequate long-term supply of potable water for visitors and park employees. It also results in long-term beneficial cumulative impacts to several resources addressed in this plan, including water quality and hydrology, wetlands, wildlife and vegetation, and visitor experience.

Flamingo Wastewater Treatment Plant. In 2003, the Environmental Assessment and FONSI for the Flamingo Wastewater System Improvements were completed, identifying the environmental impacts associated with proposed improvements to the wastewater system as well as the NPS need to add wastewater treatment services. The improvements included upgrading the current wastewater plant and collection system serving the Flamingo area of the park. The park modified and improved the wastewater treatment plant, retaining and demolishing certain portions of the plant, and upgrading deteriorated sections of the collection system. In addition to providing a more efficient and environmentally sound operation, the improvements enabled the facility to meet EPA Class III reliability standards and systematically make the facility less vulnerable to hurricane impacts by raising the facility 11 feet (NPS

2003). The wastewater treatment plant has contributed to cumulative effects on several resource topics considered in this plan, particularly water quality.

National Register of Historic Places. Several facilities and/or structures are currently under consideration for nomination to the National Register of Historic Places (NRHP) including several Mission 66 structures at Flamingo, and the potential nomination of areas to the Underground Railroad network, and the historic Ingraham Highway and associated canals. The Bear Lake mounds complex is a National Register listed Archeological District. The pre-historic Mud Lake Canal was designated a National Historic Landmark (NHL) on September 20, 2006. Other archeological sites in the Flamingo area are potentially eligible for NHL or NRHP designation.

Mission 66 was a federally-sponsored program to improve deteriorated and dangerous conditions in the national parks, the result of a massive visitor boom after World War II. The projects began in 1956 and ended in 1966. During those ten years, more than \$1 billion was spent on infrastructure and other improvements in the parks, including at Everglades National Park.

Proposed/Funded Projects. Projects currently entered into the Project Management Information System (PMIS) for the Flamingo area include the removal of underground storage tanks. In 1998, the Florida Department of Environmental Protection published the *Storage Tank System Closures Assessment Requirements*, detailing requirements for storage tank system closure assessment and monitoring and correction for possible levels of contamination. This study outlined the steps an owner or operator must take including system removal, replacement, soil and groundwater samples, and documentation and supporting data (FDEP 2006). The park will be removing underground storage tanks at Flamingo, which will contribute to beneficial cumulative impacts on water quality. The park is also scheduled to resurface the roads and parking facilities at Flamingo in Fiscal Year 2011, which will affect several resource areas considered in this plan. Finally, the Geological Society of America noted the transgression of Cape Sable over the past 75 years, including erosion damage from hurricane activity (Geological Society of America 2002). Options for better protecting and restoring Cape Sable are being investigated.

Wayside Exhibit Plan. In 2001, the *Everglades National Park Parkwide Wayside Exhibit Proposal* was published, identifying markers to be distributed throughout the park for visitor information and enjoyment, which will contribute to cumulative beneficial effects on visitor experience in the park. Opportunities for enhancing visitor's enjoyment included answers to on-the-spot questions, available interpretation of sites, direct interaction with park facilities, and close proximity to features. In addition, the exhibits are a cost efficient and easily maintained method of display for the park (NPS 2006d).

Proposed Entrance Fee Increase. In 2007, the NPS initiated an effort to evaluate entrance fees for all parks in the national park system. In response to that effort, the park held two public meetings to provide the public the opportunity to discuss the proposed fee increases and to obtain public input. Following the comment period, a recommendation on fee increases was developed and submitted to the National Park Service Washington D.C. office for final review and action. Based on input, the NPS received from across the country, including many comments opposing the proposed fee increases, the NPS has decided to postpone the consideration of any entrance fee increases until at least 2009.

The entrance fees at the main entrance to Everglades National Park remain:

- Daily fee \$10.00 (good for 7 days)
- Everglades Annual Pass (good in Everglades NP only) \$25.00
- Boat Launch Annual Pass \$60.00

- Golden Age Passport \$10.00 Boat Launch \$30.00
- National Park Pass (for national parks only) \$50.00
- Hologram (good in other sites such as memorials) \$15.00
- Walk or ride in fee \$5.00

The entrance fees would continue to be valid for seven days and accepted at all Park entrance fee areas. A decision on the proposed increases and implementation of new fees are anticipated by late 2007 or early 2008.

In order to keep entrance fees aligned with cost increases, beginning in 2011, entrance fees will be adjusted based on changes to the cumulative Consumer Price Index (CPI) calculated from 2007 to 2011. This same analysis will be conducted every three years thereafter and fees adjusted accordingly. This will help to keep entrance rates in alignment with changes in the value of the dollar, cost increases, and other financial considerations over time. The entrance fee at the Main Entrance Station at Everglades National Park has not increased in 10 years. A large portion (80 percent) of national park entrance and other user fees are returned directly to the parks where they are collected. The fees provide direct benefits to park visitors such as improving the condition of facilities, natural and cultural resource preservation, and interpretation of the park's resources.

Other Plans/Programs. In addition to the plans provided above, Everglades National Park has a Hurricane Response Plan and Mosquito Control Program that are currently followed at the park. The park's Mosquito Control Plan is being reviewed/updated for controlling mosquito populations in isolated and controlled areas. This action will occur seasonally (typically May through October) within the housing area and maintenance yards in the Flamingo district. The purpose of the plan is to limit NPS/Concession employee exposure to mosquito vectors, enhance worker safety during routine activities, and ultimately improve quality of life for park employees. This plan will also include spraying of adjacent Flamingo concessions employee housing, but would not include any concession maintenance areas and/or facilities.

South Florida and Caribbean Parks Exotic Plant Management Plan. Currently the NEPA process is underway for the development of an Exotic Plant Management Plan for Big Cypress National Preserve, Biscayne National Park, Canaveral National Seashore, Dry Tortugas National Park, Everglades National Park, Buck Island Reef National Monument, Christiansted National Historic Site, Salt River Bay National Historic Park and Ecological Preserve, and Virgin Islands National Park. Guidelines put forth proposed management and control of non-native plant species, including future implementation. All of these actions can contribute to cumulative impacts on resources in the Flamingo area, especially vegetation. Currently, exotic plants are treated on a case-by-case basis in the nine parks. The NPS is considering alternate management plans to increase planning, monitoring, and mitigation of non-native species. In addition, active restoration programs have also been proposed to rehabilitate targeted areas and reintroduce native species. The draft management plan and EIS were released for public review and comment in November 2006. Completion of the final exotic plant management plan/EIS and a record of decision are anticipated in late 2007.

OTHER FEDERAL PLANS, POLICIES, AND ACTIONS

Comprehensive Everglades Restoration Plan (CERP). The comprehensive plan is a framework and guide to restore, protect, and preserve the water resources of central and southern Florida, including several projects affecting Florida Bay. The plan is a component of the world's largest ecosystem restoration effort; encompassing 16 counties and an 18,000-square-mile area. CERP includes more than 60 elements designed to capture, store and redistribute fresh water previously lost to tide and to regulate

the quality, quantity, timing and distribution of flows. Eight CERP projects are intended to provide improvements to flows in and around Everglades National Park. Implementation of CERP will take more than 30 years to complete and will cost an estimated 15 or more billion dollars. Should the CERP projects be successfully implemented, the park should experience improvements to the quality, quantity, timing and distribution of water flows.

Manatee Management Plan. In 2001, the U.S. Fish and Wildlife Service Southeast Region published a third revision to the *Florida Manatee Recovery Plan*, which identified information on the manatee's endangered status, as well as presented recovery goals and criteria to ensure a healthy population, and ultimate removal from the endangered list. Future management and information exchange with researchers throughout the world is also outlined. The plan is part of the Comprehensive Everglades Restoration Plan and is part of ongoing research from scientists in the Florida Integrated Science Center, Florida Marine Research Institute, Ten Thousand Islands National Wildlife Refuge, Big Cypress National Preserve, and Everglades National Park (USGS 2005). Manatees are found in waters surrounding Flamingo, and this plan will contribute to their protection.

OTHER STATE AND LOCAL PLANS, POLICIES, AND ACTIONS

Other state and local plans, policies, and actions that will need to be considered during the development of a commercial services plan include several Florida Department of Transportation projects in the area related to the Tamiami Trail and U.S. Highway 1, research efforts in the park, and a number of local planning efforts. The plans and actions identified below are not all-inclusive at this point in the planning process.

Biscayne-Everglades Greenway. The City of Homestead, Miami-Dade County, the Florida Office of Greenways and Trails, Biscayne and Everglades National Parks, the Rivers, Trails and Conservation Assistance Program of the National Park Service, numerous organizations, local businesses and citizens are collectively working together to develop a multi-purpose trail and greenway that will link south Miami-Dade communities with Biscayne and Everglades National Parks. The greenway is intended to be a multi-purpose trail system linking area natural, cultural, and historical assets of South Miami-Dade County, enhancing the quality of life for residents while offering a unique transportation for national and international visitors to experience the area (City of Homestead).

Florida Circumnavigation Saltwater Paddling Trail. A project of the Office of Greenways and Trails, this paddling trail is intended to establish a sea kayak trail around the State of Florida. This project will bring thousands of paddlers to various areas along the 26 segments that range from the Everglades/Florida Bay wilderness to the urban environment of Fort Lauderdale. Planning for Segment 14, which will include the Wilderness Waterway and Florida Bay in Everglades National Park, began in January 2006. The entire trail is scheduled to open in 2008. The paddling trail project will assist in educating those who utilize the trail about the 37 aquatic preserves and coastal state parks in the state. Each segment has reliable managers to coordinate with land managers, private businesses, and volunteers. Supporting departments include the FDEP's Coastal and Aquatic Managed Areas, the South Florida Water Management District, and the Florida Wildlife Federation. The beginning phases began in November of 2004 and will continue through 2008 (FDEP 2005).

Miami-Dade Busway Extension. In 1985, the Florida Department of Transportation and the Federal Highway Administration completed an investment study that recommended a busway dedicated to rapid bus transit service be constructed to alleviate daily traffic congestion from Dadeland South Metrorail Station to Florida City. Phase I was constructed and completed in 1997, as well as the Preliminary

Engineering Report/Draft Environmental Impact Statement, which named the busway as the preferred alternative of the local community. The extension to the busway service increases the route from 8.5 miles to 13.5 miles, running alongside US Route 1, with a southern terminus in Florida City, and is expected to be completed in November 2007 (Federal Transit Administration 2000; American Public Transportation Association 2003).

Recreational Facility Closures. Several recreational vehicle campground and park facilities near Everglades National Park have recently closed. In addition, local public boat launches have been lost due to private sector acquisition and development in the region.