

ALTERNATIVES, INCLUDING THE PREFERRED ALTERNATIVE 2



Visitors at Anhinga Trail



Golden Silk Orbweaver

INTRODUCTION

This chapter of the general management plan presents four alternatives, including the NPS preferred alternative, for future management of Everglades National Park. The alternatives were developed through a lengthy, collaborative process that is described in more detail in the following section.

This chapter also includes sections on implementation of the general management plan, management zones, user capacity, mitigative measures common to all action alternatives, the environmentally preferred alternative, and actions/alternatives dismissed from detailed analysis. A table that summarizes the key differences between the alternatives and a table that summarizes the expected impacts of implementing the alternatives are also included. (The latter table is based on the analysis in Chapter 5: Environmental Consequences.)

IMPLEMENTATION OF THE GENERAL MANAGEMENT PLAN

Although this general management plan provides the analysis and justification for future national park funding proposals, this plan does not guarantee future NPS funding. Many actions would be necessary to achieve the desired conditions for natural resources, cultural resources, recreational opportunities, and facilities as envisioned in this plan. The plan establishes a vision of the future that will guide day-to-day and year-to-year management of the national park, but full implementation would likely take many years.

The park will request funding to achieve these desired conditions; although the park hopes to secure this funding and will prepare itself accordingly, the park may not receive enough funding to achieve all desired conditions. National park managers will continue to pursue other options, including

expanding the service of volunteers, drawing upon new or existing partnerships, and seeking alternative funding sources, including the philanthropic community. Many potential partner groups exist whose missions are compatible with that of the national park and these groups may offer to work with the park for mutual benefit.

DEVELOPMENT OF THE ALTERNATIVES

Much of the guidance for managing Everglades National Park is defined in the park's purpose and significance statements, special mandates, servicewide laws and policies, and desired conditions (see chapter 1). Within these sideboards, the National Park Service solicited input from the public, NPS staff, government agencies, tribes, and other organizations regarding planning issues and management direction for the national park. Public scoping meetings were held in 2003, and in 2004 a dozen focus group meetings were held with various community and interest groups to begin gathering ideas for alternatives.

Management alternatives were then developed through a progression of collaborative planning steps, incorporating public input and information about visitor use, facilities, and park resources. In 2005, the first preliminary management alternatives were approved by the NPS regional director. In 2006, the scope of the planning project changed to include a wilderness study for the East Everglades Addition. After first determining which portions of the East Everglades have wilderness characteristics and are therefore eligible to be considered for wilderness designation, the planning team developed wilderness options for the East Everglades Addition and incorporated those options into the preliminary alternatives.

In 2007, four preliminary general management plan / wilderness study alternatives, named alternative A (no-action), alternative B, alternative C, and alternative D, were presented to the public in GMP Newsletter 4. A series of public meetings about these alternatives were then held. There was intense public interest in the management options for marine areas. (In fact, some groups were prompted to suggest new alternatives for the marine areas.) On the basis of this interest, park managers promised to reconsider marine aspects of the alternatives after undertaking additional studies. In 2007 and 2008, two studies were conducted, and after undergoing peer review they were released to the public in early 2009. The first study dealt with boat use in the park and is discussed in chapter 4 under “Visitor Use” under the subheading “Annual and Seasonal Visitation.” The second study on propeller scarring of seagrass in Florida Bay is discussed in chapter 4 under “Vegetation” in the subsection on “Vegetation by Habitat Types.” These two studies were key to developing the revised alternatives for marine areas. The complete studies are available through links on the park’s website.

Based on these studies and many ideas from the public, the planning team then developed revised alternatives for marine areas of the park. These revised alternatives for marine areas of the park were alternative 1 (the no-action alternative), alternative 2, alternative 3, and alternative 4. They were distributed for public comment in 2009 in GMP Newsletter 5, and more public and stakeholder meetings were held. After reviewing all public and agency input received to date and conducting additional follow-up work, the planning team refined the general management plan alternatives again, retaining alternatives 1–4 labels. Finally, the planning team analyzed the probable impacts of implementing these alternatives.

DEVELOPMENT OF THE NPS PREFERRED ALTERNATIVE

Next, the planning team turned its attention to developing a preferred alternative that reflected its best thinking and input from the public. This process included using a tool called “Choosing by Advantages.” This involves identifying and comparing the relative advantages of each alternative according to a set of evaluation factors. The following six factors (listed in no particular order) were used to evaluate the alternatives for the Choosing by Advantages process:

1. allows natural conditions and processes to be maintained and restored
2. preserves cultural resources (archeological and ethnographic resources, historic structures, and cultural landscapes)
3. provides an appropriate range of visitor opportunities
4. establishes/maintains wilderness character
5. improves operational efficiency
6. provides other advantages to Everglades National Park, partners, and/or stakeholders

The team then looked at the relationships between the *advantages* of the alternatives (based on information from the impact analysis that was conducted earlier) and the dollar costs of the alternatives. Using this information, the team combined the best attributes of the preliminary alternatives into an NPS preferred alternative providing the greatest overall benefit while also considering costs.

Once the NPS preferred alternative was developed, alternative 3 was dropped from detailed analysis because the NPS preferred alternative was similar, a reasonable range of alternatives could be maintained without it, and for cost and document length reasons. Thus, four alternatives are analyzed in this document—no-action (alternative 1), NPS

preferred alternative, alternative 2, and alternative 4.

The early alternatives developed for this plan were more extensive in their costs and scope for one-time facility construction improvements at both the Flamingo and Gulf Coast visitor center sites.

Continued scoping and internal review resulted in refinement of the alternatives that reduced proposed one-time facility construction improvements and rehabilitation costs, as well as long-term operational commitments.

A discussion of the process and issues identified as well as how the alternatives were refined is included in this chapter.

Other issues identified in more recent scoping and review focused on how to support the long-term resilience of the national park from expected impacts from climate change such as sea level rise, increased coastal erosion, and higher storm surges.

POTENTIAL FOR BOUNDARY ADJUSTMENTS

The National Park and Recreation Act of 1978 requires general management plans to

address whether boundary modifications should be made to park units. Boundary adjustments may be recommended in order to

- protect significant resources and values or to enhance opportunities for public enjoyment related to park purposes
- address operational and management issues such as the need for access or the need for boundaries to correspond to logical boundary delineations such as topographic or other natural features or roads
- otherwise protect park resources that are essential to fulfilling park purposes

In the case of Everglades National Park, no specific boundary adjustments were identified as being needed. Thus, none of the alternatives in this general management plan propose changes to the park boundary. This plan does not preclude future consideration of boundary adjustments should needs or conditions change. The boundary has been adjusted in the past in fairly small increments where opportunities have arisen to provide mutual benefits to the National Park Service and other agencies or entities. The park would continue to consider these opportunities on a case-by-case basis.

MANAGEMENT ZONES

The building blocks for a general management plan are the management zones (discussed in this section) and the alternatives (discussed in the next section). All are developed within the scope of the park's enabling legislation, purpose, significance, legislation, and special mandates.

Management zones are descriptions of desired conditions for park resources and visitor experience in different areas of the park. Each management zone description includes desired conditions for natural and cultural resources, visitor opportunities and experiences, appropriate facilities, and management/research activities. The management zones for Everglades National Park were first presented to the public in May

2007 in GMP Newsletter 4—they were then revised based on public comment and further consideration.

In formulating the alternatives that are discussed in the following section, the management zones were placed in different locations in the park according to the overall intent (concept) of each alternative. Because the management zones prescribe desired (new) conditions, they have not been applied to the no-action alternative (alternative 1).

An overview of the management zones for Everglades National Park is provided on the following pages, with more detail in table 1, which follows.

Developed Zone

These are the main visitor facility and service areas, including facilities and services related to visitor orientation and information. This zone also accommodates NPS operational facilities. This zone does not occur in designated wilderness.



School group at Royal Palm area



Entrance to the park; Ernest Coe Visitor Center/Park Headquarters buildings

Frontcountry Zone

These are easily accessible attraction areas that provide opportunities for many visitors to enjoy and learn about the park. This zone does not occur in designated wilderness.



Guided bike trip in Long Pine Key



Commercial airboat tour in the East Everglades

Boat Access Zone

This water zone provides access to various types of recreational watercraft, including motorboats. This zone may occur on surface waters above (overlying) designated submerged marine wilderness.



Boat trip on Florida Bay

Pole/Troll Zone

This water zone protects vulnerable shallow marine areas while allowing watercraft propelled by paddles, poles, or trolling motors. This zone may occur above (overlying) designated submerged marine wilderness.



Flats fishing in Florida Bay



Florida Bayflats and keys

Backcountry (Nonmotorized) Zone

(Water)

(Land)

This is the wildest zone, providing opportunities for tranquil, nonmotorized wilderness experiences on land and water. This zone may occur in designated wilderness (land) or above (overlying) submerged marine wilderness.



Paddling in the backcountry



Coastal Prairie Trail

Special Protection Zone

This land or water zone protects key sensitive wildlife areas or areas serving as long-term ecological benchmarks for research. They are managed to protect the physical structure of habitats and ecological processes. This zone may occur in designated wilderness (land) or above (overlying) submerged marine wilderness.



Joe Bay



Ibis and Roseate Spoonbills roosting

TABLE 1. EVERGLADES NATIONAL PARK MANAGEMENT ZONES

	Attribute	Developed Zone	Frontcountry Zone	Boat Access Zone*	Pole/Troll Zone	Backcountry (Nonmotorized) Zone	Special Protection Zone
Overview	Management Zone Overview	These are the main visitor facility and service areas, including facilities and services related to visitor orientation and information. This zone also accommodates NPS operational facilities. This zone does not occur in designated wilderness.	These are easily accessible attraction areas that provide opportunities for many visitors to enjoy and learn about the park. This zone does not occur in designated wilderness.	This water zone provides access to various types of recreational watercraft, including motorboats. This zone may occur on surface waters above (or overlying) designated submerged marine wilderness. *The three light blue colors give a general indication of water depth (darker is deeper).	This water zone protects vulnerable shallow marine areas while allowing watercraft propelled by paddles, poles, or trolling motors. This zone may occur on surface waters above (or overlying) designated submerged marine wilderness.	This is the wildest zone, providing opportunities for tranquil, nonmotorized wilderness experiences on land and water. This zone may occur in designated wilderness (land) or above (overlying) submerged marine wilderness.	This land or water zone protects key sensitive wildlife areas or areas serving as long-term ecological benchmarks for research. They are managed to protect the physical structure of habitats and ecological processes. This zone may occur in designated wilderness (land) or above (overlying) submerged marine wilderness.
Desired Resource Conditions	Natural Resource Conditions	Resources are protected, but may be substantially modified to allow for high levels of visitor use and to meet visitor and operational needs. Tolerance for resource impacts is moderate to high.	Resources are protected, but may be modified to provide visitor access to park resources. Natural processes remain largely intact. Tolerance for resource impacts is moderate.	Aquatic and benthic resources are maintained in a near-natural condition, supporting healthy interaction among human, plant, and wildlife communities. Natural resources and processes predominate. Evidence of recreational impacts is minimal. Tolerance for resource impacts is low.	Aquatic and benthic resources are maintained in a near-natural condition, supporting healthy interaction among human, plant, and wildlife communities. Natural resources and processes predominate, with emphasis on the preservation of shallow water habitats. Evidence of recreational impacts is minimal. Tolerance for resource impacts is low.	Natural resources (including aquatic and benthic resources) are maintained in a near-natural condition, supporting healthy interaction among human, plant, and wildlife communities. Natural resources and processes predominate. Evidence of recreational impacts is minimal. Tolerance for resource impacts is low.	Natural resources (including aquatic and benthic resources) are maintained in a near-pristine, intact condition for the purpose of maintaining a long-term baseline to measure ecological changes. Key sensitive wildlife areas are protected and preserved, allowing wildlife to thrive and reproduce. Tolerance for resource impacts (especially to exceptional or critical resources) is very low.
	Cultural Resource Conditions	Archeological and ethnographic resources are identified, documented, and protected. Resource impacts are avoided to the extent possible, and unavoidable impacts are mitigated. Historic structures and cultural landscapes are identified, stabilized, preserved, rehabilitated for adaptive use, or restored.	Archeological and ethnographic resources are identified, documented, and protected. Resource impacts are avoided to the extent possible, and unavoidable impacts are mitigated. Historic structures and cultural landscapes are identified, stabilized, preserved, rehabilitated for adaptive use, or restored.	Submerged cultural resources, including archeological and ethnographic resources, are identified, documented, and protected. Resource impacts are avoided to the extent possible, and unavoidable impacts are mitigated.	Submerged archeological (and ethnographic resources) are identified, documented, and protected. Resource impacts are avoided to the extent possible, and unavoidable impacts are mitigated.	Archeological and ethnographic resources are identified, documented, and protected. Resource impacts are avoided to the extent possible and unavoidable impacts are mitigated. Historic structures and cultural landscapes are stabilized and preserved.	Archeological and ethnographic resources are identified, documented, and protected. Tolerance for resource impacts is very low. Unavoidable impacts are mitigated. Historic structures and cultural landscapes are stabilized and preserved.
	Natural Sights and Sounds	Sights and sounds of human activities may make it difficult to observe natural sights and sounds.	Sounds and sights of human activities may make it difficult to observe natural sights and sounds.	Natural sights and sounds predominate, except for the sound of motorboats.	Natural sights and sounds predominate.	Natural sounds and sights predominate.	Natural sounds and sights predominate.
Visitor Opportunities and Experiences	Visitor Opportunities	Common visitor activities include scenic driving, viewing scenic vistas, taking short walks, picnicking, camping in developed campgrounds, visiting indoor interpretive exhibits, attending interpretive programs, and procuring supplies and services. High use levels are accommodated, and encounters with others are likely. Basic necessities and conveniences are provided so visitors do not need a high degree of self-reliance or outdoor skills.	Common visitor activities include scenic driving, short hikes, bicycling, fishing, camping, commercial airboat tours, viewing outdoor wayside exhibits, attending interpretive walks, etc. High use levels are accommodated, and encounters with others are likely. Expectations for solitude are low during peak visitor periods.	Common visitor activities include motorboating, paddling, fishing, nature/wildlife viewing, camping at designated sites, and taking guided tours. Expectations for solitude are relatively low, but solitude usually can be found if sought. Visitors are self-reliant and require strong marine and navigational skills unless they are with a commercial tour or guide. There are good opportunities for challenge and adventure.	Common visitor activities include boating (with propulsion by paddles, trolling motors, or poles), fishing, nature/wildlife viewing, camping at designated sites, and taking guided tours. Combustion engines must be trimmed up and not used in this zone. Expectations for solitude are relatively low, but solitude usually can be found if sought. Visitors are self-reliant and require strong marine and navigational skills unless they are with a commercial tour or guide. There are good opportunities for challenge and adventure.	Common visitor activities include hiking, paddling, fishing, nature/wildlife viewing, camping at designated sites, and taking guided tours To preserve wilderness character, motorized and mechanized vehicles are not permitted. (Motorboats are permitted in emergency situations.) Expectations for solitude are relatively high, and solitude can be found in most areas. Visitors are fully self-reliant and immersed in nature. There are outstanding opportunities for challenge and adventure.	Not open to public access, but visitors understand the need for and support these special protection areas.

TABLE 1. EVERGLADES NATIONAL PARK MANAGEMENT ZONES

	Attribute	Developed Zone	Frontcountry Zone	Boat Access Zone*	Pole/Troll Zone	Backcountry (Nonmotorized) Zone	Special Protection Zone
	Orientation / Interpretation	Opportunities for visitors to obtain orientation to and information about the park are readily available through visitor centers, ranger-led programs, self-guided trails, and wayside exhibits. Opportunities to interpret cultural, natural, and wilderness resources are identified, developed, and integrated into park programs.	Opportunities for visitors to obtain orientation to and information about the park are readily available; site specific information is emphasized. Opportunities include ranger-led programs, self-guided trails, and wayside exhibits. Opportunities to interpret cultural, natural, and wilderness resources are identified, developed, and integrated into park programs.	Visitors are provided with orientation, resource protection, and boating safety information before entering this zone. Visitor education is relied upon to a large extent to prevent impacts from recreational use.	Visitors are provided with orientation, resource protection, and boating safety information before entering this zone.	Orientation information is not provided within this zone, but is available elsewhere.	Information gained through research in portions of this zone is shared with visitors off-site, through the park's interpretation and education programs.
	Commercial Services	Appropriate commercial services include lodging, camping, food service, merchandise and fuel sales, boat rentals, canoe/kayak rentals and livery service, bicycle rentals, and shuttle service. Commercial tours (e.g., tram and boat tours) and guide service may be procured in this zone.	Appropriate commercial services include camping, bicycle rentals, and limited convenience concessions. Commercial tours (e.g., tram, boat, and airboat tours) and guide services may be procured in this zone.	Appropriate commercial services include tours (e.g., boat tours) and guide services.	Appropriate commercial services include boat tours and guide services (boats propelled by paddle, pole, or trolling motor).	Appropriate commercial services include nonmotorized tours and guide services.	No commercial services are appropriate in this zone.
Facilities	Appropriate Facilities	Facilities accommodate high levels of visitor, administrative, and operational use safely and efficiently. This zone may include facilities such as visitor centers, roads, parking areas, lodging, campgrounds, picnic areas, surfaced walkways, and trailheads and trails. Operational facilities such as employee housing, administrative offices and maintenance areas may also be present.	Facilities facilitate visitor access and enjoyment of easily accessible resource attractions. Limited visitor facilities (wayside exhibits, trails and trailheads, parking areas, roads) are appropriate. Existing disturbed sites are used where feasible.	Facilities are minimal and may include navigational aids, signs, research facilities, docks, and chickees (backcountry platforms).	Facilities are minimal and may include navigational aids, signs, research facilities, docks, and chickees.	Facilities are minimal and may include navigational aids, signs, research facilities, docks, designated campsites, chickees, and maintained trails. In designated wilderness, any facilities are consistent with NPS wilderness management policies.	Facilities are minimal and may include navigational aids, signs, and research plot markers and apparatus authorized by NPS permit. No visitor use facilities are present. In designated wilderness, any facilities are consistent with NPS wilderness management policies.
Management and Research	Management and Research	Most NPS management activities are associated with supporting visitor use and park operations, and mitigating adverse impacts from visitor use.	Management is focused on maintaining visitor facilities, mitigating adverse natural and cultural resource impacts from visitor use, and providing high quality visitor experiences.	Management is focused on preserving natural resources and processes. As necessary, restoration activities are conducted to restore degraded or damaged areas. Relatively high levels of management and visitor education are needed to ensure resource protection and safety and a range of desirable visitor experiences.	Management is focused on preserving natural resources and processes. As necessary, restoration activities are conducted to restore degraded or damaged areas. Relatively high levels of management and visitor education are needed to ensure resource protection and safety and a range of desirable visitor experiences.	Management is focused on preserving natural and cultural resources. As necessary, restoration activities are conducted to restore degraded or damaged areas. Relatively low levels of management and visitor education are needed to ensure resource protection and safety and ensure a range of desirable visitor experiences. In designated wilderness, natural and cultural resource management activities and research and other administrative uses are consistent with NPS wilderness management policies.	Management is focused on preserving natural resources and processes. As necessary, restoration activities are conducted to restore degraded or damaged areas. Research activities such as conducting baseline inventories and resource condition assessments may be permitted and are nonmanipulative. In designated wilderness, natural and cultural resource management activities and research and other administrative uses are consistent with NPS wilderness management policies.

TABLE 1. EVERGLADES NATIONAL PARK MANAGEMENT ZONES

	Attribute	Developed Zone	Frontcountry Zone	Boat Access Zone*	Pole/Troll Zone	Backcountry (Nonmotorized) Zone	Special Protection Zone
	<i>Permit Requirements and Restrictions</i>	None	None	Localized areas may be closed to public use for restoration or resource protection purposes.	Localized areas may be closed to public use for restoration or resource protection purposes.	Motorized and mechanized vehicles are not permitted. There may be limits on numbers of visitors, length of stay, group size, and overnight use to protect resources or visitor experiences. Localized areas may be closed to public use for restoration or resource protection purposes.	No public access is allowed. Infrequent administrative and research access (permit is required) may be allowed.

ALTERNATIVES

This *General Management Plan / Wilderness Study / Environmental Impact Statement* presents four alternatives, including the NPS preferred alternative, for future management of Everglades National Park. Alternative 1, the no-action alternative, represents continuation of existing management direction and is included as a baseline for comparing the consequences of implementing the other action alternatives. The action alternatives are the NPS preferred alternative, alternative 2, and alternative 4. (Alternative 3 was created during an early phase of alternative development, but was dropped from detailed consideration in this plan. See the “Alternatives and Actions Considered but Dismissed from Detailed Evaluation” section later in this chapter for more information.) These three action alternatives present different ways to manage resources and visitor use and improve facilities and infrastructure at the national park. Each of the alternatives has an overall concept, followed by a more detailed description of how different areas of the park would be managed (management zones and related actions). These alternatives embody the range of what the National Park Service and most members of the public want to see

accomplished with regard to natural resource conditions, cultural resource conditions, visitor use, and visitor experience at the park.

Continued scoping and internal review resulted in refinement of the alternatives that reduced proposed one-time facility construction improvements and rehabilitation costs, as well as long-term operational commitments.

As noted in “Guidance for the Planning Effort” in chapter 1, the National Park Service would continue to follow laws, policies, and special mandates regardless of the alternatives considered in this plan. These laws, policies, and mandates are not repeated in this chapter. However, other aspects of management would differ among the alternatives, and those aspects are the focus of this chapter.

The alternatives do not include many details on resource management or visitor use management. More details on *how* to achieve the desired future would be determined in follow-up implementation plans once it has been decided *what* those conditions should be.

ALTERNATIVE 1: NO ACTION (CONTINUE CURRENT MANAGEMENT)

OVERALL CONCEPT AND PARKWIDE ACTIONS

Alternative 1, the no-action alternative, would continue existing management. The no-action alternative provides a baseline for evaluating changes and impacts of the three action alternatives. This baseline is characterized primarily by conditions at Everglades National Park as of December 2009, with continuation of current management practices into the future (business as usual). This alternative assumes implementation of some approved and funded facility improvements, plus improvements at Flamingo as outlined in the Flamingo Concession Services Plan and also Gulf Coast improvements.

The park would continue to be managed according to the enabling legislation, other applicable laws, NPS policies, and guidance in the park's 1979 Master Plan and other approved plans. Management activities would continue to conserve natural resources and processes while accommodating a range of visitor uses and experiences. Resource management and other projects that have already been funded would be implemented. Resource management would be approached from an ecosystem perspective, considering outside influences (e.g., regional water management structures and operations, Everglades restoration efforts, climate change, and socioeconomic considerations) on resources and natural processes. As possible with available funding and staffing levels, the park would strive to identify, protect, stabilize, and interpret (as appropriate) significant cultural resources and historic properties such as archeological sites, historic structures, and cultural landscapes in accordance with applicable policies and guidelines.

Visitors would continue to have access to a wide variety of land- and water-based opportunities and programs, including concessioner trips at Gulf Coast, Shark Valley, and Flamingo, plus self-guided opportunities and guided trips throughout the park.

Aside from a few planned and funded upgrades for specific facilities, the built environment would remain at its current level. Existing facilities at the park headquarters area (Long Pine Key, Key Largo, Shark Valley, and the Gulf Coast) would be maintained and continue to serve operational needs and visitors, in some cases at less than desired levels. Flamingo facilities would be maintained as well until planned improvements are funded and implemented.

Transportation to and within the park would continue to be primarily by private vehicle or vessel. Regional public transportation has numerous routes within Miami-Dade County, some of which extend to the Homestead / Florida City area. None of these routes access the park, and there are no approved plans to extend these routes to the park.

Table 5 summarizes key differences among the alternatives.

HEADQUARTERS / PINE ISLAND / ROYAL PALM / MAIN PARK ROAD

The Ernest F. Coe Visitor Center, near the east entrance of the park in the park headquarters area, would remain the primary park visitor center and would continue to provide visitor orientation, films, exhibits, and a cooperating association bookstore (see "Alternative 1 – No Action" map at the end of this section). Many park visitors would receive their first interpretive information at

this visitor center. Park headquarters and the Pine Island maintenance and housing area would remain at their current locations. The Krome Center facility in Homestead would remain as a center for park science staff focused on implementation of the Comprehensive Everglades Restoration Plan and other ecosystem restoration efforts.

The Daniel Beard Center and Robertson Building would continue to serve as administrative facilities for park resource managers, fire and aviation operations, and cooperating researchers. The Daniel Beard Center and Robertson Building would continue to be home to the South Florida Collections Management Center (SFCMC), which would continue to provide collection management support to the four south Florida national park system units and DeSoto National Memorial. The existing collection storage facility does not meet NPS collections standards, and there is inadequate space for the collections and for museum staff and researchers to work with the collections. Under this alternative, there would continue to be no public museum in the park, which meets NPS standards for museum collection exhibition.

The Royal Palm visitor contact station would continue to provide functional interpretive office and storage space and a cooperating association bookstore. The Anhinga and Gumbo Limbo trails would continue to provide opportunities for interpreting the Everglades ecosystem. The popular guided interpretive programs would continue. However, the number of programs offered has decreased, and the possibility exists that future funding levels may require further cutbacks in the number of interpretive services offered.

The Long Pine Key area would continue to offer a picnic area and campground, and the Long Pine Key nature trail would be maintained for hiking and bicycling through the pinelands.

The main park road was designed and constructed to provide access to the variety of habitats in the park. Turnouts, interpretive walks, and wayside exhibits inform visitors about the range of habitats in the park, the flora and fauna within them, and ecosystem restoration issues and challenges. The road would continue as the primary interpretive corridor providing visitors with opportunities to explore the interior of the park. As the primary access route to Flamingo, the road would continue to have heavy traffic, with many vehicles towing boats down to Flamingo/Florida Bay. Visitors in private vehicles, recreational vehicles, buses, and occasionally bicycles would also continue to use the park's main road.

Ecological restoration of the Hole-in-the Donut area (see "Interrelationships with Other Plans and Programs" in chapter 1) would continue, as would seasonal, guided interpretive tours of the Nike Missile Base site. Buildings associated with the Nike complex, which is on the National Register of Historic Places for its Cold War significance, would continue to be used for park purposes such as administrative and storage space.

Flamingo

The Flamingo area would continue as a key visitor recreational destination. The area would continue to serve as the southern portal of the Wilderness Waterway and as a major boat access point to Florida Bay, Whitewater Bay, and numerous backcountry rivers and bays, some of which include designated campsites and chickees. The base of NPS operations for western Florida Bay, Whitewater Bay, and Cape Sable would remain at Flamingo.

It is expected that a new, long-term concession contract for Flamingo would be awarded. Concession services would include overnight accommodations, food service, a marina with boat rentals, the campground, and guided boat tours operated by a park concessioner. See the chapter 1 section titled

“Ongoing Projects and Projects Planned for the Near Future, Flamingo Area Improvements” for more background information on this topic.

- New facilities at Flamingo would be designed to be sustainable, elevated/hardened/re-locatable.
- The existing gas station would be renovated to accommodate lodging reception.
- New overnight guest accommodations provided via the concession operations would include cabins, houseboats, and seasonal ecotents.
- Rehabilitation of the existing visitor center to meet visitor information, orientation, lodging, tour, and rental needs.
- The historic Mission 66 visitor center would be rehabilitated, preserved, and adaptively reused to enhance visitor services and administrative work space.
- Increased education and recreational opportunities would be located at Flamingo and may include more guided tours and land and water vendor services.
- Food and beverage services to accommodate park visitors would be provided by the concessioner.
- Concessions housing would be rehabilitated; some additional units of NPS and concessions housing would be provided to serve peak season operations.
- The NPS/concessions maintenance area would be improved (replacement buildings would be provided; work spaces would be reorganized, etc.).
- Restoration would occur at camping loops B and C (approximately 50 acres).

- Character-defining features of the Mission 66 cultural landscape would be preserved where feasible.

Florida Bay

Florida Bay, with its shallow basins and banks, is a complex resource. It is designated as a submerged marine wilderness area, and includes important wildlife habitat and a world-class fishery. Florida Bay is a popular destination for recreation, especially boating, fishing, paddling, wildlife viewing, and photography. Flamingo would remain the only Florida Bay boat access point within Everglades National Park. All other access to the bay would originate from outside the park such as from the Intracoastal Waterway in the upper keys that shares a 40-mile boundary with the park.

Under the no-action alternative, there would be no change in how boaters would use or access Florida Bay. No boater permit would be required. NPS boundary and channel markers would be maintained. Marked channels and recommended motorboat routes would continue to be identified on National Oceanic and Atmospheric Administration (NOAA) maps, commercially offered charts, and the “Florida Bay Map and Guide,” all of which are widely available and used by boaters. A few short idle speed, no-wake areas for safety purposes would remain, amounting to the only boating restrictions on Florida Bay. The shallows and banks would remain highly vulnerable to seagrass scarring from motorboat propellers and groundings. Small-scale seagrass restoration and monitoring efforts (for selected areas badly damaged by propeller scarring and groundings) would continue to be implemented with substantial support from volunteers and partners.

Two keys in Florida Bay (Little Rabbit and North Nest) would continue to be open to visitors for day use and camping. These sites, plus the two chickees at Johnson Key and

Shark Point, would be managed in accordance with the park's backcountry permit program and the updated backcountry management plan. Bradley Key and Carl Ross Key would remain open to visitor use during daylight hours. Other keys in the bay would remain closed to public use to protect bird nesting and rookery sites.

Little Madeira Bay, Joe Bay, and adjacent smaller water bodies (also known as Crocodile Sanctuary) would remain closed to public access. Opportunities for visitors to enjoy and learn more about Florida Bay would continue via the many guided fishing trips and ecotours offered in this extensive, complex area.

Key Largo

Facilities at the 20-acre NPS site in Key Largo (ranger station and Florida Bay Interagency Science Center) would continue to provide a base of operations for NPS law enforcement, interpretation, natural resource management, and ecological research activities. Other agencies working on Florida Bay management and restoration would continue to have office space and dock facility access. The Key Largo ranger station would continue to serve primarily park operations, with limited visitor services.

East Everglades Addition

In 1989, the Everglades National Park Protection and Expansion Act added 109,506 acres of the northeast portion of Shark River Slough (the East Everglades Addition) to the park. Although the 1979 Master Plan does not address management of the East Everglades Addition, the 1991 land protection plan for the East Everglades Addition specified that all lands in East Everglades were needed for ecosystem restoration, set priorities for acquisition, and gave examples of compatible and incompatible land uses. Under the no-action alternative, the East Everglades Addition

would continue to be managed under the guidance provided in the Expansion Act and the land protection plan.

Wilderness. None of the East Everglades Addition would be proposed for designation as wilderness under the no-action alternative.

Private Airboating. According to the 1989 East Everglades Expansion Act, private airboat operators who were owners of record of registered airboats in use within the East Everglades Addition on January 1, 1989, may continue using airboats in the East Everglades Addition during their lifetimes. Thus, private airboating would continue for the foreseeable future, and most use would likely remain on commonly used airboat trails or routes, although there are currently no park guidelines identifying such requirements.

Commercial Airboating. Four commercial airboat tour operators based along Tamiami Trail would continue to provide guided trips into the East Everglades Addition (plus food/beverage service, wildlife shows, gift shops, etc.) for visitors with little input or oversight from the National Park Service. These businesses would continue to operate at their own discretion without a permit from the National Park Service.

Other Management Elements. Backcountry paddling would remain an option for visitors (with a special use permit required for overnight stays), but with no paddling trails or designated primitive campgrounds, such use would likely remain at very low levels.

There are nine former hunting camps of various ages and conditions on tree islands in the East Everglades Addition that were established and used before this area became part of the national park. Under this alternative, there would continue to be no management action taken on these camps. Use of such sites would continue without permits or regulations (aside from the permit requirement for overnight use).

Chekika, a former state recreation area, would remain open for day use on a seasonal basis. Other area infrastructure, such as trails, roads, and borrow pits, would be informally used by the public for activities such as wildlife viewing, bicycling, and fishing.

East Everglades administrative and operational activities (e.g., ranger, fire management operations, maintenance, etc.) would continue to operate out of adapted former residences within the East Everglades Addition. These structures are not well suited to park operational uses, which leads to operational inefficiencies and is inconsistent with the intent of the Everglades Expansion Act.

Tamiami Trail / Shark Valley

Tamiami Trail (U.S. Highway 41), a two-lane highway that connects the east and west coasts of Florida, crosses Shark River Slough along the park's northern boundary. Many travelers along Tamiami Trail would continue to be unaware of their proximity to the national park and the educational and recreational opportunities available along the more than 20 miles of roadway that borders the park.

Shark Valley would remain the primary place for park orientation and interpretation along the northern park boundary. Visitors would continue to hike, bike, or ride an interpretive tram on the 15-mile Shark Valley loop road and visit the Shark Valley observation tower at the halfway point. The park's cooperating association (the Everglades Association) would continue to operate a bookstore in the Shark Valley visitor contact station. Interpretive operations and a park housing unit would also remain. Despite recent facility improvements, Shark Valley would likely continue to be crowded and congested during peak winter visitor periods.

The Tamiami ranger station near the intersection of Tamiami Trail and Loop Road would continue to serve as an operations

center and ranger station for this district of the park. Existing housing for park staff would also remain.

Shark River Slough, primarily a sawgrass prairie and hardwood hammock landscape characteristic of much of the interior of the park, is the classic vision of "the glades." Shark River Slough, except for airboating activities previously described, has relatively few visitors—this trend would likely continue under this alternative.

Gulf Coast / Ten Thousand Islands / Everglades City

Everglades City would continue to serve as the western gateway to the park. The 20 acres of NPS land in Everglades City would remain as the center for visitor services and park operations for the Gulf Coast. Visitor services include visitor information and orientation at the small Gulf Coast Visitor Center, concessioner-operated boat tours, and a small concessions store. Space within the visitor center is limited, and the second floor facility does not meet ADA accessibility standards.

Legislation passed in 1989 required construction of a replacement visitor center (to be named the Marjory Stoneman Douglas Visitor Center) at this site. However, it was not built because the allocated funding for the project was used for emergency repairs following Hurricane Andrew in 1992. The vision, associated environmental documentation, and cost estimates that were developed in 1990 are now outdated. Thus, the replacement visitor center was not included as part of this no-action alternative.

Facilities for public access to the water would continue to be limited in the Everglades City area. Space is at a premium in the small boat basin that is used for NPS maintenance and ranger operations and concessions tours. An NPS canoe launch is available near the visitor center, but it is in poor condition. Visitors seeking to launch motorboats near

Everglades City would continue to use public and private facilities outside the park.

Everglades City is the northern entry point to Wilderness Waterway for motorized and paddle craft. Visitors would continue to have access to the numerous designated campsites and chickees in marine and estuarine portions of the park. These campsites would be managed in accordance with the backcountry permit program and backcountry management plan of the park, as updated.

The NPS structures at Everglades City would continue to serve park interpretive, resource management, law enforcement/protection, and maintenance operations. These facilities have limited work and storage space. This site would also continue to support concessions operations.

A few small, short, idle speed, no-wake areas for safety purposes would remain, amounting to the only boating restrictions within the Gulf Coast / Ten Thousand Islands area.

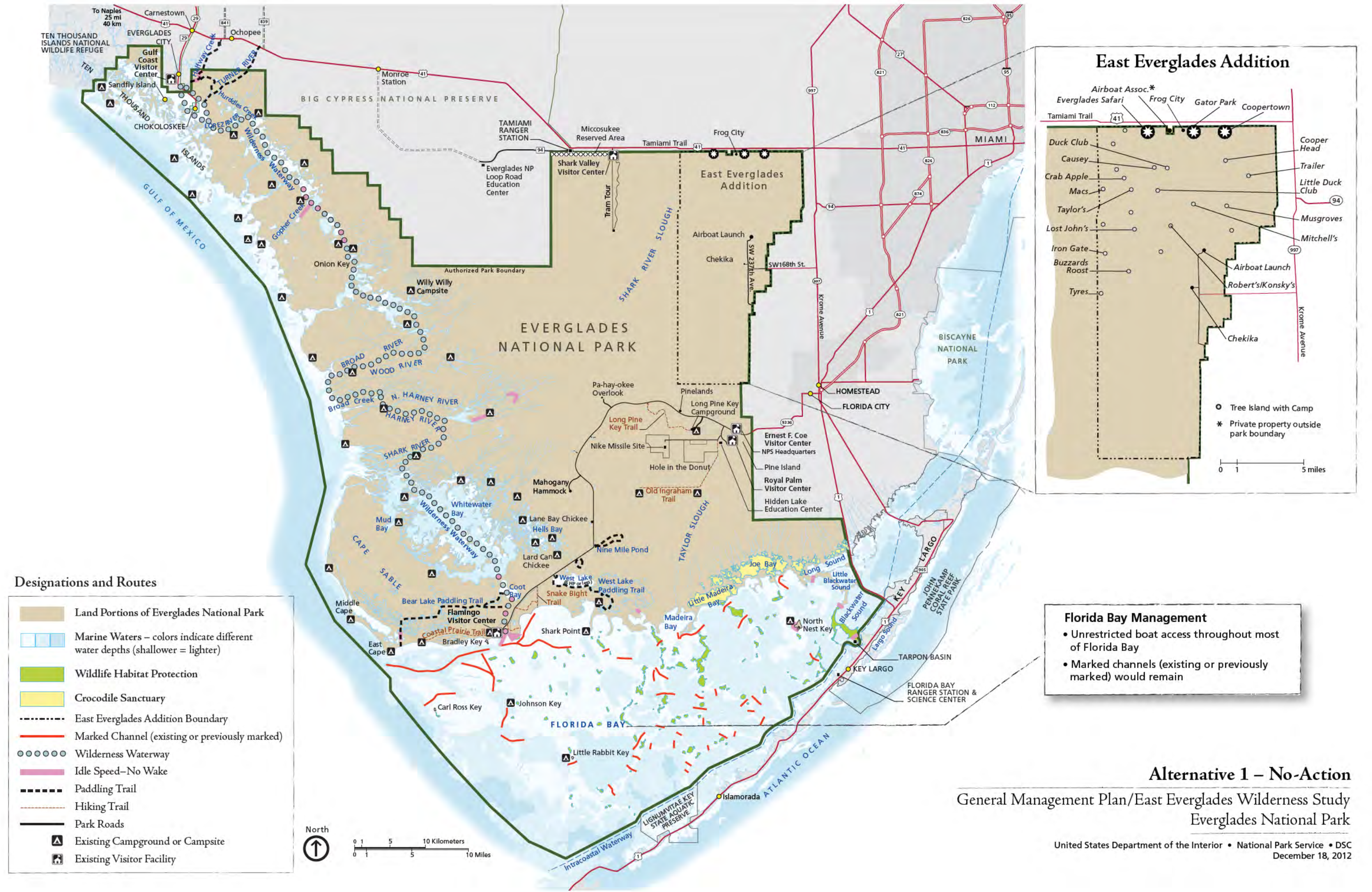
Costs and Staffing. The NPS staffing level under the no-action alternative would be 214 full-time equivalent (FTE) staff members. The actual staffing level in 2011 was 181 staff members because funding was insufficient to fill all 214 authorized positions. Volunteers and partnerships would continue to be key contributors to NPS operations. Annual

operating costs of this alternative would be \$17.0 million. One-time capital costs (for Flamingo improvements) would be \$10.8 million.

The cost estimates provided here are for comparison to other alternatives only; they are not to be used for budgeting purposes. Although the numbers appear to be absolutes, they represent a midpoint in a possible range of costs.

Presentation of these costs does not guarantee future NPS funding. Project funding would not come all at once; it would likely take many years to secure and may be provided by partners, donations, or other non-NPS federal sources. Although the National Park Service hopes to secure this funding, the park may not receive enough funding to achieve all desired conditions within the time frame of this management plan (the next 20 or more years). More information on costs is provided at the end of this chapter.

Special Regulations. All existing closures and restrictions would be retained through the original authorizations. However, the closure of Little Madeira and Joe bays (also known as Crocodile Sanctuary) would be made permanent with a special regulation in the *Code of Federal Regulations* (CFR) in 36 CFR 7.



NPS PREFERRED ALTERNATIVE

OVERALL CONCEPT AND PARKWIDE ACTIONS

Using management zoning and collaborative techniques such as adaptive management, user education, and a national park advisory committee, the NPS preferred alternative would support restoration of natural systems while providing improved opportunities for quality visitor experiences. This concept is represented in the management zoning by establishing pole/troll zones over most of the shallowest areas of Florida Bay (submerged marine wilderness) and by designating 21,700 acres in the northwest portion of the East Everglades Addition as the frontcountry zone, where commercial airboat tours and private airboat use by eligible individuals would continue. Much of the East Everglades Addition (the portion where airboat use would not occur) would be proposed for eventual wilderness designation.

Adaptive management would be used to improve success at achieving desired conditions for natural and cultural resources and visitor experiences. Adaptive management focuses on learning and adapting through partnerships of managers, scientists, and other stakeholders who learn together how to create and maintain sustainable ecosystems (Williams, Szaro, and Shapiro 2009). The National Research Council, part of the Academy of Sciences, defines adaptive management as

[A]decision process that promotes flexible decision making that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood. Careful monitoring of these outcomes both advances scientific understanding and helps adjust policies or operations as part of an iterative process. Adaptive

management also recognizes the importance of natural variability in contributing to ecological resilience and productivity. It is not a trial and error process, but rather emphasizes learning while doing. Adaptive management does not represent an end in itself, but rather a means to more effective decisions and enhanced benefits. Its true measure is in how well it helps meet environmental, social, and economic goals; increases scientific knowledge; and reduces tensions among stakeholders.

Adaptive management (1) helps managers maintain flexibility in their decisions, knowing that uncertainties exist and provides managers the latitude to change direction, (2) improves understanding of ecological and social systems to achieve management objectives, and (3) is about taking action to improve progress toward desired outcomes. Figure 1 illustrates the adaptive management process.

To provide input on implementation of the general management plan and adaptive management, the park would establish a federally designated park advisory committee (sanctioned by the Secretary of the Interior). This committee would be composed of diverse stakeholders and would help park managers consider various perspectives on different management issues (e.g., visitor use and access [especially boating in shallow marine waters], education programs, and natural and cultural resource protection). Benefits of a formal advisory committee would be realized by both park managers and the public; examples include regular and ongoing cooperation to assist the park in implementing the general management plan; identifying and evaluating key issues affecting the park and neighboring communities; developing a park constituency that is aware

of and concerned about the condition of the park and ways to protect and experience it; and participating in adaptive management and monitoring efforts related to meeting park goals. An advisory council has been working with the adjacent Florida Keys National Marine Sanctuary during the past decade. This council has strengthened the understanding and protection of the sanctuary while enhancing the overall

relationship between the sanctuary, adjacent communities, and diverse stakeholders. The park would also implement a user capacity program to assist in managing the levels, types, and patterns of park use to preserve park resources and the quality of visitor experience. The concept of user capacity and the program proposed for implementation are described in more detail in the “User Capacity” section of this chapter.

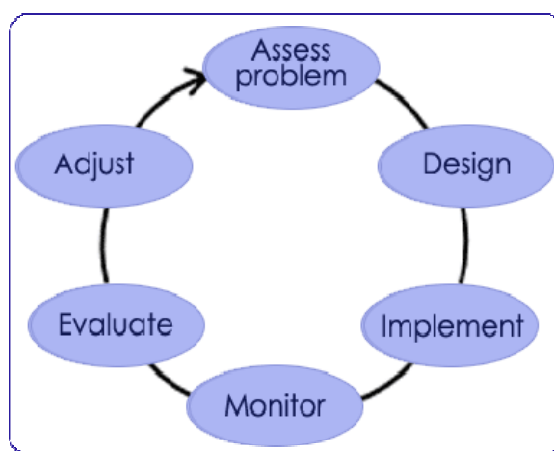


FIGURE 1. DIAGRAM OF THE ADAPTIVE MANAGEMENT PROCESS

[Note: This figure is from “Adaptive Management: the U.S. Department of the Interior Technical Guide” (Williams, Szaro, and Shapiro 2009).]

The park would commit to a more powerful natural resource management program. In contrast to the important contributions of park managers to large-scale watershed and ecosystem restoration projects that are largely focused outside the park, this program would support implementation of desired conditions described in this general management plan, implement natural resource components of this plan, and contribute to the adaptive management and user capacity components of the plan. A current example of adaptive management

being implemented that is directly related to the GMP is the seasonal modification to the Snake Bight pole/troll zone that will have a summer of 2013 expansion of the Jimmy's Lake idle-speed area when there are higher water levels in the area. Based on public input and resource assessments of the area, an extension of about 0.25 mile was determined to allow access flexibility while maintaining desired resource and visitor experience conditions for about a four-month period in 2013. Program examples include:

- monitoring/assessing key park resource conditions and trends (such as seagrass recovery and protection of important wildlife habitat including that for threatened and endangered species recovery)
- conducting small- and large-scale restoration projects in the park (such as fish passage projects under roads and within developed areas of the park, restoration of disturbed sites to natural conditions, and management/removal of invasive nonnative plants and animals from large areas)
- initiating efforts to better understand complex issues such as long-term sustainability of the park fishery
- improving decision making and developing the capacity for resource managers' timely participation in the numerous projects and plans that are a constant part of park responsibilities

A comprehensive cultural resource management program would be established at the park. This program would focus on efforts to inventory, document, and protect all types of cultural resources and would include rehabilitation or adaptive use of some historic structures. Archeological sites and other historic properties would be regularly monitored to assess resource conditions and inform long-term treatment strategies. Selected cultural sites would be interpreted for the public. Ethnographic resources would be better interpreted and protected (than in the no-action alternative) in consultation with associated American Indian tribes and other peoples traditionally associated with the park. Cultural landscapes would be identified, preserved, and interpreted. Museum collections would continue to be acquired, managed, and preserved to document and support the park's natural and cultural resources, interpretive themes, and administrative history. Increased public access to the collections would be achieved through exhibits, emerging technologies, and

research opportunities. A new multipark museum facility would be constructed to meet museum standards, provide better access for researchers and park staff to collections, and provide an exhibit space to interpret the collections to park visitors.

A mandatory boater education permit program would be implemented to provide all boaters with information on boat safety in the park; this information would help them avoid harming shallow sea bottom, seagrass, and wildlife, and operate watercraft in a manner that respects other users. This program would encourage boaters to become partners in resource stewardship. Operators of all boats—motorized and nonmotorized—using park waters would be required to complete the program, which could be tailored to each type of use and craft and/or type of trip (motorboat vs. paddler, 1- to 2-hour trip vs. multiday paddle voyage, guided trip, etc.). The education course would be made as widely accessible and convenient as possible (e.g., on the Internet, at visitor contact stations, at marinas, at gateway communities, and possibly in mobile learning centers). Details of this education and permitting system would be developed separately from this management plan with input from the public. The education program would take advantage of the lessons learned from the National Parks and Conservation Association-led Eco-mariner program, launched in 2009, with a broad-range of program partners.

This program, coupled with other on-the-water changes such as pole/troll zones and improved aids to navigation, would provide a multifaceted approach to enhanced resource protection and visitor experience. The park's law enforcement presence would be increased, especially on marine waters, to increase visitor understanding of and compliance with proper navigation, management zones, and idle speed, no-wake designations and enhance resource protection through heightened awareness of sensitive resources and minimum impact boat operation techniques. When this plan is

completed, key findings and information important to using the park's marine waters may be incorporated into the mandatory boater education permit program.

A boating safety and resource protection plan would be developed. This plan would address boating in marine waters of Florida Bay, the Gulf Coast, and Ten Thousand Islands in more detail as it relates to visitor safety and resource protection. It would consider how to further avoid/minimize the risk of boat-boat collisions, boat-wildlife collisions, groundings, and other impacts on the sea bottom, which is federally designated wilderness.

This plan would determine how to avoid and minimize risks to wildlife (including the manatee and other marine endangered species), so a separate manatee management plan would not be necessary. The plan would consider the best, most current information available including completed elements of the boater education permit program discussed above, as well as relevant scientific and resource management information. This data, together with a more detailed evaluation of Florida Bay channels, passes, and boat access routes shown on the "NPS Preferred Alternative" map would be used to make more informed decisions about how/if channels would be marked and accessed. The boating safety and resource protection plan would be developed with public input and would be updated regularly to respond to changing conditions, new information, and lessons learned. Once the plan was completed, key findings and information important to visitor experience and resource protection within the park's marine waters would be incorporated into updates of the boater education program and other materials related to the use and management of these resources.

Headquarters / Pine Island / Royal Palm / Main Park Road

The park headquarters and Ernest F. Coe Visitor Center area would be in the developed zone. The Ernest F. Coe Visitor Center would continue to be the primary site for information, orientation, and interpretation for visitors (see "NPS Preferred Alternative" map at the end of this section). There would be no change in the use of park headquarters. A center for park science staff focused on the comprehensive ecosystem restoration plan and other ecosystem restoration efforts would likely remain in a gateway community or at park headquarters.

The main park road would also be in the developed zone. The Long Pine Key campground and interpretive turnouts at attractions along the main park road would be in the frontcountry zone to allow for basic facilities that support visitor use and expanded interpretive opportunities. Long Pine Key would continue to be managed for a mix of day use opportunities and camping. The Long Pine Key nature trail would be in the frontcountry zone, with interpretation focused on pineland habitat. This trail would continue to be open to bicycling. At Long Pine Key campground, electric hookups and solar hot-water showers would be provided. Bicycle rentals, snacks, and basic camping supplies would be provided seasonally by a concessioner, possibly using the vacant residential structure near the picnic area. Interpretive programs and media would be expanded and updated at the Royal Palm area, including integrating prehistoric and historic themes into these programs. Where the road portion of the Anhinga Trail has created an impediment to water movement, more natural water flow would be restored by installing bridges or culverts.

Most of the area beyond the main park road corridor would be in the backcountry (nonmotorized) zone to perpetuate preservation of designated wilderness and protection/restoration of natural processes and natural and cultural resources. Canoeing

and “slough slogging” (walking in the wetlands) would be the primary visitor activities in this area.

To enhance pre-visit information and orientation for visitors, park managers would pursue a partnership with the Homestead and Florida City area communities to provide a cooperative visitor contact station in this national park gateway area. Opportunities such as using vacant commercial space in an area that is highly visible to visitor traffic would be explored. During the shorter term, this pre-trip information function could be accomplished with an unstaffed NPS information kiosk at a gateway site and through web-based information.

NPS staff would pursue the goal of providing some form of alternative transportation from south Miami-Dade County to the national park’s Coe Visitor Center / Royal Palm area. This would make it easier for those without private vehicles (or who prefer to use public transportation) to get to the park. NPS staff would also pursue potential opportunities for alternative transportation from the visitor center / Royal Palm area to Flamingo, with stops along the way. The ideal would be a system that allows visitors to spend time at key interpretive stops along the main park road to have more in-depth learning and experiential opportunities. It is likely that this service would be offered during the high visitor use winter months at first.

Implementation of this idea could take the form of dedicated guided bus tours, or a shuttle system that picks up and drops off visitors at regular intervals. The idea would probably need to be tested and implemented on an incremental basis based on what is most feasible given economic viability, potential partnerships, funding sources, etc.

Restoration of the Hole-in-the-Donut would continue under the NPS preferred alternative. New interpretation of ongoing restoration, wayside exhibits, and daytime hiking opportunities would be provided, and this could include spur overlook trails to one or two mounds. Most of the Hole-in-the-

Donut area, as potential wilderness, would be in the backcountry zone. Restoration activities in this area are anticipated to continue for the life of this plan and would be carried out under the wilderness minimum requirements process.

The area encompassing the Daniel Beard Center, Robertson Building, and the historic Nike Missile Base site would be in the developed zone. The Daniel Beard Center and Robertson Building would continue to be used for park administrative purposes such as resource management and research. Visitor opportunities in the vicinity would be expanded to include interpretation of the Nike Missile Base site (after rehabilitation and visitor safety improvements). Interpretive programs would be extended into the shoulder seasons, and enhanced interpretation would require site improvements such as improved vehicular access, parking, and restrooms. A tram or shuttle for guided tours would also be pursued. The historic integrity of the National Register district would be maintained, and some historic buildings at the missile site would continue to be used for park administrative purposes.

The South Florida Collections Management Center, currently housed in the Daniel Beard Center and Robertson Building, would be relocated to a new museum in this area of the park, providing for public exhibits and a storage facility that meets NPS collections standards. Museum collections would continue to be acquired, preserved, and accessible to researchers, and the public would have its first opportunity to experience the center’s vast resources and collections. Part of this new facility could be used to support interpretation and public use (e.g., interpretation and public tour staging space) of the Nike Missile Base site.

Bicycling on the main park road from the park entrance to Flamingo would continue to be allowed. Connections with nearby trails comprising the South Dade Greenway Network, including the proposed Biscayne–Everglades National Park Greenway, would

be provided where feasible. The park would also pursue development of some additional hiking/bicycling trails in frontcountry zones at Long Pine Key and Flamingo.

Paddle launch sites along the main park road (e.g., Coot Bay Pond, Noble Hammock canoe trail, and Hells Bay canoe trail) and paddling opportunities for persons with disabilities would be improved. Examples include installing modest small floating docks or other nonmuddy interface between land and water (to make launching safer and easier), safety improvements at parking areas, and better water trail wayside signs.

Flamingo

The Flamingo area would continue as a key visitor interpretive and recreational destination for short and multiday park experiences focused on the area's natural and cultural resource diversity. The area would continue as a major center for wildlife viewing, boating, camping, and fishing activities. Flamingo would be in the developed zone and would provide a variety of land- and water-based visitor opportunities to enjoy and learn about the park.

Flamingo would continue to serve as the southern portal of the Wilderness Waterway and the new Alternative Wilderness Waterway (described in the "Gulf Coast / Everglades City" section below). Flamingo would also serve as a major boat access point to Florida Bay, Whitewater Bay, and numerous backcountry rivers and bays, some of which include designated campsites and chickees. NPS operations for western Florida Bay, Whitewater Bay, and Cape Sable would remain at Flamingo.

As in the no-action alternative, a new, long-term concession contract for Flamingo would be awarded. Concession services would include overnight accommodations, food service, a marina with boat rentals, the campground, and guided boat tours operated

by a park concessioner. See the chapter 1 section titled "Ongoing Projects and Projects Planned for the Near Future, Flamingo Area Improvements" for more background information on this topic.

- New facilities at Flamingo would be designed to be sustainable, hardened, mobile, elevated/hardened/relocatable.
- The existing gas station would be renovated to accommodate lodging reception.
- New overnight guest accommodations provided via the concession operations would include cabins, houseboats, and seasonal ecotents.
- The existing visitor center would be rehabilitated to meet visitor information, orientation, lodging, tour, and rental needs.
- The historic Mission 66 visitor center would be rehabilitated, preserved, and adaptively reused to enhance visitor services and administrative workspace.
- Increased education and recreational opportunities would be based out of Flamingo and may include more guided tours and land and water vendor services.
- Food and beverage service to accommodate park visitors would be provided by the concessioner.
- Concessions housing would be rehabilitated, and some additional units of NPS and concessions housing would be provided to serve peak season operations.
- The NPS/concessions maintenance area would be improved (replacement buildings would be provided, workspaces would be reorganized, etc.).
- Restoration would occur at camping loops B and C (approximately 50 acres).

- Character-defining features of the Mission 66 cultural landscape would be preserved where feasible.

Flamingo, like other entryways to park marine waters (the upper keys and Everglades City / Chokoloskee), would be an important location for contacting boaters and fulfilling the education/permit requirement. As mentioned in the overview section for this alternative, the intent of the education/permit requirement would be to provide information about the challenges of marine navigation in the shallow marine and estuarine waters of the park, as well as information about boating etiquette to increase resource protection and visitor enjoyment.

Florida Bay

Flamingo would remain the main boat access point to Florida Bay within Everglades National Park. Much of Florida Bay would be in the boat access zone. Motorboat access could also continue via existing channels and routes, as identified on NOAA charts and in the widely available “Florida Bay Map and Guide.” Future refinements to this system would be based on the boating safety and resource protection plan effort described in the “Overall Concept” section of this alternative. Coupled with improved marking and maintenance of channel and boundary markers, as well as the mandatory boater education program, pole/troll zones and idle speed, no-wake areas would be established to better protect designated submerged marine wilderness, vegetation, and wildlife resources while allowing a wide range of recreation opportunities and reasonable recreational access (see “Florida Bay Management Zones – NPS Preferred Alternative” map at the end of this section).

The pole/troll zones shown on the “NPS Preferred Alternative” map were developed with much public input and are based on science and expert on-the-water knowledge

of where boats can be operated with reduced likelihood of damaging seagrass beds and other shallow water habitats. The zone locations would be fine-tuned over time through the adaptive management process. Under this alternative, about 131,392 acres (about 33%) of Florida Bay waters within the park (392,580 acres) would be in the pole/troll zone. Within pole/troll zones, boats would have to be propelled using push poles, electric trolling motors, or paddles. Internal combustion engines could be used in designated channels/access routes. The pole/troll zones would be minimally marked to preserve the scenery and aesthetics of Florida Bay and minimize maintenance requirements. This means that boaters would rely primarily on navigation skills, global positioning system (GPS) technology, marine charts, and materials developed for the boater education program to comply with the zone requirements. The references to shoreline pole/troll zones in eastern Florida Bay on the “Florida Bay Management Zones – NPS Preferred Alternative” map are specific to shorelines along Blackwater Sound, Little Blackwater Sound, Shell Key, the Boggies, and Little Buttonwood Sound. The pole/troll zone for these areas would extend out 300 feet from the shorelines of these areas (with the boat access zone beyond that).

A 300-foot-wide idle speed, no-wake area would be designated along the mainland shoreline from Middle Cape eastward to Shell Creek (west end of Long Sound). The purpose of this designation would be to reduce shoreline erosion from motorboat wakes, improve safety and visitor experience for those on the shoreline or boating close to the shoreline, and to better protect wildlife. This zone would also serve as a buffer that would improve the natural soundscapes in the adjacent backcountry and wilderness areas. In many places along the shoreline, the idle speed, no-wake designation would be superseded by the more restrictive pole/troll zones. Visitors would be expected to abide by pole/troll zone, backcountry zone, and idle-speed requirements, except in emergency situations.

Little Madeira Bay, Joe Bay, and adjacent smaller water bodies, also known as Crocodile Sanctuary, would be in the special protection zone, remaining closed to public access, which has been the case for more than 20 years. These water bodies would continue to serve as a baseline area for long-term ecological monitoring and restoration studies; some 200 scientific studies and research projects are associated with this area. To the east, Long Sound (including Shell Creek) would be managed as a backcountry (nonmotorized) zone to improve wilderness-type paddling opportunities, including paddlers launching from a new car-top boat launch point that would be established near Long Sound on the 18-mile stretch of U.S. 1 (in partnership with the Florida Department of Transportation and others).

A formal seagrass restoration program for submerged marine wilderness resources and sites damaged by groundings and propeller scarring would be established.

The National Park Service would pursue partnership opportunities for additional public boating (motorized and nonmotorized) access sites to Florida Bay.

The four keys in the bay now open to visitor use—two that allow overnight stays (Little Rabbit and North Nest keys) and two that are for day use only (Carl Ross and Bradley keys)—would remain open. All other keys would be in the special protection zone and remain closed to public use to protect nesting and roosting birds. Three additional chickees (platform campsites) would be built in Florida Bay to reduce the travel distance between campsites to a more reasonable length (i.e., 10–12 miles). The chickees would be constructed in the water near keys (not on them); locations would be selected based on detailed evaluation of candidate sites. Opportunities would continue for visitors to enjoy and learn more about Florida Bay via the many guided fishing trips and ecotours offered in this vast, complex area.

Key Largo

The 20-acre NPS site in Key Largo, which includes the Key Largo ranger station and Florida Bay Interagency Science Center, would remain. As in the no-action alternative, the funded project to provide NPS replacement housing and a modest new research facility would be implemented, but housing for two additional staff would also be provided under this alternative. Hammock vegetation would be restored in the areas not needed for development. Visitor-oriented improvements would include a new visitor information kiosk and a venue to support the boater education/permit program, a paddle launch, and an interpretive trail through the site's upland hammock. Both the existing site in Key Largo and the new Tarpon Basin property would be considered to meet the recreational needs.

NPS staff would pursue an interagency visitor information/orientation facility in the upper keys with other agencies such as the National Oceanic and Atmospheric Administration (Florida Keys National Marine Sanctuary), the U.S. Fish and Wildlife Service, and Florida State Parks. Such a partnership facility would be created only if there is adequate support and involvement from other partners. This could be a convenient location for visitors to get information about recreational opportunities and regulations among the various park and protected areas, as well as interpretation of Florida Bay and keys marine environments. This facility could be yet another venue to support the proposed Everglades National Park boater education/permit program.

East Everglades Addition

The northwest portion of the East Everglades Addition, where much of the private and commercial airboat use typically occurs, would be managed as the frontcountry zone (see “NPS Preferred Alternative” map). The remaining area would be managed as backcountry (nonmotorized), providing the

classic Everglades wilderness experience of solitude and quiet.

Wilderness. For a definition of wilderness, refer to the first page of chapter 3; various wilderness terms are also defined in the glossary.

Under the NPS preferred alternative, approximately 80,100 acres of East Everglades would be proposed for wilderness designation, and about 9,900 acres would be proposed as potential wilderness. Potential wilderness would be converted to designated wilderness once nonconforming uses such as private airboating ended and/or private property came into federal ownership. In addition to the northwest corner of the Addition, where commercial airboats operate (see inset on “NPS Preferred Alternative” map), areas that would be excluded from the wilderness proposal include the following:

- an east-west strip (1,320 feet wide) along the park boundary south of Tamiami Trail (to permit modifications along Tamiami Trail for improved water delivery to Shark River Slough)
- a 1,320-foot strip just inside the entire length of the eastern boundary for resource management and maintenance activities associated with ecosystem restoration [Note: before the wilderness proposal is forwarded by the National Park Service for approval, the width of this strip would be fine-tuned based on the best available information.]
- Chekika and a 300-foot strip around the Chekika area
- a 150-foot strip from either side of the centerline of SW 168th Street and from either side of the centerline of SW 237th Avenue

Private Airboating. A private airboat permit system would be implemented. Private airboating, by those eligible (according to the

1989 East Everglades Expansion Act) would continue in the frontcountry zone. Airboats would be required to stay on designated routes (to minimize resource impacts) and other regulations could be established. Designated routes would coincide with existing airboat trails (but not necessarily all existing airboat trails); specifics would be determined under the special regulations process following GMP approval (see the “Special Regulations” section of this alternative). New and/or improved airboat launch areas may be established near Chekika and along Tamiami Trail.

Commercial Airboating. In this alternative commercial airboats would operate within the frontcountry zone under NPS concession contracts. All existing commercial airboat properties would be acquired by the National Park Service. Contracts would be negotiated with commercial operators that have met terms specified in the 1989 Expansion Act.

To support park and ecosystem restoration goals, the park would seek to minimize/consolidate the number of commercial airboat facilities shared by as many as four operators. These goals include (1) additional bridging of Tamiami Trail to maximize ecological benefits and reduce barriers to flow in the Northeast Shark River Slough (based on decisions reached in the Tamiami Trail Modifications: Next Steps and future CERP projects); and (2) improved long-term management of East Everglades natural and cultural resources, facilities, and programs.

The concessions contract(s) would include several provisions, as follows:

- Only services that are necessary and appropriate to Everglades National Park would be provided (e.g., airboat interpretive tours, food service, and limited merchandise sales).
- Interpretive and educational information for airboat tour visitors would be guided by park interpretive/educational standards and

coordinated with the park's interpretive staff, as at Shark Valley, the Gulf Coast, and Flamingo areas.

- A variety of airboat tours would be provided, not necessarily all by the same operator.
- Commercial airboats would travel on designated routes; those designated routes would coincide with existing airboat trails (but not necessarily *all* existing airboat trails); specifics would be determined under the special regulations process following GMP approval (see the "Special Regulations" section of this alternative).

Other Management Elements. Tree islands in both the frontcountry and backcountry zones would be identified for day and camping use. To protect wetlands and wildlife, including threatened and endangered species, routes and sites might be periodically closed or have limited access during nesting season or low water periods. Other tree islands not specifically identified for visitor use would be closed to public use. Public use areas could be maintained cooperatively via contractual agreements with commercial airboat concessioners or other stakeholder organizations.

Some East Everglades cultural sites would be maintained and protected through a site stewardship program. Shark River Slough cultural/archeological resources would be integrated into interpretive programs.

Canoe/kayak launches would be provided along Tamiami Trail, allowing both short- and long-distance paddling opportunities. The locations of these access points would be coordinated with Tamiami Trail Modifications: Next Steps related projects. (Possible locations include the L67 extension access at the western edge of the East Everglades Addition area and/or Gator Park.) Permits would be required for overnight use in the East Everglades Addition, as is the case in other areas of the park. Long-distance

paddling routes (unmarked) would allow visitors to connect through Shark River Slough to the main park road, Alternative Wilderness Waterway, or Whitewater Bay / Gulf of Mexico.

Chekika would remain open at least seasonally as a day use area, with education and recreation programs focused on park natural and cultural resources and ecosystem restoration efforts. Borrow pits/ponds at Chekika would be filled in and restored to allow for more natural conditions.

Education and recreational opportunities (e.g., hiking, bicycling, wildlife viewing, and learning about Everglades restoration and history) would be expanded along Tamiami Trail, around SW 237th Avenue near Chekika, at some tree islands, and near the park's eastern boundary. This would be accomplished in cooperation with public and private entities that are involved in Tamiami Trail modification projects, eastern boundary water modification projects, restoration of natural flows into the park, and regional greenway efforts near the park. Previously disturbed sites would be used to the maximum extent possible.

A new East Everglades administrative/operations center would be built near, but outside the park boundary near Chekika on land recently acquired under Public Law 108-483, which was passed in 2004. This center would include a ranger/visitor contact station, a fire management station, housing for several law enforcement rangers, a helicopter landing area, equipment and vehicle storage, wayside/exhibit kiosks, and offices. Residences in the park that are now being used for these purposes would be demolished once the operations center is functional; then those sites would be restored to natural conditions.

NPS staff would pursue alternative transportation options (probably during the high visitor use season to start) from the Miami area to visitor destinations along Tamiami Trail (e.g., to commercial airboat tour sites

and Shark Valley). Such options would likely involve cooperation and/or partnerships with other entities and could be part of day-long visits in the park to view wildlife and understand Everglades restoration and history.

Tamiami Trail / Shark Valley

Much of the northern portion of the park would be managed as the backcountry zone. A visitor information kiosk and a series of turnouts would be provided along Tamiami Trail for visitor orientation and an overview of natural and cultural resource issues, including ecosystem restoration. Locations would be coordinated with Tamiami Trail modifications related to ecosystem restoration.

The facilities at both ends of Shark Valley would be in the developed zone, and the 15-mile Shark Valley loop road would be in the frontcountry zone. The interpretive tram and bicycle rentals would continue to operate. Two shelters/rest stops would be added along the loop road within the footprint of existing development. The reservation system for tram tours and bicycles would be expanded to minimize parking and congestion in this area. Pre-trip information would also be expanded to encourage visitation during off-peak hours, spread use out throughout the day, and inform visitors about what to expect.

The National Park Service would coordinate with other land management agencies along Tamiami Trail to identify and pursue cooperative projects for improved operational efficiency. Park staff would pursue working cooperatively with the Miccosukee Tribe to integrate education programs and opportunities offered by both entities and to determine the feasibility of sharing resources and facilities to meet park and tribal goals.

Law enforcement, maintenance operations for the park's Tamiami District, along with

some resource management administrative facilities and housing for several law enforcement rangers, would be relocated and centralized at a new operations facility. The location would be a previously disturbed site within the national park, e.g., a portion of the Gator Park site after NPS acquisition of the land. A ranger residence and interpretive operations would remain at Shark Valley. Current facilities would be removed once the new district facility is operational.

Gulf Coast / Ten Thousand Islands / Everglades City

Visitor and administrative facilities at Everglades City would be in the developed zone. The Marjory Stoneman Douglas Visitor Center would be constructed to replace existing facilities, as required by the Everglades National Park Protection and Expansion Act of 1989. Operation of the visitor center would focus on interpretation, orientation and concessions to address visitor opportunities available in the western portion of the park, protection of resources, and issuing backcountry permits. The size and scope of the \$7.9 million facility improvements would be consistent with the value analysis performed in 2012 to address the scaled-down version of improvements at the Gulf Coast. A modest-sized visitor center would be constructed on currently disturbed land while other areas of the site would be reclaimed and rehabilitated. Existing parking would be improved. A new canoe, kayak ramp and launch would be constructed to support both NPS and concessions operations.

NPS staff would work cooperatively with public and private interests to provide improved boat access outside the park to Gulf Coast waters.

The NPS area at Everglades City would continue to function as a major portal to the western portion of the park. The concession operation would continue and would offer expanded opportunities to visit Ten

Thousand Islands, the Gulf Coast, and Wilderness Waterway through boat tours and canoe/kayak rentals. Other commercial services would be pursued to provide visitors with more opportunities such as interpretive, fishing, and paddling tours. Additional land-based interpretive programs and activities would link the park and neighboring communities. A cultural heritage interpretive water trail would be established in the Ten Thousand Islands area; this trail would be unmarked but shown on maps, charts, pamphlets, and websites providing visitors with an understanding of significant archeological and historic sites.

Most marine areas of the Gulf Coast, including most of the Wilderness Waterway, would be in the boat access zone and managed as they are now. As previously discussed, all boaters would be required to participate in a boater education permit program, which would provide information about resource protection, safety, and boater etiquette. Everglades City would continue as the northern access point for the Wilderness Waterway.

A new Alternative Wilderness Waterway route would be established to provide enhanced opportunities for a quieter, more tranquil experience that is more consistent with wilderness values. This route would be minimally marked to preserve scenery and minimize maintenance requirements. The route would be marked by GPS waypoints. Most segments of the Alternative Wilderness Waterway would be in the boat access zone, and continued relatively infrequent use of these segments by motorboats would be expected. To provide wilderness paddling experiences, a few segments would be in the backcountry (nonmotorized) zone based on narrowness or shallowness of the water, low clearance to mangroves, and available alternate routes for motorboats. Visitors could continue to camp at backcountry chickees along the Gulf Coast and interior waterways, and as many as eight new backcountry chickees would be provided.

At Gopher Creek, the existing idle speed, no-wake designation along the first (eastern-most) mile or so would remain, as in alternative 1. Beyond that—where the creek opens up into a series of shallow ponds, bays, and creeks—Gopher Creek would be managed as a pole/troll zone to protect shallow, submerged marine wilderness and important wildlife resources.

Costs and Staffing. The NPS staffing level needed to implement the NPS preferred alternative would be 249 FTE staff members. Volunteers and partnerships would continue to be key contributors to NPS operations. Annual operating costs for this alternative would be \$22 million. One-time costs (including new construction and nonfacility costs such as major resource plans and projects) would be \$40.8 million. Major cost components include the Marjorie Stoneman Douglas Visitor Center at Gulf Coast, the improvements at Flamingo, the new South Florida Collections Management Center, the new East Everglades and Tamiami Trail operations centers, and major programs such as the boater education/permit program. More information on cost estimates is provided near the end of this chapter. Land acquisition costs are not included in the cost estimates.

The cost estimates provided here are for comparison to other alternatives only; they are not to be used for budgeting purposes. Although the numbers appear to be absolutes, they represent a midpoint in a possible range of costs.

Presentation of these costs does not guarantee future NPS funding. Project funding would not come all at once; it would likely take many years to secure and may be provided by partners, donations, or other federal sources. Although the National Park Service hopes to secure this funding, the park may not receive enough funding to achieve all desired conditions within the time frame of this general management plan (the next 20 or more years).

See appendix D for a discussion of implementation phasing.

Special Regulations. The National Park Service can close areas or otherwise regulate specific uses through special regulations published in the *Code of Federal Regulations* 36 (36 CFR) when necessary for safety or resource protection. Several use restrictions proposed under this alternative would require special regulations. Implementing the pole/troll zones and identifying designated airboat routes in the East Everglades Addition would restrict uses of these areas and so would require special regulations under sections 1.5 and 3.8(b)(2) of 36 CFR. Closure of Little Madeira and Joe bays and other special protection zones would be made permanent with a special regulation.

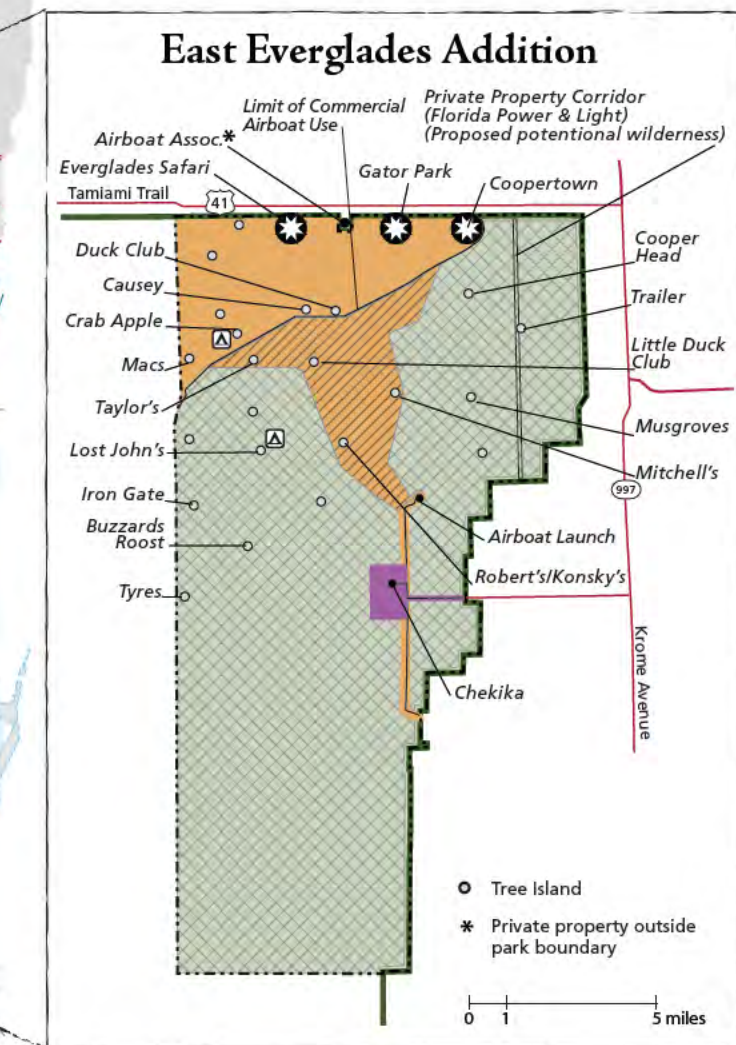
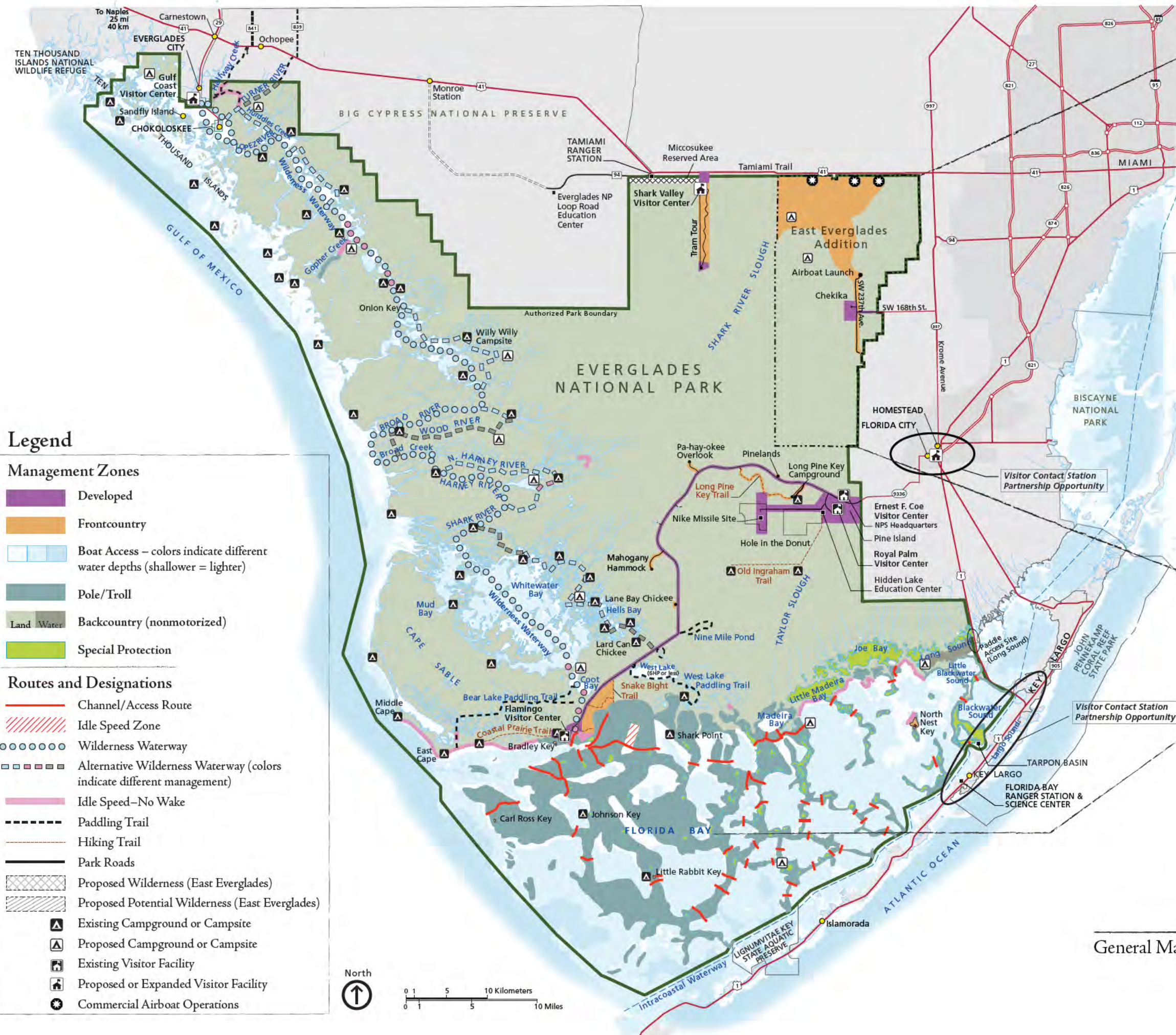
Closures or use restrictions deemed necessary under adaptive management or user capacity programs (to protect cultural or

natural resources or desired visitor experience) would be accomplished through either special regulations or the superintendent's compendium.

The closure of some tree islands in the East Everglades Addition to protect cultural and natural resources would be accomplished through the authority in section 1.5 of 36 CFR (superintendent's compendium) because it would not likely be a substantial alteration of public use patterns.

Implementing the idle speed, no-wake areas would be accomplished under the discretionary authority of the park superintendent to set speed limits (36 CFR 3.8).

Establishing the mandatory boater education/ permit process is authorized under section 1.6 and 3.3 of 36 CFR.



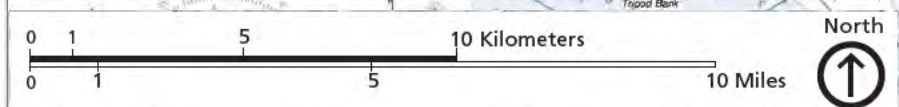
Florida Bay Management

- Protect areas at risk of scarring with pole/troll zones based on science and expert on-the-water knowledge of where boats can be operated with reduced likelihood of damaging seagrass beds and other shallow water habitats (See Florida Bay Management Zones detail map)
- Marking of pole/troll zones would be minimal, with reliance instead on navigation skills, GPS, and marine charts
- Boat channels/access routes that exist now would remain
- Mandatory education/permit program for boaters and increased enforcement presence

Note: The management zones for Florida Bay are overlaid on a base map derived from NOAA Nautical Chart 11451. Base map (background) colors, defined immediately below, should not be confused with the management zones shown in the legend at the bottom of the page.

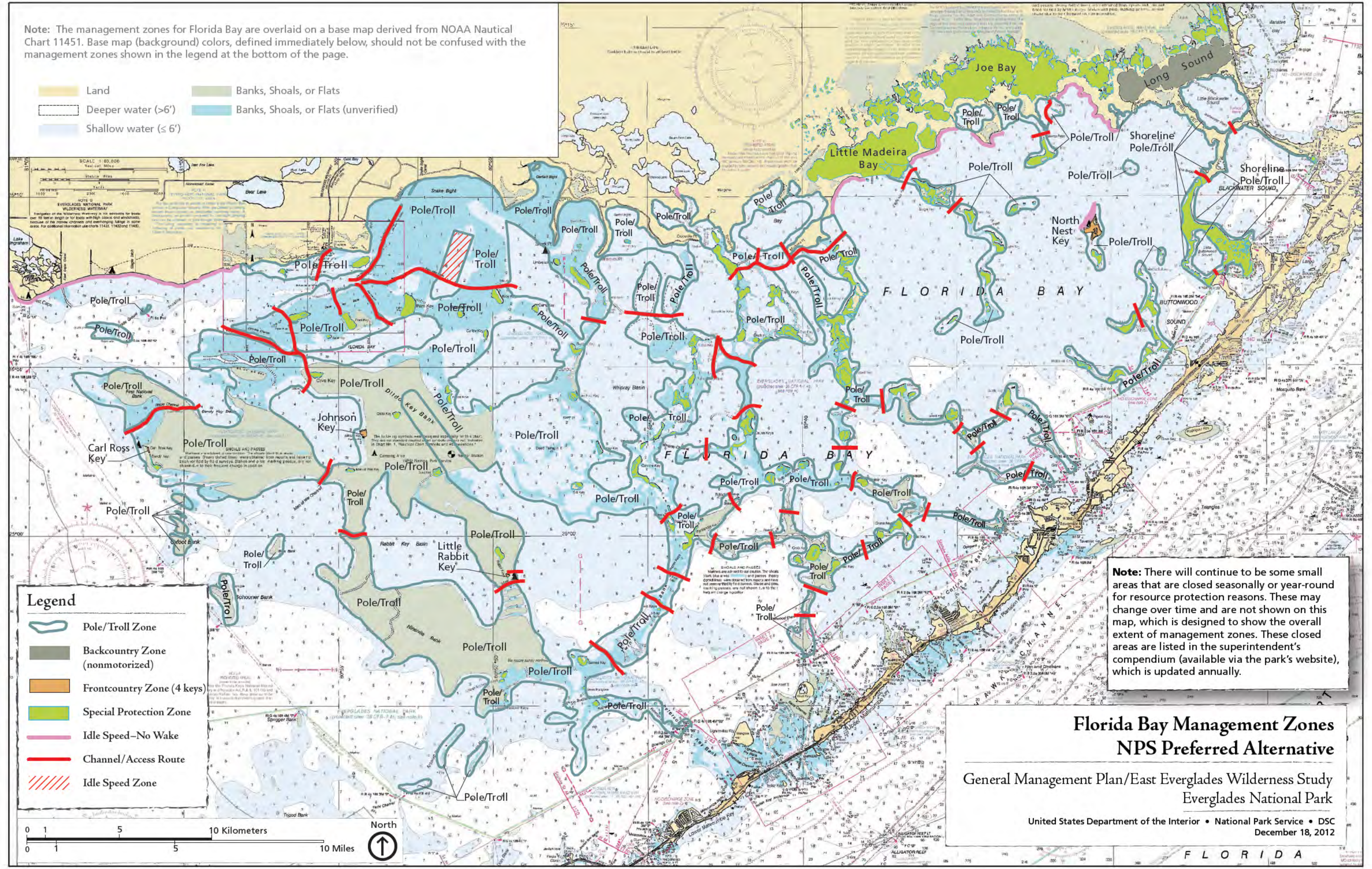
- Land
- Deeper water (>6')
- Shallow water (≤ 6')
- Banks, Shoals, or Flats
- Banks, Shoals, or Flats (unverified)

- Legend**
- Pole/Troll Zone
 - Backcountry Zone (nonmotorized)
 - Frontcountry Zone (4 keys)
 - Special Protection Zone
 - Idle Speed-No Wake
 - Channel/Access Route
 - Idle Speed Zone



Note: There will continue to be some small areas that are closed seasonally or year-round for resource protection reasons. These may change over time and are not shown on this map, which is designed to show the overall extent of management zones. These closed areas are listed in the superintendent's compendium (available via the park's website), which is updated annually.

Florida Bay Management Zones
NPS Preferred Alternative
General Management Plan/East Everglades Wilderness Study
Everglades National Park
United States Department of the Interior • National Park Service • DSC
December 18, 2012



ALTERNATIVE 2

OVERALL CONCEPT AND PARKWIDE ACTIONS

Alternative 2 would strive to maintain and enhance visitor opportunities and protect natural systems while preserving many traditional routes and ways of visitor access. This concept is represented in the management zoning by the boat access zone in Florida Bay and a large (56,000-acre) front-country zone in the East Everglades Addition. This alternative would rely more on boater education and enhanced ranger patrols to provide some measure of increased protection for seagrass beds, banks, and other submerged marine wilderness values. Like the NPS preferred alternative, alternative 2 would continue visitor opportunities for commercial airboat tours. A modest portion of the East Everglades Addition (the southern portion, where airboat use would not occur) would be proposed for wilderness designation.

Alternative 2 would have several programs in common with the NPS preferred alternative—an adaptive management program, a park advisory committee, a user capacity program, an expanded natural resource program, a comprehensive cultural resource management program, and the boater education permit requirement. Details of these various programs would be the same as described in the NPS preferred alternative.

The mandatory boater education permit program, coupled with an increased law enforcement presence, especially on marine waters, would be relied upon to increase understanding of and compliance with proper navigation and idle speed, no-wake designations and enhance resource protection through heightened awareness of sensitive resources and minimum impact boat operation techniques.

The park would develop a manatee management plan to identify ways to improve manatee protection within the national park while maintaining as many existing recreational boating opportunities as possible. This effort would include participation by staff from partner agencies having manatee management responsibilities such as the U.S. Fish and Wildlife Service and the Florida Fish and Wildlife Conservation Commission. Protection measures would be implemented using management tools that are as flexible as possible, such as the superintendent's compendium (a list of designations, closures, permit requirements, and other restrictions imposed under the discretionary authority of the park superintendent, as provided for in title 36 of the *Code of Federal Regulations*). Flexible management tools allow park managers to respond promptly to changing conditions such as changes in boat use patterns, changes in how manatees use different areas of the park, or changes in the incidence of boat-manatee collisions.

Table 5 summarizes key differences among the alternatives.

Headquarters / Pine Island / Royal Palm / Main Park Road

The headquarters and Ernest F. Coe Visitor Center area would be in the developed zone. The Ernest F. Coe Visitor Center would continue to be the primary site for information, orientation, and interpretation for visitors (see "Alternative 2" map at the end of this section). There would be no change in use of the park headquarters. A center for park science staff focused on the Comprehensive Ecosystem Restoration Plan and other ecosystem restoration efforts would likely remain in a gateway community or at park headquarters.

The main park road would also be in the developed zone. Long Pine Key campground and interpretive turnouts at attractions along the main park road would be in the front-country zone to allow for basic facilities that support visitor use and expanded interpretive opportunities. The Long Pine Key area would continue to be managed for a mix of day use activities and camping. At Long Pine Key campground, electric hookups and solar hot-water showers would be provided. The Long Pine Key nature trail would be in the frontcountry zone, with interpretation focused on the pineland habitat. This trail would continue to be open to bicycling. Interpretive programs and media would be expanded and updated at the Royal Palm area.

Most of the area beyond the main park road corridor would be in the backcountry (nonmotorized) zone to perpetuate preservation of designated wilderness and protection/restoration of natural processes and natural and cultural resources. Canoeing and “slough sloggng” (walking in the wetlands) would continue to be the primary visitor activities in this area.

NPS staff would pursue the goal of providing some form of alternative transportation from south Miami-Dade County to the Coe Visitor Center, Royal Palm, and Long Pine Key areas, with the terminus being Long Pine Key. This could be a fee-for-service commercial operation or could involve public transit; some costs could possibly be offset through partnerships, grants, or donations. This would allow visitors to stay multiple days at Long Pine Key if desired. This service would probably be offered during the high visitor use winter months at first, and implemented on an incremental basis based on what is most feasible.

Restoration of the Hole-in-the-Donut would continue for the life of this plan and would be carried out under the wilderness minimum requirements process. Portions of the Hole-in-the-Donut area would be in the front-country zone to accommodate long-term,

ongoing restoration activities. New interpretation of restoration activities for visitors, wayside exhibits, and day use hiking opportunities would be provided, as would primitive camping and evening programs at one or two mounds.

The area encompassing the Daniel Beard Center, Robertson Building, and the historic Nike Missile Base site would be in the developed zone. The Daniel Beard Center and Robertson Building would continue to be used for park administrative purposes such as resource management and research. The historic integrity of the National Register district would be maintained, and historic buildings at the missile site would continue to be used for park administrative purposes. Seasonal, guided interpretive tours of the Nike Missile Base site would continue.

The South Florida Collections Management Center, currently housed in the Daniel Beard Center and Robertson Building, would be relocated to a new museum in this area of the park, providing public exhibits and a storage facility that meets NPS collections standards. Museum collections would continue to be acquired, preserved, and accessible to researchers. The public would have opportunities to experience the center’s vast resources and collections.

The main park road would continue to serve as the only motor vehicle route between the park entrance and Flamingo. Interpretive opportunities along the road would be enhanced to provide visitors with information on the park’s diverse habitats and landscapes. Visitors would continue to access the existing turnouts, boardwalk overlooks, and wayside exhibits.

Bicycling on the main park road from the park entrance to Flamingo would be allowed. Connections with nearby trails comprising the South Dade Greenway Network, including the proposed Biscayne–Everglades National Park Greenway, would be provided where feasible.

Flamingo

As in alternative 1 and the NPS preferred alternative, the Flamingo area would continue as a key visitor interpretive and recreational destination for short and multiday park experiences focused on the area's natural and cultural resource diversity. The area would continue as a major center for wildlife viewing, boating, camping, and fishing activities. The Flamingo historic district would be in the developed zone and would promote a variety of land- and water-based visitor opportunities to enjoy and learn about the park.

Flamingo would continue to serve as the southern portal of the Wilderness Waterway and the new Alternative Wilderness Waterway, which is an element of this alternative. Flamingo would also serve as a major boat access point to Florida Bay, Whitewater Bay, and numerous backcountry rivers and bays, some of which include designated campsites and chickees. NPS operations for western Florida Bay, Whitewater Bay, and Cape Sable would remain at Flamingo.

As in the no-action alternative, a new long-term concession contract for Flamingo would be awarded. Concession services would include overnight accommodations, food service, a marina with boat rentals, the campground, and guided boat tours operated by a park concessioner. See the chapter 1 section titled "Ongoing Projects and Projects Planned for the Near Future, Flamingo Area Improvements" for more background information on this topic.

- New facilities at Flamingo would be designed to be sustainable, elevated/hardened/re-locatable.
- The existing gas station would be renovated to accommodate lodging reception.
- New overnight guest accommodations provided via concessioner operations would

include cabins, houseboats, and seasonal ecotents.

- Rehabilitation of the existing visitor center to meet visitor information, orientation, lodging, tour, and rental needs.
- The historic Mission 66 visitor center would be rehabilitated, preserved, and adaptively reused to enhance visitor services and administrative workspace.
- Increased education and recreational opportunities would be based out of Flamingo and may include more guided tours and land and water livery services.
- Food and beverage services to accommodate park visitors would be provided by the concessioner.
- Concessions housing would be rehabilitated, and some additional units of NPS and concessions housing would be provided to serve peak season operations.
- The NPS/concessions maintenance area would be improved (a few replacement buildings would be provided; workspaces would be reorganized, etc.).
- Restoration would occur at camping loops B and C (approximately 50 acres).
- Character-defining features of the Mission 66 cultural landscape would be preserved where feasible.

Flamingo, like the upper keys and Everglades City/Chokoloskee areas, would be an important location for contacting boaters and fulfilling the education/permit requirement. As explained earlier, the intent of the education/permit requirement would be to provide information about the challenges of marine navigation in the shallow marine and estuarine waters and information about boating etiquette to increase resource protection and visitor enjoyment.

Florida Bay

Flamingo would remain the main Florida Bay boat access point within Everglades National Park. Much of Florida Bay would be in the boat access zone. Under alternative 2, Florida Bay waters would be in the boat access zone, meaning no change in how boaters would use or access Florida Bay. The few short idle speed, no-wake areas for safety purposes would remain. The mandatory boater education/permit program and the increased marine law enforcement presence would provide some measure of increased protection for seagrass beds, banks, and other submerged marine wilderness values. NPS boundary and channel markers would be maintained. Marked channels and recommended motorboat routes would continue to be identified on NOAA maps, commercially offered charts, and the “Florida Bay Map and Guide,” which are widely available and used by boaters.

[Note: In contrast to the NPS preferred alternative and alternative 4, alternative 2 has no “Florida Bay Management Zones” map because there are no pole/troll zones in the bay in this alternative.]

After being closed for more than 20 years, Joe Bay would be reopened for paddling use only (and managed as the backcountry zone). Little Madeira Bay and adjacent smaller water bodies would be in the pole/troll zone. Fishing would be allowed in these areas. A new car-top launch point would be established on the 18-mile stretch of U.S. 1, near Long Sound (in partnership with the Florida Department of Transportation).

As shown in the “Alternative 2” map the pole/troll management zone would be limited to Madeira Bay.

As in the NPS preferred alternative, a formal seagrass restoration program for submerged marine wilderness resources and sites damaged by groundings and propeller scarring would be established.

The four keys in the bay now open to visitor use—two that allow overnight stays (Little Rabbit and North Nest keys) and two that are for day use only (Carl Ross and Bradley keys)—would remain open. All other keys would be in the special protection zone and remain closed to public use to protect nesting and roosting birds. Five additional chickees (two more than in the NPS preferred alternative) would be built in Florida Bay to reduce the travel distance between campsites to about 8 to 10 miles. The chickees would be constructed in the water near keys (not on them); locations would be selected based on detailed evaluation of candidate sites.

Accessibility of park paddling trails and paddling facilities would be improved for persons with disabilities, and this would be true for other areas of the park in addition to Florida Bay.

Opportunities would continue for visitors to enjoy and learn more about Florida Bay via the many guided fishing trips and ecotours offered in this vast, complex area.

Key Largo

The 20-acre NPS site in Key Largo, which includes the Key Largo ranger station and Florida Bay Interagency Science Center, would remain. Hammock vegetation would be restored in the areas not needed for development. Visitor-oriented improvements at this site would include a new visitor information kiosk and a venue to support the boater education/permit program.

NPS staff would pursue an interagency visitor information/orientation facility in the upper keys with other agencies such as the Florida Keys National Marine Sanctuary, the U.S. Fish and Wildlife Service, and Florida State Parks. In this alternative, opportunities to adaptively use existing facilities would be evaluated and pursued. Such a partnership facility would be created only if there is adequate support and involvement from other partners. This could be a convenient

location for visitors to get information about recreational opportunities and regulations among the various park and protected areas, as well as interpretation of Florida Bay and keys marine environments. This facility could be yet another venue for fulfilling the proposed Everglades National Park boater education/permit requirement.

East Everglades Addition

The northern portion of the East Everglades Addition (except for the easternmost part, which is mostly marl prairie and inaccessible to airboats) would be in the frontcountry zone (see “Alternative 2” map). Most of the rest of the Addition would be in the backcountry (nonmotorized) zone, providing classic Everglades wilderness experiences.

Wilderness. Under alternative 2, about 39,500 acres of the southern portion of the East Everglades Addition would be proposed for wilderness designation (see “Alternative 2” map). Areas within this southern portion that would be excluded from the wilderness proposal include the following:

- a 1,320-foot strip just inside the eastern boundary [Note: before the wilderness proposal is forwarded by the National Park Service for approval, the width of this strip would be fine-tuned based on the best available information.]
- Chekika and a 300-foot strip around the Chekika area
- a 150-foot strip west of the centerline of SW 237th Avenue

Private Airboating. A private airboat permit system would be implemented. Private airboating, by those eligible (according to the 1989 East Everglades Expansion Act) would continue in the frontcountry zone. Airboats would be required to stay on designated routes (to minimize resource impacts) and other regulations could be established. Designated routes would coincide with

existing airboat trails (but not necessarily all existing airboat trails); specifics would be determined under the special regulations process following GMP approval (see “Special Regulations” section of this alternative). New and/or improved airboat launch areas may be established near Chekika and along Tamiami Trail.

Commercial Airboating. In this alternative commercial airboats would operate within the frontcountry zone under NPS concession contracts. All existing commercial airboat properties would be acquired by the National Park Service. Contracts would be negotiated with the commercial operators that have met terms specified in the 1989 Expansion Act.

A wider range of airboat tours would be provided in this alternative than in the no-action alternative, including specialized tours to more destinations supporting natural and cultural resource understanding and education. Livery services for transportation of paddlers and campers to designated locations in the East Everglades Addition would also be provided.

The concessions contract(s) would include several provisions, as follows:

- Only services that are necessary and appropriate to Everglades National Park would be provided (e.g., airboat interpretive tours, food service, and limited merchandise sales).
- Interpretive and educational information for airboat tour visitors would be guided by park interpretive/educational standards and coordinated with the park’s interpretive staff, as at the Shark Valley, Gulf Coast, and Flamingo areas.
- A variety of airboat tours would be provided, not necessarily all by the same operator.
- Commercial airboats would travel on designated routes, and those designated routes would coincide

with existing airboat trails (but not necessarily all existing airboat trails); specifics would be determined under the special regulations process following GMP approval (see the “Special Regulations” section of this alternative).

Other Management Elements. A few primitive campsites would be designated on tree islands that currently have camps or campsites. Tree islands in both the frontcountry and backcountry zones would be identified for day and camping use. To protect wetlands and wildlife, including threatened and endangered species, routes and sites might be periodically closed or have limited access during nesting seasons or low water periods. Other tree islands not specifically identified for visitor use would be closed. Permits would be required for overnight backcountry use, as in other areas of the park. Paddling trails would also be provided.

Canoe/kayak launches would be provided along Tamiami Trail. As in the NPS preferred alternative, the locations of these access points would be coordinated with Tamiami Trail Modifications: Next Steps related projects.

Chekika would remain open at least seasonally as a day use area and for primitive camping. The level of education and resource-based programs would be increased.

As in the NPS preferred alternative, educational and recreational opportunities would be expanded along Tamiami Trail, around SW 237th Avenue near Chekika, at some tree islands, and near the park’s eastern boundary in cooperation with public and private entities involved in restoration projects. Previously disturbed sites would be used to the maximum extent possible.

As in the NPS preferred alternative, a new East Everglades administrative/operations center would be built near but outside the

park boundary near Chekika on land recently acquired under Public Law 108-483, which was passed in 2004. Structures in the park that are now being used for these purposes would be demolished once the operations center is functional, and then those sites would be restored to natural conditions.

Tamiami Trail / Shark Valley

Much of the northern portion of the park would be managed as the backcountry zone. A visitor information kiosk and a series of turnouts would be provided along Tamiami Trail for visitor orientation and an overview of natural and cultural resource issues, including ecosystem restoration. As in the NPS preferred alternative, locations would be coordinated with changes associated with Tamiami Trail modifications related to ecosystem restoration.

The facilities at both ends of Shark Valley would be in the developed zone, and the 15-mile Shark Valley loop road would be in the frontcountry zone. The interpretive tram and bicycle rentals would continue to operate. Several shelters/rest stops would be added along the loop road within the footprint of existing development.

The National Park Service would coordinate with other land management agencies along Tamiami Trail to identify and pursue cooperative projects for improved operational efficiency. Park staff would pursue working cooperatively with the Miccosukee Tribe to integrate education programs and opportunities offered by both entities, and to determine the feasibility of sharing resources and facilities to meet park and tribal goals.

As in the NPS preferred alternative, law enforcement, maintenance operations for the park’s Tamiami Trail District, along with some resource management administrative facilities and housing for several wildlife fire staff, would be relocated and centralized at a new operations facility in the park. The

location would be a previously disturbed site within the national park, e.g., Gator Park. A ranger residence and interpretive operations would remain at Shark Valley.

Gulf Coast / Ten Thousand Islands / Everglades City

Visitor and administrative facilities at Everglades City would be in the developed zone. The Marjory Stoneman Douglas Visitor Center would be constructed to replace existing facilities, as required in the Everglades National Park Protection and Expansion Act of 1989. Operation of the visitor center would focus on interpretation, orientation, and concessions to address visitor opportunities available in the western portion of the park, protection of resources, and issuing backcountry permits. The size and the scope of the \$7.9 million facility improvements would be consistent with the value analysis performed in 2012 to address the scaled-down version of improvements at the Gulf Coast. A modest-sized visitor center would be constructed on currently disturbed land while other areas of the site would be reclaimed and rehabilitated. Existing parking would be improved. A new canoe/ kayak ramp and launch would be constructed to support both NPS and concessions operations.

NPS staff would work cooperatively with public and private interests to provide improved boat access outside the park to Gulf Coast waters.

The NPS area at Everglades City would continue to function as a major portal to the western portion of the park. The concession operation would offer expanded opportunities to visit Ten Thousand Islands, the Gulf Coast, and Wilderness Waterway through boat tours and canoe/kayak rentals. Other commercial services would be pursued to provide visitors with additional opportunities such as interpretive, fishing, and paddling tours. Additional land-based

interpretive programs and activities would link the park and neighboring communities.

Most marine areas of the Gulf Coast, including most of the Wilderness Waterway, would be in the boat access zone, managed as they are now. As previously discussed, all boaters would be required to participate in a boater education permit program, which would provide information about resource protection, safety, and boater etiquette. Everglades City would continue as the northern access point for Wilderness Waterway.

As in the NPS preferred alternative, an “Alternative Wilderness Waterway” route would be established to provide enhanced opportunities for a quieter, more tranquil experience that is more consistent with wilderness values. However, in this alternative the Alternative Wilderness Waterway route would be unmarked (to preserve scenery and minimize maintenance requirements), but would be highlighted in the mandatory boater education program, in marine navigation charts, GPS systems, and other products that highlight park recreational opportunities. Also, except for existing idle speed, no-wake areas, the entire Alternative Wilderness Waterway would be in the boat access zone; continued relatively infrequent use of these segments by motorboats would be expected. Visitors could continue to camp at backcountry chickees along the Gulf Coast and interior waterways, and as many as eight new backcountry chickees would be provided.

Costs and Staffing. The NPS staffing level needed to implement alternative 2 would be 240 FTE staff members. Volunteers and partnerships would continue to be key contributors to NPS operations. Annual operating costs for this alternative would be \$20.9 million. One-time costs (including new construction and nonfacility costs such as major resource plans and projects) would be \$36.1 million. Major cost components include the Marjorie Stoneman Douglas Visitor Center at Gulf Coast, the

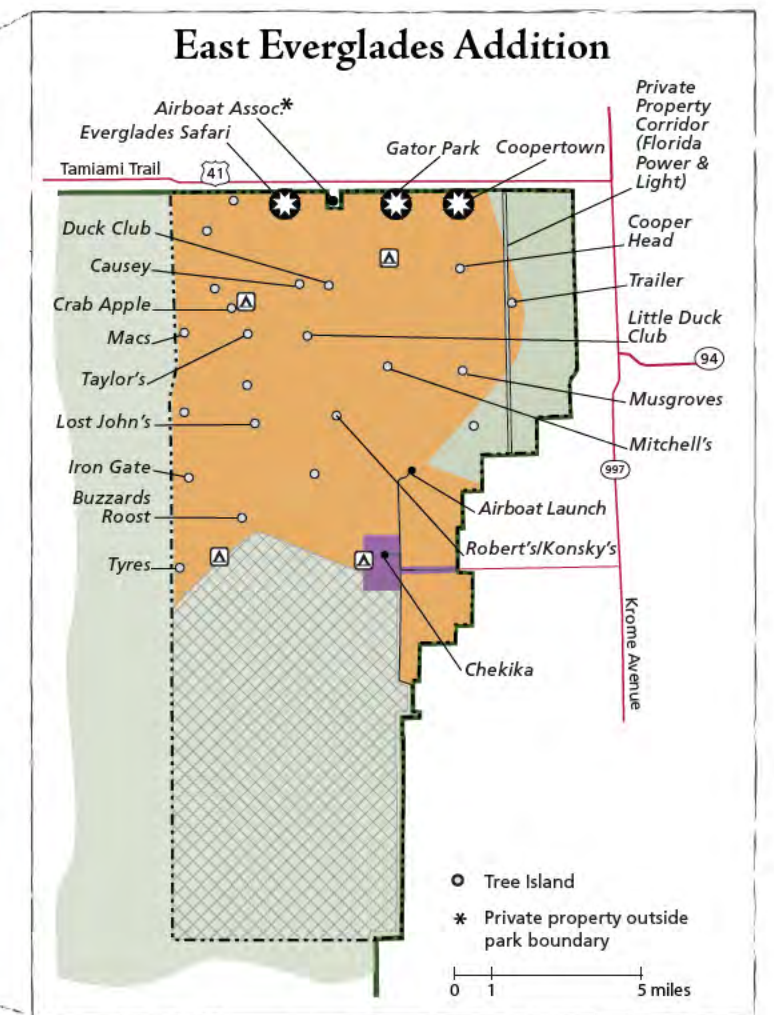
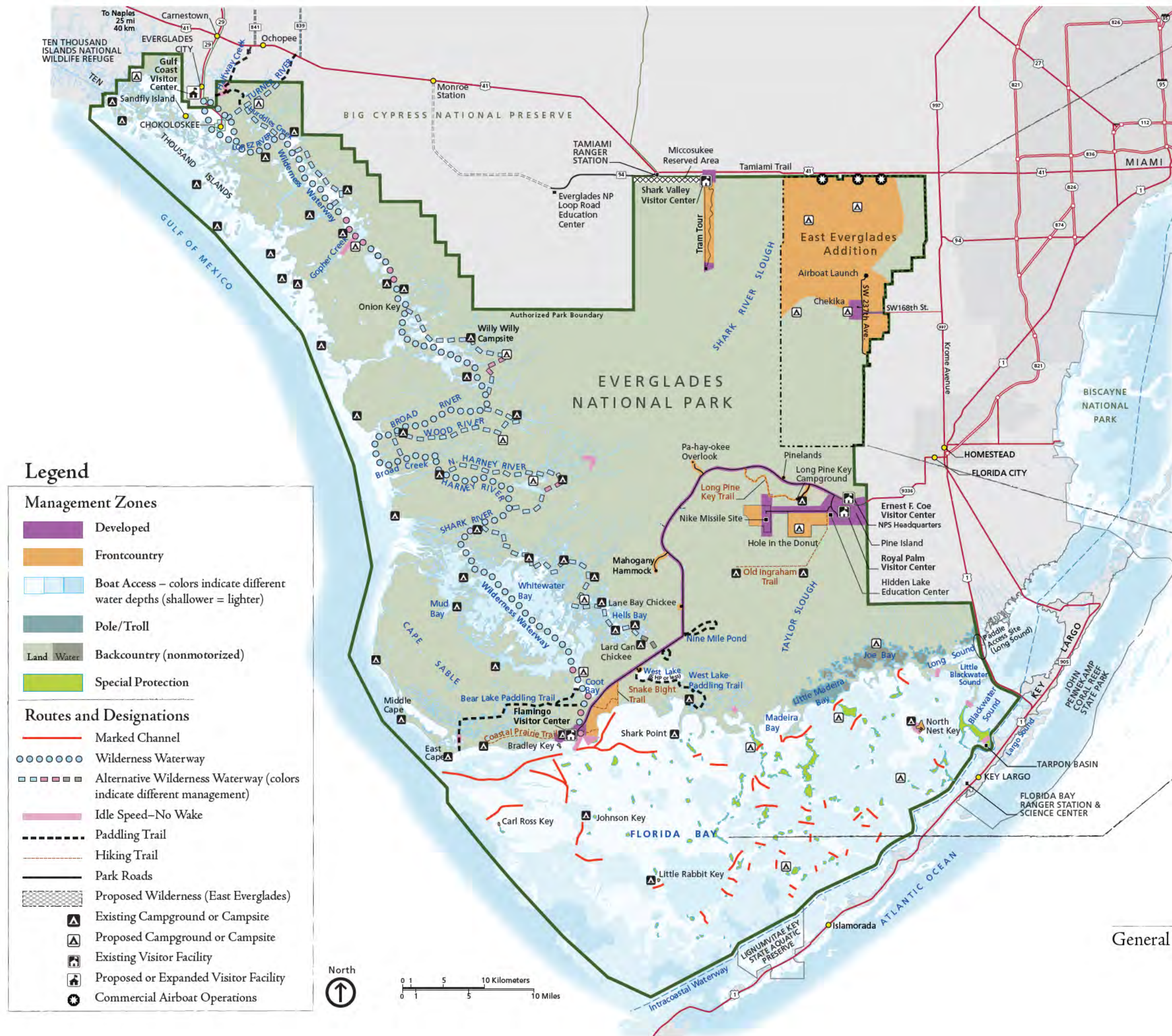
improvements at Flamingo, the new South Florida Collections Management Center, the new East Everglades and Tamiami Trail operations centers, and major programs such as the boater education/permit program. More information on costs is provided near the end of this chapter. Land acquisition costs are not included in the cost estimates.

The cost estimates provided here are for comparison to other alternatives only; they are not to be used for budgeting purposes. Although the numbers appear to be absolutes, they represent a midpoint in a possible range of costs.

Presentation of these costs does not guarantee future NPS funding. Project funding would not come all at once; it would likely take many years to secure and may be

provided by partners, donations, or other federal sources. Although the National Park Service hopes to secure this funding, the park may not receive enough funding to achieve all desired conditions within the time frame of this general management plan (the next 20 or more years).

Special Regulations. The National Park Service can close areas or otherwise regulate specific uses through special regulations published in the *Code of Federal Regulations* 36 (36 CFR) when necessary for safety or resource protection. Several closures and use restrictions proposed under this alternative would require special regulations, and these would be accomplished as described for the NPS preferred alternative.



Florida Bay Management

- Unrestricted boat access throughout most of Florida Bay
- Protect seagrass and banks using mandatory education/permit program for boaters and increased enforcement presence
- Marked channels (existing or previously marked) would remain

ALTERNATIVE 3

Alternative 3 was created during an early phase of alternative development, but was dropped from detailed consideration in this plan. See the “Alternatives and Actions

Considered but Dismissed from Detailed Evaluation” section later in this chapter for more information.

ALTERNATIVE 4

OVERALL CONCEPT AND PARKWIDE ACTIONS

Alternative 4 would provide a high level of support for protecting natural systems while improving opportunities for certain types of visitor activities. This concept is represented in management zoning by establishing pole/troll zones over shallow areas of Florida Bay, and by designating 21,600 acres in the northwest portion of the East Everglades Addition as the frontcountry zone (where private airboating by eligible individuals would continue). Visitor opportunities for commercial airboat tours would be discontinued in this alternative. Nearly all of the East Everglades Addition would be proposed for eventual wilderness designation.

Alternative 4 would have several programs in common with alternative 2 and the NPS preferred alternative—an adaptive management program, a park advisory committee, a user capacity program, an expanded natural resource program, a comprehensive cultural resource management program, and the boater education permit requirement. Details of these various programs would be the same as described in the NPS preferred alternative.

The mandatory boater education permit program, coupled with other on-the-water changes such as pole/troll zones, would provide a multifaceted approach to enhanced resource protection and visitor experiences. The park's law enforcement presence would be increased, especially on marine waters, to increase understanding of and compliance with proper navigation, management zones, and idle speed, no-wake designations and enhance resource protection through heightened awareness of sensitive resources and minimum impact boat operation techniques.

As in alternative 2, the park would develop a manatee management plan to identify ways to improve manatee protection within the national park while maintaining as many existing recreational boating opportunities as possible. Details would be as described in alternative 2.

Table 5 summarizes key differences among the alternatives.

Headquarters / Pine Island / Royal Palm / Main Park Road

The headquarters and Ernest F. Coe Visitor Center area would be in the developed zone. The Ernest Coe Visitor Center would continue to be the primary site for information, orientation, and interpretation for visitors, as in the other alternatives (see "Alternative 4" map at the end of this section). There would be no change in use of the park headquarters. A center for park science staff focused on the Comprehensive Ecosystem Restoration Plan and other ecosystem restoration efforts would likely remain in a gateway community or at park headquarters.

The main park road would also be in the developed zone. The Long Pine Key campground and interpretive turnouts at attractions along the main park road would be in the frontcountry zone to allow basic facilities that support visitor use and expanded interpretive opportunities. Long Pine Key would continue to be managed for a mix of daytime opportunities and camping. The Long Pine Key nature trail would be in the frontcountry zone, with interpretation focused on pineland habitat. This trail would continue to be open to bicycling.

As in alternative 2 and the NPS preferred alternative, most of the area beyond the main park road corridor would be in the

backcountry (nonmotorized) zone to perpetuate preservation of designated wilderness and protection/restoration of natural processes and natural and cultural resources. Canoeing and “slough slogging” would continue to be the primary visitor activities in this area.

As in the NPS preferred alternative, park managers would pursue a partnership with the Homestead and Florida City area communities to provide a cooperative visitor contact station in this national park gateway area and to enhance pre-visit information and orientation for visitors.

NPS staff would pursue the goal of providing alternative transportation from south Miami-Dade County to the national park’s Coe Visitor Center / Royal Palm area. This would make it easier for those who are without private vehicles (or who prefer to use public transportation) to get to the park. As in the NPS preferred alternative, NPS staff would also pursue potential opportunities for alternative transportation from the visitor center / Royal Palm area to Flamingo, with stops along the way. This would probably need to be implemented on an incremental basis based on what is most feasible given economic viability, potential partnerships, funding sources, etc.

Restoration of the Hole-in-the-Donut would continue for the life of this plan and would be carried out under the wilderness minimum requirements analysis process. The entire area would be restored as wetlands or hammocks. Potential wilderness would be converted to designated wilderness during the life of the general management plan.

The area encompassing the Daniel Beard Center, Robertson Building, and the Nike Missile Base site would be in the developed zone. The Daniel Beard Center and Robertson Building would continue to be used for park administrative purposes such as resource management and research. Visitor opportunities in the vicinity would be expanded to include interpretation of the

Nike Missile Base site after rehabilitation and visitor safety improvements. Interpretive programs would be extended into the shoulder seasons, and enhanced interpretation would require site improvements such as improved vehicular access, parking, and restrooms. The historic integrity of the National Register district would be maintained, and historic buildings at the missile site would continue to be used for park administrative purposes.

The South Florida Collections Management Center, currently housed in the Daniel Beard Center and Robertson Building, would be relocated to a new museum centrally located in the Homestead-Florida City area. The new facility, which could be a partnership with a university or other public institution, would meet NPS collections standards. Museum collections would continue to be acquired, preserved, and accessible to researchers, and the public would have access, as appropriate, to the collection.

As in the other alternatives, the main park road would continue to serve as the only motor vehicle route between the park entrance and Flamingo. Interpretive opportunities along the road would be enhanced to provide visitors with information on the park’s diverse habitats and landscapes. Visitors would continue to access the existing turnouts, boardwalk overlooks, and wayside exhibits.

Bicycling on the main park road from the park entrance to Flamingo would be allowed. Connections with nearby trails comprising the South Dade Greenway Network, including the proposed Biscayne–Everglades National Park Greenway, would be provided where feasible. In addition, increased hiking/cycling opportunities in nonwilderness areas at the headquarters/ Long Pine Key area and Flamingo would be pursued.

Flamingo

As in all other alternatives, the Flamingo area would continue as a key visitor interpretive and recreational destination for short and multiday park experiences focused on the area's natural and cultural resource diversity. The area would continue as a major center for wildlife viewing, boating, camping, and fishing activities. The Flamingo historic district would be in the developed zone and would provide a variety of land- and water-based visitor opportunities to enjoy and learn about the park.

Flamingo would continue to serve as the southern portal of the Wilderness Waterway and the new Alternative Wilderness Waterway, which is an element of this alternative. Flamingo would also serve as a major boat access point to Florida Bay, Whitewater Bay, and numerous backcountry rivers and bays, some of which include designated campsites and chickees. NPS operations for western Florida Bay, Whitewater Bay, and Cape Sable would remain at Flamingo.

As in the no-action alternative, a new long-term concession contract for Flamingo would be awarded. Concession services would include overnight accommodations, food service, a marina with boat rentals, the campground, and guided boat tours operated by a park concessioner. See the chapter 1 section titled "Ongoing Projects and Projects Planned for the Near Future, Flamingo Area Improvements" for more background information on this topic.

- New facilities at Flamingo would be designed to be sustainable, hardened, mobile, elevated/hardened/re-locatable.
- The existing gas station would be renovated to accommodate lodging reception.
- New overnight guest accommodations provided via the concessioner operations would

include cabins, houseboats, and seasonal ecotents.

- Rehabilitation of the existing visitor center to meet visitor information, orientation, lodging, tour, and rental needs.
- The historic Mission 66 visitor center would be rehabilitated, preserved, and adaptively reused to enhance visitor services and administrative workspace.
- Increased education and recreational opportunities would be based out of Flamingo and may include more guided tours and land and water livery services.
- Food and beverage service to accommodate park visitors would be provided by the concessioner.
- Concessions housing would be rehabilitated, and some additional units of NPS and concessions housing would be provided to serve peak season operations.
- The NPS/concessions maintenance area would be improved (a few replacement buildings would be provided; workspaces would be reorganized, etc.).
- Restoration would occur at camping loops B and C (approximately 50 acres).
- Character-defining features of the Mission 66 cultural landscape would be preserved where feasible.

A new long-term concession contract for Flamingo would be awarded. Concession services would include overnight accommodations, food service, a marina with boat rentals, the campground, and guided boat tours operated by a park concessioner, as described in the Flamingo Concession Services Plan.

Flamingo, like the upper keys and Everglades City / Chokoloskee areas, would be an

important location for contacting boaters and fulfilling the education/permit requirement.

Florida Bay

Flamingo would remain the main Florida Bay boat access point within Everglades National Park. Much of Florida Bay would be in the boat access zone. Coupled with improved marking and maintenance of channel and boundary markers, as well as the mandatory boater education program, pole/troll zones and idle-speed areas would be established to better protect designated submerged marine wilderness, vegetation, and wildlife resources while allowing reasonable recreational access. (See “Alternative 4” and “Florida Bay Management Zones” maps at the end of this section.)

In this alternative, the shallowest areas of Florida Bay (mean water depth 2 feet or less) would be managed as marked pole/troll zones based on the 2008 propeller scarring study’s (NPS 2008b) prediction of areas at risk of propeller and grounding damage. The pole/troll zones would be marked and also shown on marine charts and GPS maps. Under this alternative, about 159,564 acres (about 41%) of Florida Bay waters within the park (392,580 acres) would be in the pole/troll zone. Within pole/troll zones, boats would have to be propelled using push poles, electric trolling motors, or paddles. Internal combustion engines could be used in designated channels, but there would be fewer designated channels than now to reduce bottom impacts from propeller scarring and groundings.

A 300-foot-wide idle speed, no-wake area would be designated both along the mainland shoreline between East Cape and Middle Cape and around the keys in Florida Bay (the latter are not shown on the alternatives maps due to scale/clarity issues). The purpose of these designations is to reduce shoreline erosion from motorboat wakes, improve safety and experiences for those on the shoreline or boating close to the shoreline,

and better protect wildlife. This zone would also serve as a buffer that would improve the natural soundscapes in the adjacent backcountry and wilderness areas. Visitors would be expected to abide by pole/troll zone, backcountry zone, and idle-speed-no wake requirements, except in emergency situations.

As in the NPS preferred alternative, Little Madeira Bay, Joe Bay, and adjacent smaller water bodies would be in the special protection zone (no public use), continuing to serve as a baseline area for long-term ecological monitoring and restoration studies. A new car-top launch would be established on the 18-mile stretch of U.S. 1, near Long Sound (in partnership with the Florida Department of Transportation).

A formal seagrass restoration program for submerged marine wilderness resources and sites damaged by groundings and propeller scarring would be established.

As in the NPS preferred alternative, NPS staff would pursue partnership opportunities for additional public boating (motorized and nonmotorized) access onto Florida Bay.

The four keys in the bay now open to visitor use—two that allow overnight stays (Little Rabbit and North Nest keys) and two that are for day use only (Carl Ross and Bradley keys)—would remain open. All other keys would be in the special protection zone and remain closed to public use to protect nesting and roosting birds. Four additional platform campsites (chickees) would be built in Florida Bay to reduce the travel distance between campsites to a more reasonable length (i.e., 8–10 miles). The chickees would be constructed in the water near keys (not on them); locations would be selected based on detailed evaluation of candidate sites.

Opportunities would continue for visitors to enjoy and learn more about Florida Bay via the many guided fishing trips and ecotours offered in this vast, complex area.

Key Largo

The 20-acre NPS site in Key Largo, which includes the Key Largo ranger station and Florida Bay Interagency Science Center, would remain. Hammock vegetation would be restored in the areas not needed for development. Visitor-oriented improvements at this site would include a new visitor information kiosk and a venue to support the boater education/permit program.

NPS staff would pursue an interagency visitor information/orientation facility in the upper keys with other agencies such as the Florida Keys National Marine Sanctuary, the U.S. Fish and Wildlife Service, and Florida State Parks. In this alternative, the opportunities in a new facility would be pursued. Such a partnership facility would be created only if there is adequate support and involvement from other partners. This could be a convenient location for visitors to get information about recreational opportunities and regulations regarding the various park and protected areas, as well as interpretation of Florida Bay and keys marine environments. This facility could be yet another venue for fulfilling the proposed Everglades National Park boater education/ permit requirement.

East Everglades Addition

As in the NPS preferred alternative, the northwest portion of the East Everglades Addition would be managed as the frontcountry zone until private airboat use ends (see “Alternative 4” map). After that, the frontcountry zone would be reduced to a strip along Tamiami Trail and the area around SW 237th Avenue. Most of the remaining area would be managed as backcountry (nonmotorized), providing the classic Everglades wilderness experience of solitude and quiet.

Wilderness. Under this alternative there would be about 42,700 acres proposed for wilderness designation and 59,400 acres proposed as potential wilderness (see

“Alternative 4” map). Potential wilderness would become designated wilderness once nonconforming uses such as private airboat use have ended and/or private property came into federal ownership. Areas that would be excluded from the wilderness proposal include the following:

- an east-west strip (1,320 feet wide) along the park boundary south of Tamiami Trail (to permit modifications along Tamiami Trail for improved water delivery to Shark River Slough)
- a 1,320-foot strip just inside the entire length of the eastern boundary (to permit drainage modification and seepage management infrastructure). [Note: before the wilderness proposal is forwarded by the National Park Service for approval, the width of this strip would be fine-tuned based on the best available information.]
- Chekika and a 300-foot strip around the Chekika area
- a 150-foot strip on either side of the centerline of SW 168th Street and on either side of the centerline of SW 237th Avenue

Private Airboating. A private airboat permit system would be implemented. Private airboating, by those eligible (according to the 1989 East Everglades Expansion Act), would continue in the frontcountry zone. Airboats would be required to stay on designated routes (to minimize resource impacts), and other regulations could be established. Designated routes would coincide with existing airboat trails (but not necessarily all existing airboat trails); specifics would be determined under the special regulations process following GMP approval (see “Special Regulations” section of this alternative). New and/or improved airboat launch areas may be established near Chekika and along Tamiami Trail.

Private airboating would continue in the frontcountry zone by those eligible, consistent with the 1989 East Everglades Expansion Act.

Commercial Airboating. In contrast to the other alternatives, commercial airboat operations within the park would end under this alternative, so visitors would no longer have the opportunity to take a commercial guided airboat tour. The commercial airboat sites would be acquired by the National Park Service to advance ecosystem restoration goals. One fill site that is now used as commercial airboat bases of operations would be used instead for visitor activities and programs such as picnicking, wildlife viewing, a canoe/kayak launch, and camping. If not needed for other purposes, the site would be restored to more natural conditions.

Other Management Elements. A few primitive campsites would be designated on tree islands that currently have camps or campsites. Tree islands in both frontcountry and backcountry zones would be identified for day and camping use. To protect wetlands and wildlife, including threatened and endangered species, routes and sites might be periodically closed or have limited access during nesting seasons or low water periods. Other tree islands not specifically identified for visitor use would be closed.

Canoe/kayak launches would be provided along Tamiami Trail, allowing both short- and long-distance paddling opportunities. As in the NPS preferred alternative, the locations of these access points would be coordinated with Tamiami Trail Modifications: Next Steps related projects. Permits would be required for overnight use in the East Everglades, as is the case in other areas of the park. Long-distance paddling routes (unmarked) would allow visitors to connect through Shark River Slough to the main park road, Alternative Wilderness Waterway, or Whitewater Bay / Gulf of Mexico.

Some East Everglades Addition cultural sites would be maintained and protected through a stewardship program. Shark River Slough cultural/archeological resources would be integrated into interpretive programs.

Chekika would remain open at least seasonally for day use and would also serve as one of the park's environmental education venues; this could include overnight programs.

Educational and recreational opportunities (e.g., hiking, bicycling, wildlife viewing, and learning about Everglades restoration and history) would be expanded along Tamiami Trail, around SW 237th Avenue near Chekika, and near the park's eastern boundary, consistent with the management zones. This would be accomplished in cooperation with public and private entities that are involved in Tamiami Trail modification projects, eastern boundary water modification projects, and restoration of natural flows into the park and regional greenway efforts near the park. Previously disturbed sites would be used to the maximum extent possible.

As in the NPS preferred alternative and alternative 2, a new East Everglades administrative / operations center would be built near, but outside the park boundary near Chekika on land recently acquired under Public Law 108-483, which was passed in 2004. Structures in the park that are now being used for these purposes would be demolished once the operations center is functional; those sites would be restored to natural conditions.

As in the NPS preferred alternative, the National Park Service would pursue alternative transportation options (probably during the high visitor use season to start) from the Miami area to visitor destinations along Tamiami Trail (to Shark Valley and sites in the East Everglades Addition). Such options would likely involve cooperation and/or partnerships with other entities.

Tamiami Trail / Shark Valley

As in the other alternatives, much of the northern portion of the park would be in the backcountry zone. NPS staff would pursue a new multiagency visitor contact facility near the intersection of Tamiami Trail and Krome Avenue with other partners (e.g., local, state, and federal management entities involved in Everglades restoration and Tamiami Trail rebuilding). The intent would be to provide a centralized location for visitors to get information about outdoor recreational and educational opportunities, resource issues, and ecosystem restoration efforts throughout the Tamiami Trail corridor.

More generally, NPS staff would coordinate with other land management agencies along Tamiami Trail to identify and pursue other cooperative opportunities to increase operational efficiency. Park staff would pursue working cooperatively with the Miccosukee Tribe to integrate education programs and opportunities offered by both entities, and to determine the feasibility of sharing resources and facilities to meet park and tribal goals.

At Shark Valley, the facilities at each end of the 15-mile loop road would be in the developed zone, and the loop road itself would be in the frontcountry zone. The interpretive tram and bicycle rentals would continue to operate. As in alternative 2, several shelters/rest stops would be added along the loop road within the footprint of existing development.

In contrast to the NPS preferred alternative and alternative 2, law enforcement, interpretation, and maintenance operations for the Tamiami Trail District would not be consolidated in a new facility; instead they would remain in existing facilities (as in alternative 1).

Gulf Coast / Ten Thousand Islands / Everglades City

Visitor and administrative facilities at Everglades City would be in the developed zone. The Marjory Stoneman Douglas Visitor Center would be constructed to replace existing facilities, as required by the Everglades National Park Protection and Expansion Act of 1989. Operation of the visitor center would focus on interpretation, orientation, and concessions to address visitor opportunities available in the western portion of the park, protection of resources, and issuing backcountry permits. The size and the scope of the \$7.9 million facility improvements would be consistent with the value analysis performed in 2012 to address the scaled-down version of improvements at the Gulf Coast. A modest-sized visitor center would be constructed on currently disturbed land while other areas of the site would be reclaimed and rehabilitated. Existing parking would be improved. A new canoe/kayak ramp and launch would be constructed to support both NPS and concessions operations.

The NPS area at Everglades City would continue to function as a major portal to the western portion of the park. The concession operation would continue and would offer expanded opportunities to visit Ten Thousand Islands, the Gulf Coast, and Wilderness Waterway through boat tours and canoe/kayak rentals. Other commercial services would be pursued to provide visitors with more opportunities such as interpretive, fishing, and paddling tours. Additional land-based interpretive programs and activities would link the park and neighboring communities. A cultural heritage interpretive water trail would be established in the Ten Thousand Islands area; this trail would be unmarked but shown on maps, charts, websites, and pamphlets providing visitors with an understanding of significant archeological and historic sites in the region.

Most marine areas of the Gulf Coast, including most of Wilderness Waterway,

would be in the boat access zone and managed as they are now. As previously discussed, all boaters would be required to participate in a boater education permit program, which would provide information about resource protection, safety, and boater etiquette. Everglades City would continue as the northern access point for Wilderness Waterway.

A new Alternative Wilderness Waterway route would be established to provide enhanced opportunities for a quieter, more tranquil experience that is more consistent with wilderness values. This route would be minimally marked to preserve scenery and minimize maintenance requirements. Some segments of the Alternative Wilderness Waterway would be in the boat access zone, and continued relatively infrequent use of these segments by motorboats would be expected. To provide wilderness paddling experiences, some segments would be designated idle speed, no-wake areas or backcountry (nonmotorized) zones based on narrowness or shallowness of the water, low clearance to mangroves, and available alternate routes of access for motorboats. See “Alternative 4” map. Visitors could continue to camp at backcountry chickees along the Gulf Coast and interior waterways, and as many as eight new backcountry chickees would be provided.

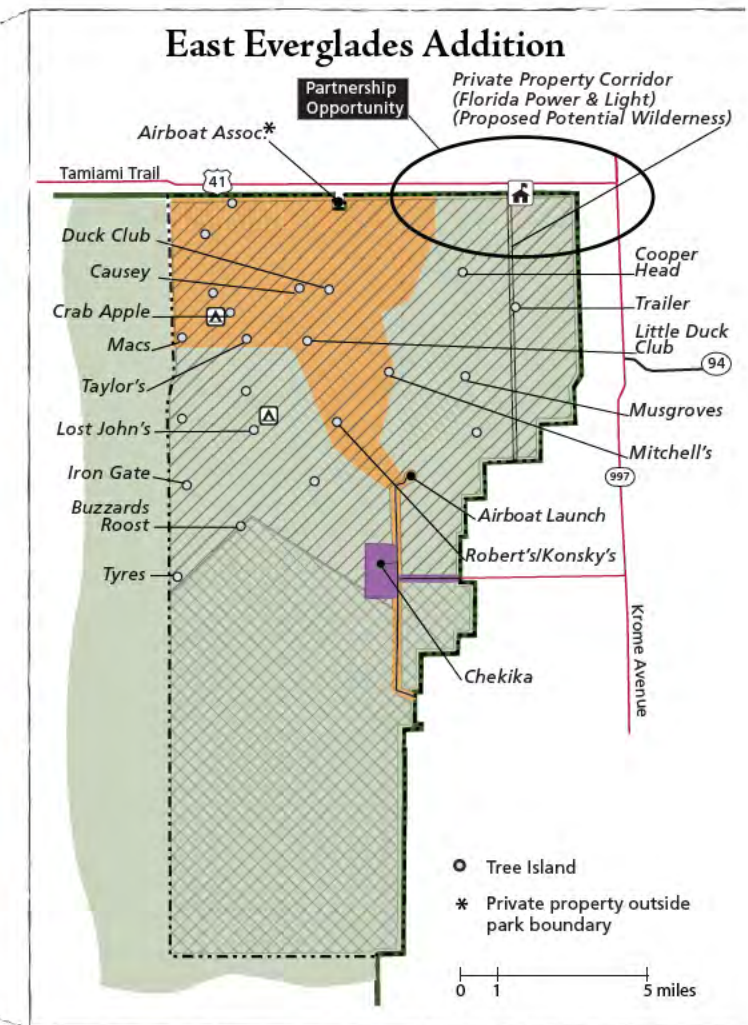
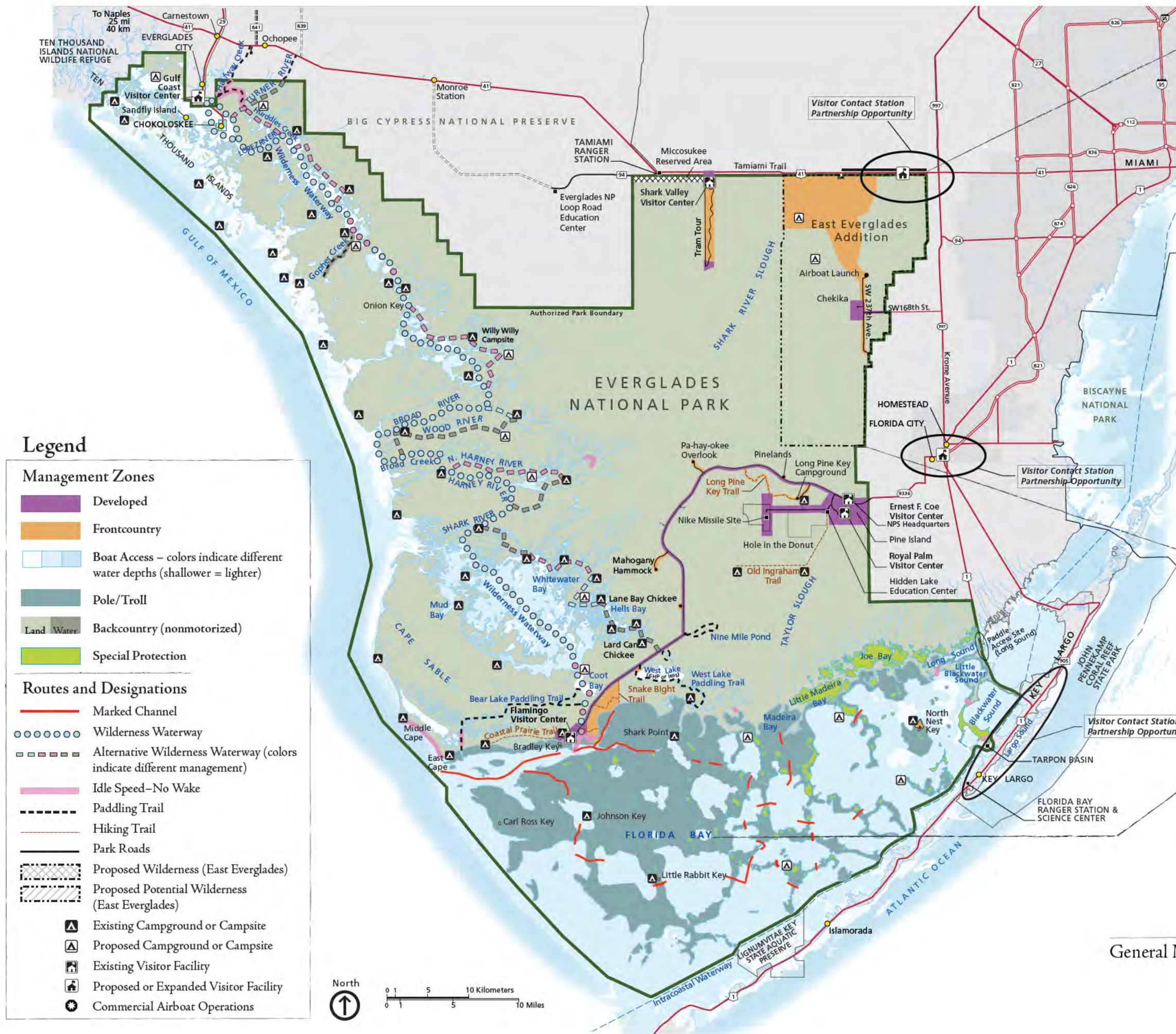
Costs and Staffing. The NPS staffing level required to implement alternative 4 would be 251 FTE staff members. Volunteers and partnerships would continue to be key contributors to NPS operations. Annual operating costs for this alternative would be \$22 million. One-time costs (including new construction and nonfacility costs such as

major resource plans and projects) would be \$38.7 million. Major cost components include the Marjorie Stoneman Douglas Visitor Center at Gulf Coast, the improvements at Flamingo, the new South Florida Collections Management Center, the new East Everglades operations center, and major programs such as the boater education / permit program. Land acquisition costs are not included in the cost estimates.

The cost estimates provided here are for comparison to other alternatives only; they are not to be used for budgeting purposes. Although the numbers appear to be absolutes, they represent a midpoint in a possible range of costs.

Presentation of these costs does not guarantee future NPS funding. Project funding would not come all at once; it would likely take many years to secure and may be provided by partners, donations, or other federal sources. Although the National Park Service hopes to secure this funding, the park may not receive enough funding to achieve all desired conditions within the time frame of this general management plan (the next 20 or more years). More information on costs is provided near the end of this chapter.

Special Regulations. The National Park Service can close areas or otherwise regulate specific uses through special regulations published in the *Code of Federal Regulations* 36 (36 CFR) when necessary for safety or resource protection. Several closures and use restrictions proposed under this alternative would require special regulations, and these would be accomplished as described for the NPS preferred alternative.



Florida Bay Management



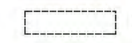

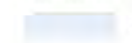
- Protect areas at risk of scarring with marked pole/troll zones in areas 2' deep or shallower (based on propeller scarring study's predictive model). See Florida Bay Management Zones detail map.
- 300-foot pole/troll zone around all Florida Bay keys (not shown on map)
- Marking of pole/troll zones
- Marked channels for motorboat use (fewer than now) in some areas
- Mandatory education/permit program for boaters and increased enforcement presence

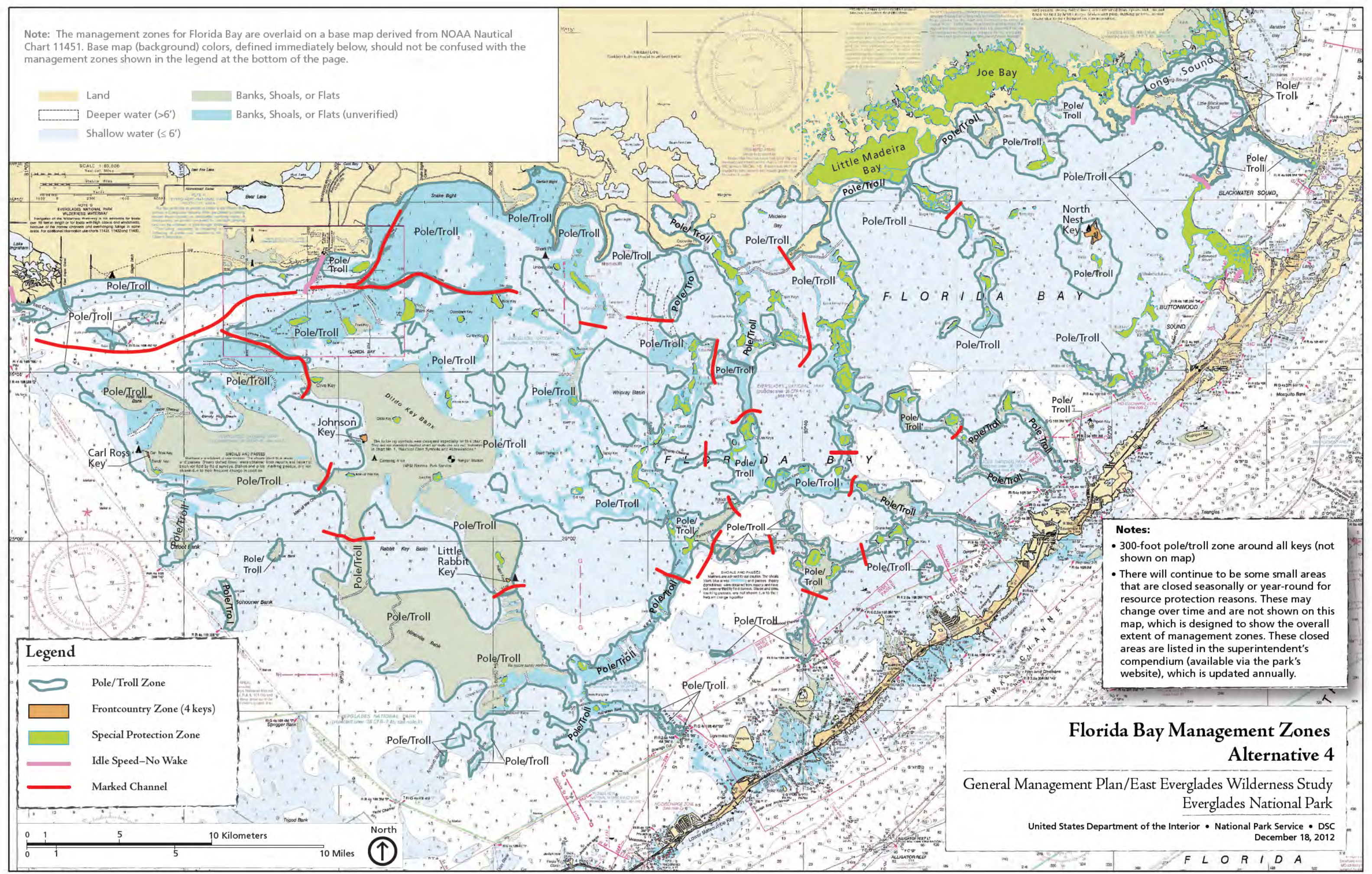
Alternative 4

General Management Plan/East Everglades Wilderness Study

Everglades National Park

Note: The management zones for Florida Bay are overlaid on a base map derived from NOAA Nautical Chart 11451. Base map (background) colors, defined immediately below, should not be confused with the management zones shown in the legend at the bottom of the page.

- | | |
|--|--|
|  Land |  Banks, Shoals, or Flats |
|  Deeper water (>6') |  Banks, Shoals, or Flats (unverified) |
|  Shallow water (≤ 6') | |



Notes:

- 300-foot pole/troll zone around all keys (not shown on map)
- There will continue to be some small areas that are closed seasonally or year-round for resource protection reasons. These may change over time and are not shown on this map, which is designed to show the overall extent of management zones. These closed areas are listed in the superintendent's compendium (available via the park's website), which is updated annually.

**Florida Bay Management Zones
Alternative 4**

General Management Plan/East Everglades Wilderness Study
Everglades National Park

United States Department of the Interior • National Park Service • DSC
December 18, 2012

COST SUMMARY OF THE ALTERNATIVES

NPS decision makers and the public must consider an overall picture of the complete costs and advantages of the alternatives, including the no-action alternative, to make wise planning and management decisions for Everglades National Park. In estimating the costs of the alternatives, different types of costs need to be taken into account, including one-time and annual operating costs.

The following applies to costs presented in this general management plan:

- Costs are presented as general estimates. They are intended for alternatives comparison purposes only and are not appropriate for budgeting purposes.
- The cost estimates were developed in 2012.
- The cost estimates have been developed using industry standards to the extent possible.
- Actual costs would be determined at a later date and would take into consideration the design of facilities, identification of detailed resource protection needs, and changing visitor expectations.
- Approval of the general management plan does not guarantee that funding or staffing for proposed actions would be forthcoming.
- Project funding may not come all at once; it may take many years to secure and may be provided by partners, donations, or other nonfederal sources.
- Some proposals may not be funded within the life of this general management plan, and full

implementation may occur many years into the future.

- Costs have *not* been estimated for alternative actions where the terms “pursue” or “seek to” are used in the chapter 2 description of alternatives. For example, “the National Park Service would pursue alternative transportation” or “park managers would pursue a partnership with the Homestead and Florida City area communities to provide a cooperative visitor contact station” for the following reasons:
 - These actions would require partnerships and/or cooperation by other entities.
 - These actions would probably be funded, at least in part, from non-NPS funding sources.
 - These actions are considered less certain, and not enough details are known at this time to estimate costs.

The following explanatory notes pertain to table 2:

- Annual operating costs (ONPS) are the total costs per year for maintenance and operations associated with each alternative, including utilities, supplies, staff salaries and benefits, leasing, and other materials. Cost and staffing estimates assume that the alternative is fully implemented as described in the narrative. For all alternatives annual operating costs includes staffing and other costs associated with Flamingo improvements.

TABLE 2. ESTIMATED COSTS OF THE ALTERNATIVES (IN 2012 DOLLARS)

	Alternative 1 (No Action)	NPS Preferred	Alternative 2	Alternative 4
Annual Operating Costs (ONPS)	\$16,953,000	\$22,050,500	\$20,919,800	\$22,147,100
Staffing (FTE)	214	249	240	251
Total One-time Costs	\$10,800,000	\$40,875,000	\$36,125,000	\$38,725,000
Facility Costs	\$10,800,000	\$36,800,000	\$33,150,000	\$35,600,000
Nonfacility Costs	\$ 0	\$ 4,075,000	\$ 2,975,000	\$ 3,125,000
Other Costs*				
Flamingo Redevelopment	\$10,800,000	\$10,800,000	\$10,800,000	\$10,800,000
(Concessions)	\$ 3,400,000	\$ 3,400,000	\$ 3,400,000	\$ 3,400,000
(NPS)	\$ 7,400,000	\$ 7,400,000	\$ 7,400,000	\$ 7,400,000
Gulf Coast	\$ 0	\$ 7,900,000	\$ 7,900,000	\$ 7,900,000

*Flamingo Redevelopment and Gulf Coast costs are included in the total one time costs for each action alternative.

- The staffing figure (total number of FTE employees) is the number of person-years of staff required to maintain the assets of the park, provide visitor services, protect resources, and generally support park operations. The FTE number indicates ONPS-funded NPS staff only, not volunteer positions or positions funded by partners. FTE salaries and benefits are included in the annual operating costs. There were 214 FTE authorized for the no-action alternative, while the actual staffing level in 2011 was 181 FTE because funding was insufficient to fill all 214 authorized positions.
- Total one-time costs include facility costs, nonfacility costs, and other costs. They are calculated by summing the rows in table 2.
- One-time facility costs include those for the design, construction, rehabilitation, or adaptive use of visitor centers, roads, parking areas, administrative facilities, comfort stations, educational facilities, entrance stations, fire stations, maintenance facilities, museum collection facilities, and other visitor facilities.
- One-time nonfacility costs include actions for the preservation of cultural or natural resources not related to facilities, the development of visitor use tools not related to facilities, and other park management activities that would require substantial funding above park annual operating costs. Examples include the seagrass restoration program and the boater education/permit program.
- Other costs are for projects that would be partially or wholly funded from other sources. Flamingo costs have been separated out in table 2 because (1) costs for Flamingo redevelopment would be incurred by the concessioner and the National Park Service, (2) Flamingo costs make up a large share of the overall cost,

and (3) Flamingo costs are common to every alternative, including the no-action alternative.

- Land acquisition costs are not included in the cost estimates.

USER CAPACITY

OVERVIEW

General management plans for national park system units are required by law to identify and address implementation commitments for user capacity, also known as carrying capacity. The National Park Service defines user capacity as the types and levels of visitor use that can be accommodated while sustaining the quality of park resources and visitor experience consistent with the purposes of the park. Managing user capacity in national parks is inherently complex and depends not only on the number of visitors, but also on where the visitors go, what they do, and the “footprints” they leave behind. In managing for user capacity, park staff and partners rely on a variety of management tools and strategies rather than relying solely on regulating the number of people in a park area. In addition, the ever-changing nature of visitor use in parks requires a deliberate and adaptive approach to managing user capacity.

The foundations for making user capacity decisions in this general management plan are the purpose, significance, special mandates, and management zones associated with the park. The purpose, significance, and special mandates define why the park was established and identify the most important resources and values, including visitor opportunities that would be protected and provided. The management zones in each action alternative describe the desired resource conditions and visitor experiences, including appropriate types of activities and general use levels for different locations throughout the park. The zones, as applied in the alternatives, are consistent with, and help the park achieve, its specific purpose, significance, and special mandates. As part of the NPS commitment to implement user capacity, park staff would abide by these directives for guiding the types and levels of visitor use that would be accommodated

while sustaining the quality of park resources and visitor experience consistent with the purposes of the park.

In addition to these important directives, this plan includes indicators and standards for Everglades National Park. Indicators and standards are measureable variables that would monitor resource conditions and visitor experience. The indicators and standards help the National Park Service ensure that desired conditions are being attained, thereby supporting the fulfillment of the park’s legislative and policy mandates. The general management plan also identifies the types of management actions that would be taken to achieve desired conditions and related legislative and policy mandates.

Table 3 includes the indicators, standards, and potential future management strategies allocated by management zones that would be implemented as a result of this planning effort. The management strategies in table 3 are generally listed in sequential order, i.e., strategies near the top of the list would generally be implemented first; strategies near the bottom are less preferred and might be implemented only if needed. The planning team considered many potential issues and related indicators that would identify impacts of concern, but those described in this section were considered the most significant, given the importance and vulnerability of the resource or visitor experience affected by visitor use. The planning team also reviewed the experiences of other parks with similar issues to help identify meaningful indicators. Standards that represent the minimum acceptable condition for each indicator were then assigned, taking into consideration the qualitative descriptions of the desired conditions, data on existing conditions, relevant research studies, staff management experience, and scoping on public preferences.

User capacity decision making is a form of adaptive management (figure 2) in that it is an iterative process in which management decisions are continuously informed and improved. Indicators are monitored and adjustments are made as appropriate. As monitoring conditions continues, managers may decide to modify or add indicators if

better ways are found to measure important changes in resource and visitor experience conditions. Information on NPS monitoring efforts, related visitor use management actions, and any changes to the indicators and standards would be shared with the public.

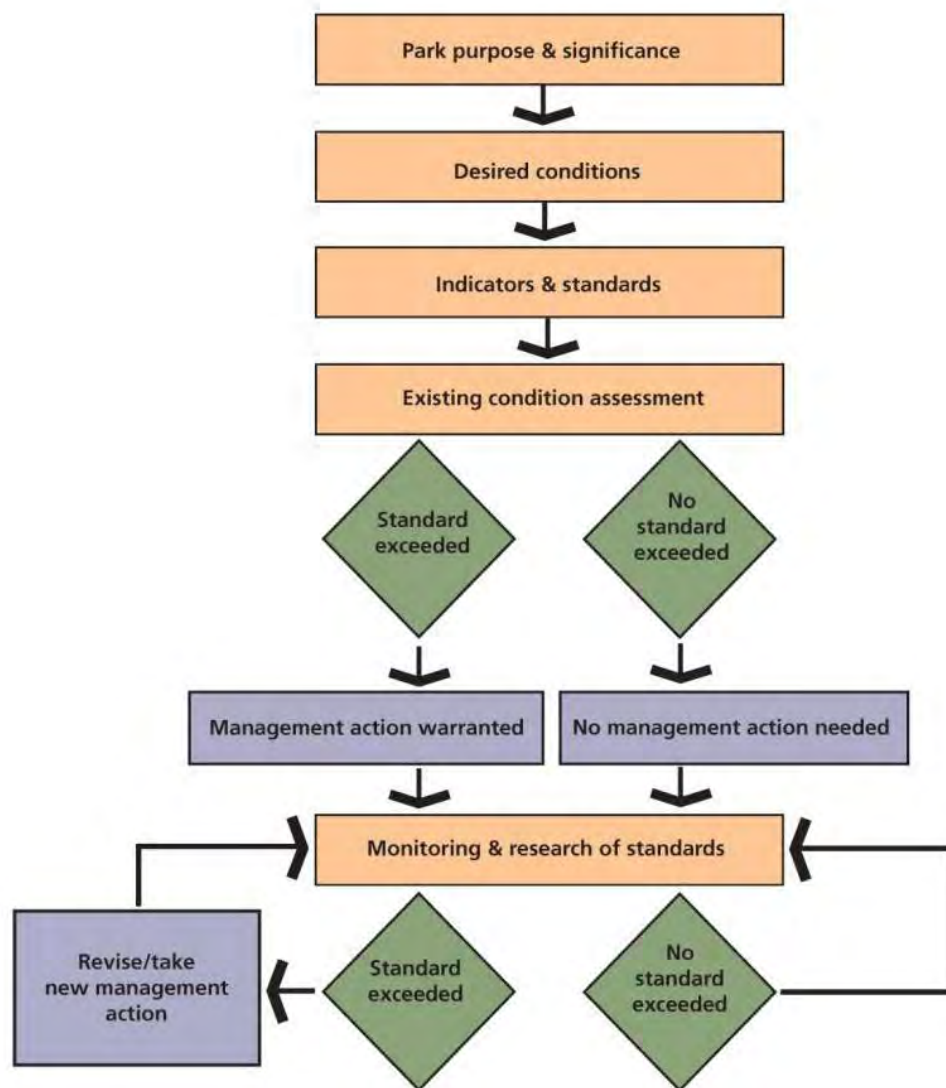


FIGURE 2. USER CAPACITY FRAME WORK

RESOURCE INDICATORS AND STANDARDS

The priority resource indicators for Everglades National Park are associated with the following issues (not in priority order):

- seagrass scarring from motorboat propellers in Florida Bay
- disturbance of nesting and roosting birds
- creation of new airboat trails
- vegetation and soil impacts on campsites
- changes in cultural resource conditions as a result of visitor impacts

The condition of these resources is already being monitored and managed in various ways, but the indicators described below would help park staff track specific influences to these resources as a result of visitor use.

Impacts on seagrass from visitor activities include scarring from propellers, vessel groundings, and anchoring. These impacts can be widespread with dense scarring found in more shallow depths and near areas that are heavily used by boats (NPS 2008b). Increased boating activity, often by boaters with no or only limited previous experience, makes parts of Florida Bay susceptible to further seagrass scarring. The loss of seagrass from boating activities is a significant concern because seagrass beds in the bay are highly productive and provide vast areas of habitat for recreationally and commercially important fish and invertebrates. Although active restoration of damaged seagrass communities is technically possible, it is expensive and time consuming. Also, recent model estimates for seagrass recovery rates suggest that it may take as long as 60 years for some areas to fully recover (NPS 2008b).

Everglades National Park conducted a study in 2008 that documented the severity and

extent of seagrass scarring in Florida Bay. The study reported that scarring was widespread, and there has been a significant increase in the amount and density of scarring since 1995 (NPS 2008b). Minimizing the extent and severity of impact on the seagrass beds has been the focus of ongoing management strategies, including educating visitors on low-impact boating practices. The indicator included in table 3 for seagrass scarring would encourage the use of adaptive management strategies to reduce impacts in Florida Bay. The goal/standard of these efforts would be to achieve at least a 5% per year reduction in the number and length of scars over baseline conditions. Some of the management strategies being considered in this plan to further manage this impact include relocating routes, pole/troll zone designations, and better channel marking.

The park is home to numerous types of wading birds including the white ibis, wood storks, and several species of egrets and herons. These wading birds are sensitive to human activities during nesting and foraging (Stolen 2003). Areas of special concern are portions of Florida Bay, the East Everglades Addition, and the Gulf Coast areas where visitor use occurs near wildlife nesting and roosting locations. For more than 25 years Everglades National Park biologists have conducted systematic reconnaissance flights to document wading bird abundance and distribution throughout the park. Under the general management plan user capacity program, the park would begin additional wading bird monitoring to support the goal of increased abundance and distribution of these birds in the park. This monitoring program, focused on important bird habitats, would use disturbance to nesting and roosting birds from public use (primarily boating, paddling, airboating) as an indicator. This indicator is supported by scientific literature (Rodgers and Smith 1995) documenting human disturbance from boating and other public use activities. The standard (no more than twice per day that birds are flushed from the roost or nesting colony) would ensure that human activity is

not causing undue levels of disturbance. Some management strategies park staff would use to manage this impact include more visitor education/signs, slower speed zones near roosting locations, and temporary or permanent area closures.

The creation and use of new undesignated airboat trails in the East Everglades Addition is a concern because of their impacts on soils and vegetation, as well as wildlife disturbance (including threatened and endangered species). This plan would determine designated routes in the Addition, consistent with the intent of the Everglades National Park Protection and Expansion Act, section 103(c), see appendix A. Park regulations implemented following this management plan would prohibit off-trail airboat activity; the standard would be zero tolerance for new undesignated airboat trails. The indicators and standards in table 3 would be based on the route system approved in this plan. A baseline for this indicator was established in 2004 through a study conducted by the University of Georgia (2006). Education, increased enforcement, and informational signage are management tools that would be used to address this issue.

Camping is a popular activity in the park that can impact resources. A widely used condition classification system that measures the extent and severity of resource impacts on campsites is the basis of this indicator (Marion 1995). The system uses a scale that ranges from class 0 (zero) where the site is minimally disturbed to class 5 where the site is highly impacted (significant loss of vegetation and signs of soil erosion). The park staff would maintain ground-based campsites to a standard of condition class 3 or better (no more than moderate vegetation loss and minimal signs of soil erosion and shoreline disturbance) and would endeavor to maintain at least 90% of campsites at a class 3 or better standard year-round (and 80% during peak season). NPS staff would employ management strategies such as Leave-No-Trace education programs, group

size regulations, and informational signage to achieve this standard.

Visitor use impacts on cultural resources include wear on historic structures and unintentional disturbances and vandalism to archeological resources and historic structures. Cultural resources are nonrenewable, so impacts, especially those resulting from disrespectful behavior, must be minimized to the extent possible. Park staff members are already using internal guidelines to monitor cultural resources. The indicator for human impacts on cultural resources is based on this existing monitoring protocol (documented changes in condition of cultural resources from human-caused threats and disturbance by visitor awareness of characteristics such as loss of artifacts, erosion, wear on structures, new trails, and use of unauthorized areas). Management efforts would be focused on maintaining the integrity and condition of all significant sites to a standard of at least “good” condition. To ensure that this standard is maintained, visitor education and enforcement of federal laws such as the Archaeological Resources Protection Act and park regulations would be continued, and closure of particularly vulnerable areas would be considered.

VISITOR EXPERIENCE INDICATORS AND STANDARDS

The priority visitor experience indicators for Everglades National Park would be associated with the following issues:

- satisfaction with on-the-water experiences
- compliance rate with the backcountry permit system
- number of encounters between boaters
- number of groups encountered along backcountry hiking trails
- crowding and use conflicts at Shark Valley

- wait time at boat launches
- parking in undesignated areas

Similar to the resource indicators, visitors' opportunities and related experiences in the park are already being monitored and managed in various ways, but the indicators described below would help park staff track these specific issues more systematically to ensure that desired conditions are being achieved.

Maintaining high levels of visitor satisfaction with park experiences is an important management goal. Because of the diversity and high levels of uses that occur on the water, use conflicts and crowding can be a problem. The indicator related to these concerns would track trends (through random surveys) in visitor satisfaction levels specific to visitors' on-the-water experiences (through random surveys). The standard would ensure that most visitors (75% during peak visitation times, 85% at all other times) have a high satisfaction level. If satisfaction levels are not meeting the established standard, park staff would further investigate the source of crowding or conflict and implement appropriate management strategies.

In the backcountry, failure to adhere to reservations for designated camping locations as specified in a backcountry permit can also lead to crowding or conflict between users. Sometimes weather conditions may force visitors to stay in a particular location, and this is unavoidable. It is when visitors stray from the conditions of their backcountry permit purely for convenience or preference that is of concern. Park staff would monitor an indicator related to permit compliance (the percentage of visitors compliant with backcountry permit conditions). The standard would ensure that most visitors (70% during peak visitation times, 85% all other times) comply with backcountry permit conditions to minimize conflicts with other visitors. Park staff would use management strategies such as education

on park regulations, encouraging use at less busy times, and regular enforcement to maintain high levels of permit compliance.

Many people visit Everglades National Park seeking wilderness and solitude. Crowding and conflicts can be of particular concern for such visitors. A study conducted in 1990 found that 63% of canoeists and 39% of motorboaters reported some degree of crowding along the park's Wilderness Waterway (Stewart and Ivy 1990). An indicator for this concern is the number of vessel groups encountered per day. Because boating visitors expect to see few others in a wilderness setting, the standard was set at no more than four vessel groups encountered per day for 90% of the days during peak season more than 5 miles from marinas, boat ramps, and launch sites in the following areas: Wilderness Waterway, Alternative Wilderness Waterway, and the East Everglades Addition. This standard is consistent with research on visitor preferences for the levels of encounters with other groups in wilderness, as well as actual encounter rate standards that have been established in many other wilderness areas (Manning 1999).

Similar crowding concerns can occur along backcountry hiking trails. Currently, use levels in these areas are relatively low, and encounters between hiking groups are infrequent. To maintain these conditions long term, an indicator of the number of encounters per day between groups on hiking trails would be monitored. A similar standard of no more than four groups encountered per day (more than 1 mile from trailheads) for at least 95% of the days during the peak use season would help ensure opportunities for solitude in the park's backcountry. For both on-the-water and hiking activities, park staff would continue to educate visitors on times of peak use in hopes of redistributing use to off-peak times. If needed, the park may use other management strategies such as providing alternate trails or routes that can help to disperse use in wilderness and backcountry areas.

At Shark Valley, visitors tour a 15-mile loop road via tram, bicycling, or walking. Because this is such a small area, the measure of people at one time is an important indicator of crowding, as well as visitor safety. A standard of 400 to 500 people at one time (including those along the loop road, waiting for the tram, and in the parking lot/restroom area) was established based on an assessment of conditions at peak use times and current infrastructure capacity. Another indicator related to crowding and safety is the number of times the Shark Valley tram stops per trip on the loop road for bicycle groups. To minimize the frequency of this conflict, the standard was set at no more than three stops per tram trip (because of bicycles) during peak season, and no more than two times per tram trip during the off-peak season, for 80% of all tram trips. Management strategies for this area of the park would include real time information on current use conditions, visitor education of park regulations, encouraging use during off-peak times, and managing/regulating the flow of trams and bicycles along the one-way route.

Park boat ramps and launch sites are another location for occasional bottlenecks that create additional crowding, user conflict, and visitor safety concerns. The current wait times to launch and retrieve boats at peak times are generally considered acceptable, but given documented trends of increasing boat use in the park, it is important to monitor to detect a possible trend toward longer wait times. To track this issue over the long term, an indicator for wait times to launch or retrieve watercraft would be monitored. A standard of no more than 30 minutes during peak use times, for at least 90% of visitors, would be maintained. This standard is consistent with recommended national standards (Aukerman and Haas 2004). Crowding and safety concerns can also be a problem associated with visitor parking. An indicator for tracking compliance with designated parking areas has been identified. A standard of at least 90% compliance with parking regulations during peak season days

was established. (Peak season is when this parking issue occurs; how peak season is defined may need to continue to be evaluated based on changing use patterns.) Education about peak use times, real-time information about current use, and enforcement would help park staff maintain desired conditions at high use locations such as Flamingo and the Gulf Coast Visitor Center areas.

LONG-TERM MONITORING

Park staff would continue monitoring use levels and patterns throughout the park. In addition, park staff would monitor these user capacity indicators. The intensity of monitoring the indicators (e.g., frequency of monitoring cycles, amount of geographic area monitored) might vary considerably depending on how close existing conditions are to the standards. If the existing conditions are far from exceeding the standard, the rigor of monitoring might be less than if the existing conditions are close to or trending toward the standard.

Initial monitoring of the indicators would determine if the indicators are accurately measuring the conditions of concern and if the standards truly represent the minimally acceptable condition of the indicator. Park staff might decide to modify the indicators or standards and revise the monitoring program if better ways are found to measure changes caused by visitor use. Most of these types of changes should be made within the first several years of initiating monitoring. After this initial testing period, adjustments would be less likely to occur. Finally, if use levels and patterns change appreciably, park staff might need to identify new indicators to ensure that desired conditions are achieved and maintained. This iterative learning and refining process, a form of adaptive management, is a strength of the NPS user capacity management program. Input from the park advisory committee would also be sought and incorporated as appropriate.

TABLE 3. USER CAPACITY INDICATORS, STANDARDS, AND MANAGEMENT STRATEGIES FOR ACTION ALTERNATIVES

Indicator	Assigned Zone	Standard	Management Strategies
Topic: Visitor Related Resource Impacts			
Percent reduction in number of scars and total length of scars in Florida Bay over baseline conditions	boat access, pole/troll, backcountry, special protection	% decrease in number of scars and total length of scars in Florida Bay equals 5% per year over baseline conditions	<ul style="list-style-type: none"> ▪ Educate about low impact practices and park regulations (part of mandatory education program). ▪ Increase law enforcement. ▪ Add signs/markings of zones. ▪ Actively restore seagrass. ▪ Apply additional restrictions on boating. ▪ Close areas or banks.
Number of times per day birds are flushed from the roost or nesting colony	frontcountry, boat access, pole/troll, backcountry, special protection	No more than two times in a 12-hour period (based on observations that are aggregated to equal a 12-hour day such as two days of observation at 6 hours each)	<ul style="list-style-type: none"> ▪ Educate about low impact practices and park regulations. ▪ Add signs. ▪ Implement slower speed zone near roosts. ▪ Apply more restricted type of zoning to area of concern. ▪ Close area around roost. ▪ Implement seasonal closures in targeted areas to prohibit motors and/or human activity.
New, undesignated airboat trails	frontcountry and backcountry	Zero tolerance for new undesignated airboat trails (i.e., the authorized airboat trail "routes" are the only trails that are visible based on aerial observation monitoring)	<ul style="list-style-type: none"> ▪ Educate about low impact practices and park regulations. ▪ Better marking/delineation of existing trails. ▪ Increase enforcement. ▪ Add signs. ▪ Close trails/areas.
Number of designated campsites maintained at class 3 standards or better	developed, frontcountry, boat access, backcountry	Achieve and maintain at least 90% of campsites at class 3 or better standard year-round, and 80 % during peak season	<ul style="list-style-type: none"> ▪ Educate about low impact practices and park regulations (graduated consequences for noncompliance). ▪ Increase interactions with park law enforcement/resource protection staff. ▪ Add appropriate educational/regulations signs. ▪ Change capacity of designated campsites.

TABLE 3. USER CAPACITY INDICATORS, STANDARDS, AND MANAGEMENT STRATEGIES FOR ACTION ALTERNATIVES

Indicator	Assigned Zone	Standard	Management Strategies
Documented changes in condition of cultural resources from human caused threats and disturbances (by visitors and park management activities), as defined in NPS Archeological Site Management Information System and List of Classified Structures (defined as good, fair, poor, or destroyed). Look at characteristics such as loss of artifacts, erosion, wear on structures, new trails, and use of unauthorized areas/sites.	All management zones — developed, frontcountry, boat access, pole/troll, backcountry, and special protection	<p>Sites are maintained in good condition.</p> <p>Visitor impacts do not exceed threshold of changing overall site condition to a lesser condition (i.e., good to fair, fair to poor, etc.) with emphasis on maintaining sites in good condition.</p> <p>Visitor impacts do not threaten character-defining features that make the property eligible for the National Register of Historic Places.</p> <p>At sites in less than good condition, management actions improve condition at least one level.</p>	<ul style="list-style-type: none"> Develop new opportunities for active or passive interpretation of sites that include education about low impact practices and park regulations. Develop site stewardship programs with volunteers and organizations. Partner with other historic preservation and friends groups to create awareness about archeological and historic sites and public archeology programs. Mitigate/take corrective action consistent with Secretary of the Interior's Standards. Restrict visitor activity at designated areas. Add signs and/or barriers to better protect resources. Increase law enforcement. Establish site/area closures.
Topic: Visitor Experience			
Percent satisfaction with park on-the-water experiences (using random survey instrument)	boat access, pole/troll, backcountry	Achieve and maintain at least 85% year-round satisfaction level, with 75% satisfaction during peak season	<ul style="list-style-type: none"> Educate to encourage use at off-peak times. Educate on park regulations and user group etiquette. Increase interactions with park staff and/or law enforcement. Change in use regulations. Further separate use types (alternative access/launch sites). Change capacity of designated campsites/build future sites with capacity to achieve desired experiences. Establish limitations on use levels.
Percentage of visitors compliant with backcountry permit conditions	frontcountry, boat access, pole/troll, backcountry	Achieve and maintain at least 85% compliance year-round, with at least 70% during peak season	<ul style="list-style-type: none"> Educate on park regulations and user group etiquette (graduated consequences for noncompliance). Encourage use at less busy times. Increase interactions with park law enforcement/resource protection staff. Further separate use types (alternative access/launch sites). Change capacity of designated campsites/build future sites with capacity to achieve desired experiences.

TABLE 3. USER CAPACITY INDICATORS, STANDARDS, AND MANAGEMENT STRATEGIES FOR ACTION ALTERNATIVES

Indicator	Assigned Zone	Standard	Management Strategies
Number of vessel groups encountered per day (6 hours) more than 5 miles from park marinas, boat ramps, and launch sites on Wilderness Waterway, Alternative Wilderness Waterway, and East Everglades Addition	boat access, backcountry	No more than four vessel groups encountered per day, for 90% of the days during peak season	<ul style="list-style-type: none"> Continue permitting system for overnight use to these areas of the park. Make greater efforts toward public education to encourage voluntary redistribution of use to off-peak times or to lesser used areas. Establish new access points or routes to better distribute use. Establish limitations on use levels.
Number of groups encountered per day (6 hours) more than 1 mile from trailheads along designated backcountry hiking trails	backcountry (as applied to land areas)	No more than four groups encountered per day (6 hours) along designated hiking trails, for at least 95% of the days during the peak use season	<ul style="list-style-type: none"> Make greater efforts toward public education to encourage voluntary redistribution of use to off-peak times or to lesser used areas. Establish new trail opportunities to better distribute use. Establish limitations on use levels.
Number of times the Shark Valley tram stops for bicycle groups per trip on the loop road	developed, frontcountry	<p>Peak—no more than three times per tram trip, for 80% of the trips</p> <p>Off-peak—no more than two times per tram trip, for 80% of the trips</p>	<ul style="list-style-type: none"> Educate to encourage use at off-peak times. Educate on park regulations and trail etiquette. Provide alternate recreational opportunities and direct visitors to those locations. Establish spatial or temporal restrictions by use type.
People at one time at Shark Valley	developed, frontcountry	No more than 400–500 people at one time within the Shark Valley area (includes people on the loop road, waiting for a tram, in the parking/restroom area)	<ul style="list-style-type: none"> Educate to encourage use at off-peak times (before 11:00 a.m., after 2:00 p.m.). Modify reservation and bike rental system to encourage more off-peak use. Provide real-time information regarding parking and access opportunities. Provide alternate recreational opportunities and direct visitors to those locations. Regulate and enforce informal/overflow parking. Change the timing of park operations. Establish spatial or temporal restrictions by use type. Initiate alternative transit and/or shuttle to Shark Valley options (at least during peak season).
Wait time to launch, load, and/or take a motorboat, airboat, or canoe/kayak out of the water	developed, frontcountry	No more than a 30-minute wait to load, unload, and/or take out watercraft during peak use times, for at least 90% of visitors	<ul style="list-style-type: none"> Make greater efforts toward public education to encourage voluntary redistribution of use to off-peak times or to lesser-used areas. Provide real-time information about ramp use. Add staff to aid facilitation of boat launching and loading. Redesign/configure launch ramp facilities. Further separate by vessel type. Regulate the number of vessels at the park entrance station and at launch site parking facilities.

TABLE 3. USER CAPACITY INDICATORS, STANDARDS, AND MANAGEMENT STRATEGIES FOR ACTION ALTERNATIVES

Indicator	Assigned Zone	Standard	Management Strategies
Percentage of time visitors use designated parking spaces	developed, frontcountry	Achieve and maintain at least 90% compliance during peak season days	<ul style="list-style-type: none"> ▪ Make greater public education efforts to encourage voluntary redistribution of use to off-peak times or to lesser used areas. ▪ Post areas as being at capacity (go elsewhere or return at a later, designated time). ▪ Provide real-time information regarding parking and access opportunities. ▪ Provide alternate recreational opportunities and direct visitors to those locations. ▪ Regulate and enforce informal/overflow parking. ▪ Initiate alternative transit and/or shuttle options (at least during peak season).

[Note: The management strategies in table 3 are generally listed in sequential order, i.e., strategies near the top of the list would be implemented first; strategies near the bottom are less preferred and might be implemented only if needed.]

MITIGATIVE MEASURES COMMON TO ALL ACTION ALTERNATIVES

Congress charged the National Park Service with managing the lands under its stewardship “in such manner and by such means as will leave them unimpaired for the enjoyment of future generations” (NPS Organic Act, 16 USC 1). As a result, NPS staff routinely evaluate and implement mitigation measures whenever conditions occur that could adversely affect the sustainability of national park system resources.

To ensure that implementation of the action alternatives protects natural and cultural resources and the quality of the visitor experiences, a consistent set of mitigation measures would be applied to actions proposed in this plan, especially for construction-related projects. The National Park Service would prepare appropriate environmental compliance (i.e., that required by the National Environmental Policy Act (NEPA), National Historic Preservation Act (NHPA), and other relevant legislation) for these future actions. As part of the environmental compliance, the National Park Service would avoid, minimize, and mitigate adverse impacts when practicable. The implementation of a compliance monitoring program would be within the parameters of NEPA and NHPA compliance documents, U.S. Army Corps of Engineers section 404 permits, etc. The compliance monitoring program would oversee these mitigation measures and would include reporting requirements.

The following mitigation measures and best management practices would be applied to avoid or minimize potential impacts from implementation of the action alternatives.

NATURAL RESOURCES

General

The park’s resources, including air, water, soils, vegetation, and wildlife, would be periodically inventoried and monitored to provide information needed to avoid or minimize impacts of future development. Any museum collections related to natural resources generated by such activities would be managed according to NPS policies.

Whenever possible, new facilities would be built in previously disturbed areas or in carefully selected sites with as small a construction footprint as possible and with sustainable design. During design and construction periods, NPS natural and cultural resource staff would identify areas to be avoided and monitor activities.

Fencing or other means would be used to protect sensitive resources adjacent to construction areas.

Construction materials would be kept in work areas, especially if construction takes place near streams, springs, natural drainages, or other water bodies.

Visitors would be informed of the importance of protecting the park’s natural resources and leaving them undisturbed for the enjoyment of future generations.

AIR QUALITY

Standard dust abatement measures would be applied if necessary and could include watering or otherwise stabilizing soils, covering haul trucks, employing speed limits on unpaved roads, minimizing vegetation clearing, and revegetating after construction.

SOILS

New facilities would be built on soils suitable for development. Soil erosion would be minimized by limiting the time soil is left exposed and by applying other erosion control measures such as erosion matting, silt fencing, and sedimentation basins in construction areas to reduce erosion, surface scouring, and discharge to water bodies. Once work was completed, construction areas would be revegetated with native plants in a timely manner.

To minimize soil erosion on new trails, best management practices for trail construction would be used. Examples of best management practices include installing water bars, check dams, and retaining walls; contouring to avoid erosion; and minimizing soil disturbance.

An area of land previously used as a dump site at the Gulf Coast Visitor Center area has been identified in the construction area, which comprises approximately 1 acre (based solely on visual and shovel observation). All proposed activities that occur within or adjacent to the old landfill and a 200-foot buffer, which may affect the integrity of any environmental protection measures at the site, are regulated by the FDEP and require meetings with them to discuss the proposed improvements and the potential impacts to the landfill. See the Gulf Coast VA 2012 document for further development requirements.

WATER RESOURCES

To prevent water pollution during construction, erosion control measures would be used, discharges to water bodies would be minimized, and construction equipment would be regularly inspected for leaks of petroleum and other chemicals.

Best management practices, such as the use of silt fences, would be followed to ensure that construction-related effects were minimal

and to prevent long-term impacts on water quality, wetlands, and aquatic species.

Caution would be exercised to protect water resources from activities with the potential to damage water resources, including damage caused by construction equipment, erosion, and siltation. Measures would be taken to keep fill material from escaping work areas, especially near streams, springs, natural drainages, and wetlands.

For new facilities, and to the extent practicable for existing facilities, stormwater management measures would be implemented to reduce nonpoint source pollution discharge from parking lots and other impervious surfaces. Such actions could include use of oil/sediment separators, street sweeping, infiltration beds, permeable surfaces, and vegetated or natural filters to trap or filter stormwater runoff.

The NPS spill prevention and pollution control program for hazardous materials would be followed and updated on a regular basis. Standard measures could include (1) procedures for hazardous materials storage and handling, spill containment, cleanup, and reporting; (2) limitation of refueling and other hazardous activities to upland/nonsensitive sites.

WETLANDS

Wetlands would be avoided if possible, and protection measures would be applied during construction. Wetlands would be delineated by qualified NPS staff or certified wetland specialists and clearly marked before construction work. Construction activities would be performed in a cautious manner to prevent damage caused by equipment, erosion, siltation, etc.

VEGETATION

Areas used by visitors (e.g., areas near trails) would be monitored for signs of native

vegetation disturbance. Public education, revegetation of disturbed areas with native plants, erosion control measures, and barriers would be used to control potential impacts on plants from trail erosion or social trailing.

Proposed sites for new trails and other facilities would be surveyed for sensitive species before construction. If sensitive species were present, new developments would be relocated to avoid impacts.

As appropriate, revegetation plans would be developed for disturbed areas. Revegetation plans should specify such features as seed/plant source, seed/plant mixes, soil preparation, fertilizers, and mulching. Salvage vegetation, rather than new planting or seeding, would be used to the greatest extent possible. To maintain genetic integrity, native plants that grow in the project area or the region would be used in restoration efforts whenever possible. Use of invasive nonnative species or genetic materials would be considered only where deemed necessary to maintain a cultural landscape or to prevent severe resource damage. This use must be approved by the NPS resource management staff. Restoration activities would be instituted immediately after construction was completed. Monitoring would occur to ensure that revegetation was successful, plantings were maintained, and unsuccessful plant materials were replaced.

INVASIVE NONNATIVE SPECIES

Special attention would be devoted to preventing the spread of invasive nonnative plants. Standard measures would include the following elements—ensure that construction-related equipment arrives on-site free of mud or seed-bearing material, certify all seeds and straw material as weed-free, identify areas of invasive nonnative plants before construction, treat nonnative plants or nonnative infested topsoil before construction (e.g., topsoil segregation, storage, herbicide treatment), and revegetate with appropriate native species.

WILDLIFE

To the extent possible, new or rehabilitated facilities would be sited to avoid sensitive wildlife habitats, including feeding and resting areas, major travel corridors, nesting areas, and other sensitive habitats.

Construction activities would be timed to avoid sensitive periods such as nesting or spawning seasons. Ongoing visitor use and NPS operational activities could be restricted if their potential level of damage or disturbance warranted doing so.

Measures would be taken to reduce the potential for wildlife to get food from humans. Wildlife-proof garbage containers would be required at sites such as visitor centers, picnic areas, trails, and interpretive waysides. Signs would continue to educate visitors about the need to refrain from feeding wildlife.

Other visitor impacts on wildlife would be addressed through techniques such as visitor education programs, restrictions on visitor activities, and ranger patrols.

SPECIAL STATUS SPECIES

Conservation measures would occur during normal operations as well as before, during, and after construction to minimize long-term, immediate impacts on special status species where they are identified in the national park. These measures would vary by specific project and the affected area of the park. Many of the measures listed above for vegetation and wildlife would also benefit special status species by helping to preserve habitat. Conservation measures specific to special status species would include the following actions:

- Surveys would be conducted for special status species, including rare, threatened, and endangered species, before deciding to take any action that might cause harm. In

consultation with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and Florida Fish and Wildlife Conservation Commission, appropriate measures would be taken to protect any sensitive species whether identified through surveys or presumed to occur.

- Breeding or nesting areas for threatened and endangered species would be protected from human disturbance.
- New facilities and management actions would be located and designed to avoid adverse effects on rare, threatened, and endangered species. If avoidance of adverse effects on rare, threatened, and endangered species was infeasible, appropriate conservation measures would be taken in consultation with the appropriate resource agencies.
- Restoration or monitoring plans would be developed as warranted. Plans should include methods for implementation, performance standards, monitoring criteria, and adaptive management techniques.
- Measures would be taken to reduce the adverse effects of invasive nonnative plants and wildlife on rare, threatened, and endangered species.

Sea Turtle and Smalltooth Sawfish

The construction supervisor shall comply with the following protected species construction conditions for these species:

- The construction supervisor shall instruct all personnel associated with the project of the potential presence of these species and the need to avoid collisions with sea turtles and smalltooth sawfish. All construction personnel are responsible for

observing water-related activities for the presence of these species.

- The project manager shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing sea turtles or smalltooth sawfish, which are protected under the Endangered Species Act of 1973.
- Siltation barriers shall be made of material in which a sea turtle or smalltooth sawfish cannot become entangled, be properly secured, and be regularly monitored to avoid protected species entrapment. Barriers may not block sea turtle or smalltooth sawfish entry to or exit from designated critical habitat without prior agreement from the National Marine Fisheries Service's Protected Resources Division, St. Petersburg, Florida.
- All vessels associated with the construction project shall operate at no wake/idle speeds at all times while in the construction area and while in water depths where the draft of the vessel provides less than a 4-foot clearance from the bottom. All vessels would preferentially follow deep-water routes (e.g., marked channels) whenever possible.
- If a sea turtle or smalltooth sawfish is seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure its protection. These precautions shall include cessation of operation of any moving equipment closer than 50 feet of a sea turtle or smalltooth sawfish. Operation of any mechanical construction equipment shall cease immediately if a sea turtle or smalltooth sawfish is seen within a 50-foot radius of the equipment. Activities may not resume until the

protected species has departed the project area of its own volition.

- Any collision with and/or injury to a sea turtle or smalltooth sawfish shall be reported immediately to the National Marine Fisheries Service's Protected Resources Division (727-824-5312) and the local authorized sea turtle stranding/ rescue organization.
- Any special construction conditions, required of a specific project, outside these general conditions, if applicable, will be addressed in the primary consultation.

SOUNDSCAPE

Standard noise abatement measures would be followed during construction. Standard noise abatement measures would include the following: a schedule that minimizes impacts on adjacent noise-sensitive resources, the use of the best available noise control techniques wherever feasible, the use of hydraulically or electrically powered tools when feasible, and the location of stationary noise sources as far from sensitive resources as possible. Facilities would be located and designed to minimize objectionable noise.

SCENIC RESOURCES

Mitigation measures are designed to minimize visual intrusions. These measures could include the following:

- Where appropriate, facilities such as boardwalks and fences would be used to route people away from sensitive natural and cultural resources while still permitting access to important viewpoints.
- Facilities would be designed, sited, and constructed to avoid or minimize visual intrusion into the natural environment or landscape.

- Vegetation screening would be provided, where appropriate.

CULTURAL RESOURCES

All projects with the potential to affect cultural resources would be carried out in compliance with section 106 of the National Historic Preservation Act to ensure that the effects are adequately addressed. All reasonable measures would be taken to avoid, minimize, or mitigate adverse effects in consultation with the Florida state historic preservation officer and, as necessary, the Advisory Council on Historic Preservation and other concerned parties, including American Indian tribes. In addition to adhering to the legal and policy requirements for cultural resources protection and preservation, NPS staff would also undertake the measures listed below to further protect the park's resources.

- All areas selected for construction (including any trail improvements) would be surveyed to ensure that cultural resources (i.e., archeological, historic, ethnographic, and cultural landscape resources) in the area of potential effects are adequately identified and protected by avoidance or, as appropriate, mitigation.
- Compliance with the Native American Graves Protection and Repatriation Act of 1990 would apply in the unlikely event that human remains believed to be American Indians were discovered during construction or other activities in the park. Prompt notification and consultation with the tribes traditionally associated with Everglades National Park would occur in accordance with the act. If such human remains were believed to be non-Indian, standard reporting procedures to the proper authorities would be followed, as would all

applicable federal, state, and local laws.

- Archeological documentation would be done in accordance with the *Secretary of the Interior's Standards for Archeology and Historic Preservation* (1983, as amended and annotated) and Director's Order 28A: *Archeology*.
- If during construction previously unknown archeological resources were discovered, all work in the immediate vicinity of the discovery would be halted until the resources could be identified and documented and, if the resources cannot be preserved *in situ*, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer, associated Indian tribes, and others as appropriate.
- Ethnographic resources would be protected and mitigated by such means as identifying and maintaining access for recognized and associated groups to traditional, spiritual/ceremonial, resource gathering, and other activity areas. As practical, new developments would be screened from these areas, and conflicting uses would be relocated or timed to minimize disruptions.
- Further background research, resource inventories, and National Register of Historic Places evaluation of historic properties would be carried out where management information is lacking. The surveys and research necessary to determine the eligibility of a site, structure, district, or landscape for listing in the National Register are a prerequisite (under section 110 of the National Environment Preservation Act) for understanding the resource's significance, as well as the basis of informed future decision making regarding how the resource should be managed. The results of these efforts would be incorporated into site-specific planning and compliance documents.
- The park would strive to protect and preserve historic properties in accordance with all applicable laws, policies and guidelines. However, instances may occur in which the park cannot reasonably preserve a historic structure because of safety concerns or other conflicting and/or compelling management considerations (e.g., ecosystem restoration requirements). In those instances, the decision to remove or allow a structure to "molder" benign neglect would only be carried out following review and approval by the regional director, and consultation conducted in accordance with section 106 of the National Historic Preservation Act. NPS staff would consult as appropriate with the Florida state historic preservation office, associated tribes, and other interested parties. As part of the mitigation, adversely affected properties would be documented and recorded as appropriate to the standards of the Historic American Buildings Survey / Historic American Engineering Record / Historic American Landscape Survey program.
- All historic structures and cultural landscapes maintained as park assets would follow an approved preservation prescription identified in a historic structure report or cultural landscape report that follows the *Secretary of Interior's Standards for the Treatment of Historic Properties*.
- All treatment of historic structures and cultural landscapes would be done in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* including the standards and guidelines for the treatment of

cultural landscapes. Properties that have been determined to be national historic landmarks would be protected to the highest standards and every effort would be made to avoid, not just mitigate, any adverse effect.

- Visitors would be educated on the importance of protecting the park's historic properties and leaving these undisturbed for the enjoyment of future visitors.

VISITOR SAFETY AND EXPERIENCES

Measures to reduce adverse effects of construction on visitor safety and experience would be implemented, including project scheduling and best management practices.

Visitor safety concerns would be integrated into park educational programs. Directional signs would continue to orient visitors, and education programs would continue to promote understanding among visitors.

SOCIOECONOMIC ENVIRONMENT

During the future planning and implementation of the approved management plan for the park, NPS staff would work with local communities and county governments to further identify potential impacts and mitigation measures that would best serve the interests and concerns of both the National Park Service and the local communities. Partnerships would be pursued to improve the quality and diversity of community amenities and services.

CLIMATE CHANGE

New facilities development in coastal areas:

- All alternatives in this plan propose some development in coastal areas, including at Flamingo and the Gulf

Coast. All development within Everglades National Park would adhere to the following guidelines during actual development within the park. Development would consider the potential impacts that could result from changes in intensity or frequency of tropical storm events (including hurricanes), sea level change, variations in precipitation (droughts or more extreme rain events), and changes in groundwater levels, etc. When Everglades considers development within the park, managers must consider changes to sea level, hardened construction, and mobility of structures in addition to best construction practices.

- For the purposes of this plan, park managers should consider, review, and include the following items when proceeding with design and/or construction:
 - Temporary Structures: This construction type is temporary in nature and is not designed to resist high intensity storm events, which makes them susceptible to failure and could further damage park resources in a high intensity storm event. This type of construction could be used for short durations if needed to meet a temporary park management need, but this construction method is generally not recommended in Everglades National Park.
 - Mobile Structures: Mobile construction must be easily moved within a short time period to a predetermined location of relative safety. Over the life of the structure, it must remain code compliant. It must be clear that this structure is meant to be moved during an expected hazard event. Intact mobile structures, such as trailers and recreational

- vehicles, fit this description. Although this type of construction is permissible to meet park needs as defined in this plan, it would not withstand a high intensity storm surge event (as defined by code and park). All such mobile structures would be removed to a predetermined safe location.
- Elevated/hardened/re-locatable structures: Structures that are permanent-looking facilities shall be designed and sited to withstand hurricane-force winds (class 4) and storm surges, but that could be relocated to a new site at such time as the coastal conditions warrant (long-term climate change, for example).
 - Structures: This construction type is considered permanent and nonmovable. At a minimum, this construction type would meet nationally recognized codes.
 - Building codes provide guidance on how to appropriately deal with wind, flooding, and storm surge, but current codes do not provide guidance on sea level change. Any new construction at the park would be required to appropriately consider the finished floor elevation of structures using the formula below, which takes into account variables such as predicted sea level change and the wave effect due to sea level change.
 - $\text{Finished Floor Elevation} = \text{Base Flood Elevation} + \text{Predicted Sea Level Change} + \text{Wave Effect Due to Sea Level Change} + \text{Insurance Risk Adjustment} + \text{Floor Structure Height}$.
 - The finished floor elevation would change depending on the flood hazard zone in which the structure was built, as delineated on FEMA Flood Insurance Rate Maps (FIRM). As of this writing, and based on a structure with a 50-year life, the finished floor height would be 12.2 feet above sea level in the A-zone and 16.1 feet above sea level in the V-zone.
 - Flood Hazard Zone: A and V zones are delineated on FEMA Flood Insurance Rate Maps (FIRM).
 - Base Flood Elevation: 100-year flood elevation determined by FEMA for the area of construction. Obtained from FEMA FIRM delineating the base flood elevation(s) in the area of construction.
 - Predicted Sea Level Change: Current predictive information regarding anticipated sea level change for the life of the structure (for most permanent structures this is 50 years, the sum of the maximum 40-year life for life cycle cost calculations as prescribed by Energy Independence and Security Act of 2007, plus 10 years assumed to account for the process of planning, funding acquisition, design and construction). This is obtained by researching authoritative sources providing sea level change data local to the project site.
 - Wave Effect Due to Sea Level Change (applies to V-zone construction): The additional height of storm surge induced waves due to the predicted sea level change. Obtain guidance from the FEMA Flood Insurance Study for the area including the structure to obtain the relationship between still water depth and wave height in storm surge wave-prone areas (V-zones).
 - Insurance Risk Adjustment (applies to V-zone construction): A height adjustment to the proposed finished floor elevation

- in V-zone construction designed to equalize the financial risk to that of construction in an A-zone. Obtain actuarially based flood insurance premiums from FEMA's flood insurance program for construction in flood-prone areas (A and V-zones). Adjust the V-zone finished floor height upwards, until the insurance premium for that construction is equal to or lower than the insurance premium for flood insurance program compliant construction in the A-zone.
- Floor Structure Height (applies to V-zone construction): The difference between the finished floor height and the height of the FEMA mandated element prescribed to be at or above the base flood. Obtain current guidance from FEMA's Coastal Construction Manual regarding

building element's relationship to design flood level. For instance the current FEMA Coastal Construction Manual requires the bottom of the lowest horizontal structural member to be at or above flood level in V-zones.

- Examples: The finished floor elevation would change depending on the flood hazard zone in which the structure was built. As of the publication of this document and based on a structure with a 50-year life, the finished floor height would be 12.2 feet above sea level in the A-zone and 16.1 feet above sea level in the V-zone. The actual finished floor elevation would be subject to changes in current code, current scientific data, and best practices in construction.

South Florida, 2012, 50-year Life, A-Zone, AE (EL 11)	South Florida, 2012, 50-year Life, V-Zone, VE (EL 11)
Zone AE Base flood elevation – 11 ft Predicted Sea Level Change – 1.2 ft Wave effect of Sea Level Change – N/A Insurance Risk Adjustment – N/A Floor Structure Height – N/A Finished Floor Elevation = 12.2 ft above sea level	Zone VE Base flood elevation – 11 ft Predicted Sea Level Change – 1.2 ft Wave effect of Sea Level Change – 0.6 ft (0.55*1.2 ft) Insurance Risk Adjustment – 1.3 ft Floor Structure Height – 2 ft Finished Floor Elevation = 16.1 ft above sea level

FIGURE 3. EXAMPLE CALCULATION IN A-ZONE AND V-ZONE

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The National Park Service is required to identify the environmentally preferable alternative in its environmental documents in accordance with National Environmental Policy Act. The environmentally preferable alternative is the alternative that best promotes the national environmental policy expressed in the National Environmental Policy Act (section 101(b)).

This act states that it is the continuing responsibility of the federal government to

1. fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
3. attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
4. preserve important historic, cultural, and natural aspects of national heritage, and maintain, wherever possible, an environment which supports diversity, and variety of individual choices;
5. achieve a balance between population and resource use that would permit high standards of living and a wide sharing of life's amenities; and
6. enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

After the environmental consequences of the alternatives were analyzed, each alternative was evaluated as to how well the six goals listed above would be met. The following discussion highlights how each alternative would meet or not meet these goals.

Two of the goals listed above did not make a difference in determining the environmentally preferable alternative. Goal number 1 is satisfied by each of the alternatives because Everglades is a national park and as the steward of these units, the National Park Service would continue to fulfill its mandate to protect the resources of Everglades National Park and provide opportunities for enjoyment of those resources for future generations. Goal 6 addresses the quality of renewable resources and recycling of depletable resources, which are not applicable in the scope of a general management plan. However, conservation and recycling of resources is encouraged throughout the National Park Service and, therefore, would be implemented under any alternative.

Alternative 1 (no action) represents a continuation of the present course of park management. Under alternative 1, park staff would continue to respond to resource impacts, visitor demands, and facility maintenance needs as they arise according to existing management direction. Without an updated general management plan, alternative A would lack the range of diversity and individual choices found in the other alternatives; it also does not provide as much resource protection and active, beneficial management as the other alternatives. Thus, the no-action alternative would *not* meet goal 3, goal 4, and goal 5 to the same extent as the other alternatives:

The NPS preferred alternative would support a high level of both science-based resource restoration activities and visitor experience opportunities, thus fully meeting goals 3, 4, and 5. Implementing user capacity and boater education programs under this alternative would also contribute to meeting goals 2, 3, and 5. Establishing the pole/troll zones in Florida Bay and a large area of proposed

wilderness in the East Everglades Addition would help meet goals 2, 3, and 4.

Alternative 2 would provide a high level of visitor experience opportunities, fully meeting goals 2 and 5. Implementing user capacity and boater education programs under this alternative would contribute to meeting goals 2, 3, and 5. This alternative would continue protection of undeveloped areas of the national park, but not to the extent of alternatives 4 and the preferred, so goal 4 would be only partially met.

Alternative 4 would support the highest level of resource protection and active, beneficial management of any of the alternatives. Alternative 4 would provide the highest comparative level of protection for Florida Bay (based on the extent of pole/troll zones) and the most proposed and potential wilderness in the East Everglades Addition, so it would best meet goal 4. Implementing

user capacity and boater education programs under this alternative would contribute to meeting goals 2, 3, and 5. However, the resource protection elements of this alternative would come at some cost to visitor opportunities and flexibility, so goals 3 and 5 would be only partially met.

After evaluation of all the alternatives in this general management plan, the environmentally preferable alternative was determined to be the NPS preferred alternative. This alternative would more fully satisfy all the national environmental criteria than alternatives 1, 2, or 4. The NPS preferred alternative would provide a high level of protection of natural and cultural resources. This alternative would also maintain an environment that supports a diversity and variety of individual choices and would integrate resource protection with an appropriate range of visitor use.

TABLE 4. ENVIRONMENTALLY PREFERABLE ALTERNATIVE

Goal	Alternative 1 (No Action)	NPS Preferred Alternative	Alternative 2	Alternative 4
1	Fully meets goal	Fully meets goal	Fully meets goal	Fully meets goal
2	Fully meets goal	Fully meets goal	Fully meets goal	Fully meets goal
3	Partially meets goal	Fully meets goal	Fully meets goal	Partially meets goal
4	Partially meets goal	Fully meets goal	Partially meets goal	Fully meets goal
5	Partially meets goal	Fully meets goal	Fully meets goal	Partially meets goal
6	Not applicable	Not applicable	Not applicable	Not applicable
Conclusion		Environmentally Preferable		

ALTERNATIVES AND ACTIONS CONSIDERED BUT DISMISSED FROM DETAILED EVALUATION

ALTERNATIVES DISMISSED

The management alternatives in this document were developed over several years, through an iterative process that incorporated public input and new information at every step. This process is described in detail in the “Development of the Alternatives” section near the beginning of this chapter.

Once a preliminary NPS preferred alternative was developed several years into the planning process, the planning team considered the entire set of alternatives that had been carried forward so far and determined that alternative 3 should be dropped from detailed evaluation in this document. The reasons for dropping alternative 3 from detailed evaluation in this plan are as follows:

- The preliminary preferred alternative turned out to be rather similar to alternative 3, so dropping alternative 3 resulted in four distinct alternatives remaining.
- The range of reasonable alternatives could be maintained without alternative 3.
- Having fewer distinct alternatives reduces the potential for confusion as readers try to understand the various alternatives and ideas presented.
- With four rather than five alternatives, the cost of evaluating the alternatives and producing this document could be kept within the project budget.

ACTIONS DISMISSED

Certain *actions* (elements) from the various alternatives considered during the planning process were dismissed from detailed study in this plan. These actions are described briefly below, along with the reasons for their dismissal.

- Development of a dedicated multiuse recreational path (parallel to the main park road) from the park entrance to Flamingo *or* widening of the main park road to add bicycle lanes on the road shoulders for safer, more enjoyable cycling—This action was dismissed from detailed analysis because of the high anticipated costs and potential adverse impacts on wetlands and other natural resources. Adding paved shoulders or a separate bike path would require an increase in pavement of at least 12 feet in width. To properly engineer slopes and meet road and trail safety standards, the amount of fill and the culvert length required could easily exceed twice that, depending on the road segment, adjacent resources, elevation, and other factors. The cost for this action could easily exceed \$60 million, not considering culverts/bridging and wetland mitigation costs. At least 120 acres of wetlands in the heart of the national park would be directly affected; indirect ecosystem and hydrologic impacts (e.g., impacts to surface water sheet flow) would also be expected, although more detailed study would be required to determine the nature and intensity of such impacts.

- Management by boat length in Florida Bay—This idea, proposed in GMP Newsletter 4, would have prohibited motorboats beyond 24 feet in length from portions of Florida Bay. While boat length generally correlates with boat draft, many shallow draft large boats do

exist. In consideration of these exceptions and the fact that boat manufacturing technology may change over time, boat length was dismissed from detailed evaluation as a management tool.

SUMMARY OF KEY DIFFERENCES AMONG THE ALTERNATIVES

TABLE 5. SUMMARY OF KEY DIFFERENCES AMONG THE ALTERNATIVES

PLANNING UNIT / TOPIC	ALTERNATIVE 1 (NO ACTION)	NPS PREFERRED ALTERNATIVE	ALTERNATIVE 2	ALTERNATIVE 4
PARKWIDE ACTIONS				
Overview	<p>As funding permits, Flamingo facilities would be improved or upgraded as outlined in the Flamingo CSP, as would other selected <i>planned</i> and <i>funded</i> facility improvements. Otherwise the built environment would remain at its current level. Existing facilities at the park headquarters area, Long Pine Key, Key Largo, Shark Valley, and Gulf Coast would be maintained and continue to serve operational needs and visitors, in some cases at less than desired levels. As funding permits, Flamingo facilities would be maintained until planned improvements are funded and implemented.</p> <p>Management activities would continue to conserve natural resources and processes while accommodating a range of visitor uses and experiences.</p> <p>Visitors would continue to have access to a wide variety of land- and water-based opportunities and programs, including concessioner trips at Gulf Coast, Shark Valley, and Flamingo, plus self-guided opportunities and guided trips throughout the park.</p>	<p>Using management zoning and collaborative techniques such as adaptive management, user education, and a national park advisory committee, the NPS preferred alternative would support restoration of natural systems while providing improved opportunities for quality visitor experiences. This concept is represented in the management zoning by establishing pole/troll zones over some shallow areas of Florida Bay (submerged marine wilderness) and by designating 21,700 acres in the northwest portion of the East Everglades Addition as the frontcountry zone, where commercial airboat tours and private airboat use by eligible individuals would continue. Much of the East Everglades Addition (the portion where airboat use would not occur) would be proposed for eventual wilderness designation.</p>	<p>Alternative 2 would strive to maintain and enhance visitor opportunities and protect natural systems while preserving many traditional routes and ways of visitor access. This concept is represented in the management zoning by the boat access zone in Florida Bay and a large (56,000-acre) frontcountry zone in the East Everglades Addition. This alternative would rely more on boater education and enhanced ranger patrols to provide some measure of increased protection for seagrass beds, banks, and other submerged marine wilderness values. Like the NPS preferred alternative, alternative 2 would continue visitor opportunities for commercial airboat tours. A modest portion of the East Everglades Addition (the southern portion, where airboat use would not occur) would be proposed for wilderness designation.</p>	<p>Alternative 4 would provide a high level of support for protecting natural systems while improving opportunities for certain types of visitor activities. This concept is represented in the management zoning by establishing pole/troll zones over shallow areas of Florida Bay, and by designating 21,600 acres in the northwest portion of the East Everglades Addition as the frontcountry zone (where private airboating by eligible individuals would continue). Commercial airboat tours in the national park would be discontinued in this alternative. Nearly all of the East Everglades Addition would be proposed for eventual wilderness designation.</p>
Adaptive Management	n/a	Use the adaptive management process to (a) evaluate the success of management actions in achieving desired resource and visitor use conditions, and (b) modify management strategies as needed to improve success at achieving desired conditions.	Same as NPS preferred alternative.	Same as NPS preferred alternative.
Advisory Committee	n/a	Establish an Everglades National Park Advisory Committee comprised of diverse stakeholders to help park managers consider various perspectives on issues such as management of fisheries, access and visitor use (especially management of boating in shallow marine waters), and protection of endangered species during adaptive implementation of the approved management plan.	Same as NPS preferred alternative.	Same as NPS preferred alternative.
User Capacity Program	n/a	Implement a user capacity program to assist in managing the levels, types, and patterns of visitor use to preserve park resources and quality of the visitor experience. Components would include (a) establish desired conditions for various areas of the park through management zoning, (b) identify indicators to monitor to determine whether desired conditions are being met, (c) identify standards (limits of acceptable change) for the indicators, (d) monitor indicators to determine if there are disturbing trends or if standards are being exceeded, and (e) take management action to maintain or restore desired conditions.	Same as NPS preferred alternative.	Same as NPS preferred alternative.

TABLE 5. SUMMARY OF KEY DIFFERENCES AMONG THE ALTERNATIVES

PLANNING UNIT / TOPIC	ALTERNATIVE 1 (NO ACTION)	NPS PREFERRED ALTERNATIVE	ALTERNATIVE 2	ALTERNATIVE 4
Cultural Resource Management	As possible with available funding and staffing levels, strive to identify, protect, stabilize, and interpret (as appropriate) significant cultural resources and historic properties such as archeological sites, historic structures, and cultural landscapes in accordance with applicable policies and guidelines.	Establish a comprehensive cultural resource management program that would focus on efforts to inventory, document, and protect all types of cultural resources; regularly monitor archeological sites and other historic properties to assess resource conditions and inform long-term treatment strategies; interpret selected cultural sites for the public; better interpret and protect ethnographic resources in consultation with associated American Indian tribes and other peoples traditionally associated with the park.	Same as NPS preferred alternative.	Same as NPS preferred alternative.
Natural Resource Management Program	As possible with available funding and staffing levels, strive to protect and restore natural resources and systems. Continue park managers' participation in large-scale watershed and ecosystem restoration projects.	Develop a more robust natural resource management program to support implementation of desired conditions described in this general management plan, implement natural resource components of this plan, and contribute to the adaptive management and user capacity components of this plan.	Same as NPS preferred alternative.	Same as NPS preferred alternative.
Boater Education Permit Requirement	n/a	Implement a mandatory boater education permit program to promote shared stewardship for marine resources, including the shallow sea bottom areas, seagrasses, and wildlife. Operators of motorboats and nonmotorized boats (including paddled craft) would complete a mandatory education program to obtain a permit to operate vessels in the park. Program information would be tailored to the type of craft and/or type of trip and would be widely available at the park; on the Internet; in gateway communities, marinas, hotels; from guides; etc.	Same as NPS preferred alternative.	Same as NPS preferred alternative.
Boating Safety and Resource Protection Plan	n/a	Develop a boating safety and resource protection plan. This plan would address boating in marine waters of Florida Bay, the Gulf Coast, and Ten Thousand Islands in more detail as it relates to visitor safety and resource protection. It would consider how to further avoid/minimize the risk of boat-boat collisions, boat-wildlife collisions, groundings, and other impacts on the sea bottom, which is federally designated wilderness. This study would address how to minimize risks to wildlife (including the manatee and other marine endangered species), so a separate manatee management plan would be unnecessary. The plan would study in more detail the Florida Bay channels, passes, and boat access routes shown on the "NPS Preferred Alternative" map and make more detailed decisions about how/if channels would be marked and accessed. This plan would be developed with public input and would be updated regularly.	n/a	n/a
Manatee Protection		Manatee protection would be addressed by the boating safety and resource protection plan (see row immediately above.)	Develop a manatee management plan to identify ways to improve manatee protection within the national park while maintaining as many existing recreational boating opportunities as possible. This effort would include participation by staff from partner agencies having manatee management responsibilities. Protection measures would be implemented using management tools that are as flexible as possible such as the superintendent's compendium.	Same as alternative 2.

TABLE 5. SUMMARY OF KEY DIFFERENCES AMONG THE ALTERNATIVES

PLANNING UNIT / TOPIC	ALTERNATIVE 1 (NO ACTION)	NPS PREFERRED ALTERNATIVE	ALTERNATIVE 2	ALTERNATIVE 4
Paddling Trail Accessibility	n/a	Paddling trail accessibility would be improved, including for persons with disabilities.	Same as NPS preferred alternative.	Same as NPS preferred alternative.
HEADQUARTERS / PINE ISLAND / ROYAL PALM / MAIN PARK ROAD				
Long Pine Key	The Long Pine Key area would continue to offer a picnic area and campground, and the Long Pine Key nature trail would be maintained for hiking and bicycling through the pinelands.	Same as alternative 1, plus at Long Pine Key campground, electric hookups and solar hot-water showers would be provided. Bicycle rentals, snacks, and basic camping supplies would be provided seasonally by a concessioner.	Same as alternative 1, plus at Long Pine Key campground, electric hookups and solar hot-water showers would be provided.	Same as alternative 1.
Royal Palm Area	The Royal Palm visitor contact station would continue to provide functional interpretive office and storage space and a cooperating association bookstore. The Anhinga and Gumbo Limbo trails would continue to provide opportunities for interpreting the Everglades ecosystem.	Interpretive programs and media would be expanded and updated at the Royal Palm area, including integrating prehistoric and historic themes into these programs. Where the road portion of the Anhinga Trail has created an impediment to water movement, more natural water flow would be restored by installing bridges or culverts.	Interpretive programs and media would be expanded and updated at the Royal Palm area.	Interpretive programs and media would be expanded and updated at the Royal Palm area, including integrating prehistoric and historic themes into these programs.
Visitor Orientation and Information	The Ernest F. Coe Visitor Center, near the east entrance of the park in the park headquarters area, would remain the primary park visitor center and would continue to provide visitor orientation, films, exhibits, and a cooperating association bookstore.	To enhance pre-visit information and orientation for visitors, park managers would pursue a partnership with the Homestead and Florida City area communities to provide a cooperative visitor contact station in this gateway area. As a short-term solution, develop an unstaffed orientation kiosk there and provide web-based information.	Same as alternative 1.	To enhance pre-visit information and orientation for visitors, park managers would pursue a partnership with the Homestead and Florida City area communities to provide a cooperative visitor contact station in this gateway area.
Alternative Transportation	n/a	NPS staff would pursue the goal of providing some form of alternative transportation from south Miami-Dade County to the national park's Coe Visitor Center/Royal Palm area and all the way to Flamingo. (Ideally the system would allow visitors to spend time at key interpretive stops along the way). Options could include simple transit and dedicated guided interpretive tours. The service would probably be offered during the high visitor use winter months at first and would be implemented incrementally based on economic viability, potential partnerships, funding sources, etc.	Same as the NPS preferred alternative except that the terminus of the service would be Long Pine Key.	Same as the NPS preferred alternative.
Hole-in-the Donut	Ecological restoration of the Hole-in-the Donut area would continue, as would seasonal, guided interpretive tours of the Nike Missile Base site. Buildings associated with the historic Nike complex would continue to be used for park purposes such as administrative and storage space.	Same as alternative 1, except that new interpretation of ongoing restoration and daytime hiking opportunities would be provided, and this could include spur overlook trails to one or two mounds.	Same as alternative 1, except that new interpretation of restoration activities for visitors and daytime hiking opportunities would be provided, as would primitive camping and evening programs at one or two mounds.	Same as alternative 1, except that that areas zoned backcountry would be restored to natural conditions and would be converted to designated wilderness during the life of this plan.
Beard Center, Robertson Building, and South Florida Collections Management Center	The Daniel Beard Center and Robertson Building would continue to serve as administrative facilities for park resource managers, fire and aviation operations, and cooperating researchers. The Daniel Beard Center and Robertson Building also would continue to house the South Florida Collections Management Center (SFCMC).	The Daniel Beard Center and Robertson Building would continue to be used for park administrative purposes, and this would include space vacated by the South Florida Collections Management Center (see below). The South Florida Collections Management Center, currently housed in the Daniel Beard Center and Robertson Building, would be relocated to a new museum in this area that meets NPS collections standards. Museum collections would continue to be acquired, preserved, and accessible to researchers, and the public would have its first opportunity to experience the center's vast resources and collections. Part of this new facility could be used to support interpretation and public use (e.g., interpretation and public tour staging space) of the Nike Missile Base site.	The Daniel Beard Center and Robertson Building would continue to be used for park administrative purposes, and this would include space vacated by the South Florida Collections Management Center (see below). The South Florida Collections Management Center, currently housed in the Daniel Beard Center and Robertson Building, would be relocated to a new museum in this area that meets NPS collections standards. Museum collections would continue to be acquired, preserved, and accessible to researchers. The public would have opportunities to experience the center's vast resources and collections.	The Daniel Beard Center and Robertson Building would continue to be used for park administrative purposes. Space in these buildings vacated by the South Florida Collections Management Center (see below) would serve interpretive/educational needs related to the Nike Missile Base site. The South Florida Collections Management Center, currently housed in the Daniel Beard Center and Robertson Building, would be relocated to a new museum centrally located in the Homestead-Florida City area. The new facility, which could be a partnership with a university or other public institution, would meet NPS collections standards. Museum collections would continue to be acquired, preserved, and accessible to researchers, and the public would have access, as appropriate, to the collection.

TABLE 5. SUMMARY OF KEY DIFFERENCES AMONG THE ALTERNATIVES

PLANNING UNIT / TOPIC	ALTERNATIVE 1 (NO ACTION)	NPS PREFERRED ALTERNATIVE	ALTERNATIVE 2	ALTERNATIVE 4
Nike Missile Base Site	The historic integrity of the National Register district would be maintained, and historic buildings at the missile site would continue to be used for park administrative purposes.	Guided interpretive tours of the Nike Missile Base site would be expanded into the shoulder seasons. Significant cultural resources would be preserved, site interpretation would be enhanced, and site improvements for access and circulation, parking, etc. would be made. A tram or shuttle for guided tours would be pursued. The historic integrity of the National Register district would be maintained, and historic buildings at the missile site would continue to be used for park administrative purposes.	Seasonal, guided interpretive tours of the Nike Missile Base site would continue. The historic integrity of the National Register district would be maintained, and historic buildings at the missile site would continue to be used for park administrative purposes.	Same as NPS preferred alternative except no tram or shuttle for guided tours would be pursued.
Bicycling and Hiking Opportunities	Bicycling on the main park road from the park entrance to Flamingo would continue to be allowed. Bicycling would continue to be permitted on other park roads where motor vehicles are allowed and on a few trails where bicycling is specifically permitted (e.g., Long Pine Key trail)	Same as alternative 1 plus connections with nearby trails comprising the South Dade Greenway Network, including the proposed Biscayne–Everglades National Park Greenway, would be provided where feasible. The park would also pursue development of some additional hiking/bicycling trails in frontcountry zones at Long Pine Key and Flamingo.	Same as alternative 1 plus connections with nearby trails comprising the South Dade Greenway Network, including the proposed Biscayne–Everglades National Park Greenway, would be provided where feasible.	Same as NPS preferred alternative.
Paddling Opportunities	Established paddle launch sites along the main park road (e.g., Nine Mile Pond, West Lake, and Hell’s Bay) would continue.	Paddle launch sites along the main park road would be improved.	Same as NPS preferred alternative.	Same as NPS preferred alternative.
FLAMINGO				
Commercial Services and Facilities	<p>A new, long-term concession contract for Flamingo would be awarded. Concession services would include overnight accommodations, food service, a marina with boat rentals, the campground, and guided boat tours operated by a park concessioner. See chapter 1, the section titled “Ongoing Projects and Projects Planned for the Near Future, Flamingo Area Improvements” for more background information on this topic.</p> <p>New facilities at Flamingo would be designed to be sustainable, elevated/hardened/re-locatable structures. The existing gas station would be renovated to accommodate lodging reception. New overnight guest accommodations provided via concessioner operations would include cabins, houseboats, and seasonal ecotents. The visitor center would be rehabilitated to meet visitor information, orientation, lodging, tour, and rental needs. The historic Mission 66 visitor center would be rehabilitated, preserved, and adaptively reused to enhance visitor services and administrative workspace. Increased education and recreational opportunities would be based out of Flamingo and may include more guided tours, and land and water livery services. Food and beverage service to accommodate park visitors would be provided by the concessioner. Concessions housing would be rehabilitated, and some additional units of NPS and concessions housing would be provided to serve peak season operations. The NPS/concessions maintenance area would be improved (a few replacement buildings would be provided; workspaces would be reorganized, etc.). Restoration would occur restoration at camping loops B and C (approximately 50 acres).</p>	Same as alternative 1.	Same as alternative 1.	Same as alternative 1.

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PLANNING UNIT / TOPIC	ALTERNATIVE 1 (NO ACTION)	NPS PREFERRED ALTERNATIVE	ALTERNATIVE 2	ALTERNATIVE 4
FLORIDA BAY				
Boat Access Points	Flamingo would remain the only Florida Bay boat access point within Everglades National Park. All other access to the bay would originate from outside the park such as from the Intracoastal Waterway in the upper keys that shares a 40-mile boundary with the park.	Flamingo would remain the main boat access point to Florida Bay within Everglades National Park. A new launch point for carry-in boats would be established near Long Sound on the 18-mile length of U.S. 1. The National Park Service would pursue partnership opportunities for additional public boating (motorized and nonmotorized) access sites onto Florida Bay.	Flamingo would remain the main boat access point to Florida Bay within Everglades National Park. A new launch point for carry-in boats would be established near Long Sound on the 18-mile stretch of U.S. 1.	Same as NPS preferred alternative.
Channels for Boat Access in Florida Bay	NPS boundary and channel markers for established channels would remain in use. Marked channels and recommended motorboat routes would continue to be identified on NOAA maps, commercially offered charts, and the "Florida Bay Map and Guide."	Established channels would remain in use. Future refinements to this system would be based on the boating safety and resource protection plan effort described in the first section of this table.	Same as alternative 1.	Compared to the no-action alternative, fewer channels would remain in use, to reduce bottom impacts from propeller scarring and groundings. Channels and recommended motorboat routes would continue to be identified on NOAA maps, commercially offered charts, and the "Florida Bay Map and Guide."
Boating Management of Florida Bay	There would be no change in how boaters use or access Florida Bay. Boating would remain relatively unrestricted throughout most of the bay.	Much of Florida Bay would be in the boat access zone. Pole/troll zones (about 131,392 acres or 33% of Florida Bay waters within the park) would be established to better protect designated submerged marine wilderness, vegetation, and wildlife resources while allowing for a wide range of recreational opportunities and reasonable access. The pole/troll zones in this alternative were developed with public input and are based on science and expert on-the-water knowledge of where boats can be operated with reduced likelihood of damaging seagrass beds and other shallow water habitats. The zone locations would be fine-tuned over time through the adaptive management process. The pole/troll zones would be minimally marked to preserve the scenery and aesthetics of Florida Bay and minimize maintenance requirements, so boaters would rely primarily on navigation skills, global positioning system (GPS) technology, marine charts, and materials developed for the boater education program to comply with the zone requirements. Within pole/troll zones, boats would have to be propelled using push poles, electric trolling motors, or paddles. Internal combustion engines could be used in designated channels/access routes. To access the majority (77.5%) of pole/troll zones, visitors would need to pole or troll 0.5 mile or less. Less than 20% of the pole/troll zones would require visitors to pole or troll between 0.5 to 1.0 mile, and less than 1% of pole/troll areas would be more than 1.5 miles away from traditional boat access zones. The majority of the bay would still be open to motorboat access and most pole/troll distances would be relatively short. The Pole/Troll Distance Analysis map, Pole/Troll Vessel Density Analysis map, and the Pole/Troll Analysis: Flamingo Area map for the NPS preferred alternative follow table 6.	Nearly all of Florida Bay waters would be in the boat access zone, so boating would remain relatively unrestricted throughout most of the bay. The few established short, idle speed, no-wake areas would remain.	Much of Florida Bay would be in the boat access zone. Pole/troll zones (about 159,564 acres or 41% of Florida Bay waters within the park) would be established to better protect designated submerged marine wilderness, vegetation, and wildlife resources. The pole/troll zones in this alternative cover the shallowest areas of Florida Bay (basically, mean depth 2 feet or less, based on the propeller scarring study's (NPS 2008b) prediction of areas at risk of propeller and grounding damage). The pole/troll zones would be marked and also shown on marine charts and GPS maps. Within pole/troll zones, boats would have to be propelled using push poles, electric trolling motors, or paddles. Internal combustion engines could be used in designated channels. The emphasis on preservation resulted in longer distances when compared to the NPS preferred alternative—boaters would have to pole or troll to reach their desired water destination (in some cases, exceeding 5 miles). The majority of the pole/troll zones (61.0%) would require visitors accessing these areas to pole or troll up to 0.5 mile. Visitors accessing the next tier of these zones (23% of pole/troll areas) would have to pole or troll between 0.5 and 1.0 mile. Under this alternative, 16% of pole/troll zones would require visitors to pole or troll more than 1.01 miles from motorboat access zones, as compared to less than 5% of pole/troll zones over 1.01 miles in the NPS preferred alternative. Under alternative 4, more than half of Florida Bay would still be open to motorboat access. The Pole/Troll Distance Analysis map, Pole/Troll Vessel Density Analysis map, and the Pole/Troll Analysis: Flamingo Area map for alternative 4 follow table 6.
Idle speed, no-wake Areas	The few existing small idle speed, no-wake areas in Florida Bay would remain.	The few existing small idle speed, no-wake areas in Florida Bay would remain. A 300-foot-wide idle speed, no-wake area would be designated along the mainland shoreline from Middle Cape eastward to Shell Creek (west end of Long Sound) to reduce shoreline erosion from motorboat wakes, improve safety and experiences for those on the shoreline or boating	Same as alternative 1.	Same as NPS preferred alternative except the 300-foot-wide idle speed, no-wake area would be designated along the mainland shoreline between East Cape and Middle Cape and around the keys in Florida Bay.

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PLANNING UNIT / TOPIC	ALTERNATIVE 1 (NO ACTION)	NPS PREFERRED ALTERNATIVE	ALTERNATIVE 2	ALTERNATIVE 4
		close to the shoreline, and better protect wildlife. This zone would also serve as a buffer that would improve the natural soundscapes in the adjacent backcountry and wilderness areas. In places where this idle speed, no-wake designation near shoreline would fall within a pole/troll designation due to shallow water depth, the pole/troll designation would prevail.		
Seagrass Restoration	Small-scale seagrass restoration and monitoring efforts (for selected areas badly damaged by propeller scarring and groundings) would continue.	A formal seagrass restoration program for submerged marine wilderness resources and sites damaged by groundings and propeller scarring would be established.	Same as NPS preferred alternative.	Same as NPS preferred alternative.
Little Madeira Bay, Joe Bay, and Adjacent Water Bodies	Little Madeira Bay, Joe Bay, and adjacent smaller water bodies (also known as the “Crocodile Sanctuary”) would remain closed to public access.	Little Madeira Bay, Joe Bay, and adjacent smaller water bodies would be in the special protection zone, remaining closed to public access. These water bodies would continue to serve as a baseline area for long-term ecological monitoring and restoration studies.	After being closed for more than 20 years, Joe Bay would be reopened for paddling use only (and managed as the backcountry zone). Little Madeira Bay and adjacent smaller water bodies would be in the pole/troll zone. Fishing would be allowed in these areas.	Same as NPS preferred alternative.
Long Sound	Public boating access in Long Sound would continue.	Long Sound would be managed as a backcountry (nonmotorized) zone to improve wilderness-type paddling opportunities.	Long Sound would be zoned boat access, meaning public boating access would continue.	Same as alternative 2.
Keys and Chickees in Florida Bay	Two keys in Florida Bay (Little Rabbit and North Nest) would continue to be open to visitors for day use and camping. These sites, plus the two chickees at Johnson Key and Shark Point, would be managed in accordance with the park’s backcountry permit program and backcountry management plan as updated. Bradley Key and Carl Ross Key would remain open to visitor use during daylight hours. Other keys in the bay would remain closed to public use to protect bird nesting and rookery areas.	As in alternative 1, Little Rabbit, North Nest, Carl Ross, and Bradley keys would remain open. All other keys would be in the special protection zone and remain closed to public use to protect nesting and roosting birds. <i>Three</i> additional chickees (platform campsites) would be built in Florida Bay.	Same as NPS preferred alternative except <i>five</i> additional chickees would be built in Florida Bay.	Same as NPS preferred alternative except <i>four</i> additional chickees would be built in Florida Bay.
KEY LARGO				
NPS Site and Tarpon Basin	Facilities at the 20-acre NPS site in Key Largo (ranger station and Florida Bay Interagency Science Center) would continue to provide a base of operations for NPS law enforcement, interpretation, and ecological research activities. The Key Largo ranger station would continue to serve primarily park operations, with limited visitor services.	Facilities at the 20-acre NPS site in Key Largo would remain. Improvements would include a new visitor information kiosk and a venue to support the boater education/permit program, a paddler launch, and an interpretive trail through the site’s upland hammock. Both the existing site in Key Largo and the new Tarpon Basin property would be considered to meet resource protection, interpretive, and recreational needs.	Same as NPS preferred alternative without the paddler launch and interpretive trail.	Same as alternative 2.
Visitor Information/ Orientation	n/a	NPS staff would pursue an interagency visitor information/orientation facility in the upper keys with other agencies. To allow maximum flexibility, existing facilities or a new facility in Key Largo would be used for this purpose.	Same as NPS preferred alternative but only existing facilities in Key Largo would be pursued for this purpose.	Same as the NPS preferred alternative but only a new facility or expansion of an existing facility in Key Largo would be pursued for this purpose.
EAST EVERGLADES ADDITION				
Overview	In 1989 the Everglades National Park Protection and Expansion Act added 109,506 acres of the northeast portion of Shark River Slough (the “East Everglades Addition”) to the park. Although the 1979 <i>Master Plan</i> does not address management of the East Everglades Addition, the 1991 land protection plan for the East Everglades Addition identified that all lands in the East Everglades were needed for ecosystem restoration, set priorities for acquisition, and gave examples of compatible and incompatible land uses. The East Everglades Addition would continue to be managed under guidance provided in the Expansion Act and the land protection plan.	The northwest portion of the East Everglades Addition, where much of the private and commercial airboat use typically occurs, would be managed as frontcountry zone (see “NPS Preferred Alternative” map). The remaining area would be managed as backcountry (nonmotorized), providing the classic Everglades wilderness experience of solitude and quiet.	The northern half of the East Everglades Addition (except for the easternmost part, which is mostly marl prairie and inaccessible to airboats) would be in the frontcountry zone (see “Alternative 2” map). Most of the rest of the Addition would be in the backcountry (nonmotorized) zone, providing classic Everglades wilderness experiences.	The northwest portion of the East Everglades Addition would be managed as the frontcountry zone (see “Alternative 4” map). Most of the remaining area would be managed as backcountry (nonmotorized), providing the classic Everglades wilderness experience of solitude and quiet.

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Wilderness	No wilderness is proposed, but wilderness-eligible lands (most of the East Everglades Addition) would be managed to preserve their eligibility for preservation until the legislative process of wilderness designation has been completed.	Proposed wilderness: about 80,100 acres Proposed potential wilderness: <u>about 9,900 acres</u> Total: 90,000 acres Potential wilderness would become designated wilderness once nonconforming uses such as private airboat use have ended and/or private property came into federal ownership.	Proposed wilderness: about 39,500 acres Proposed potential wilderness: <u>0 acres</u> Total: 39,500 acres	Proposed wilderness: about 42,700 acres Proposed potential wilderness: <u>about 59,400 acres</u> Total: 102,100 acres Potential wilderness would become designated wilderness once nonconforming uses such as private airboat use have ended and/or private property came into federal ownership.
Private Airboating	According to the 1989 East Everglades Expansion Act, private airboat operators who were owners of record of registered airboats in use within the East Everglades Addition on January 1, 1989, may continue using airboats in the East Everglades Addition during their lifetimes. Most private airboat use would probably remain on commonly used airboat trails or routes, although there is currently no such requirement.	A private airboat permit system would be implemented. Private airboating by those eligible individuals would continue within the frontcountry zone. Airboats would be required to stay on designated routes, and other regulations could be established to protect resources. New and/or improved airboat launch sites would be established north of Chekika and along Tamiami Trail.	Same as NPS preferred alternative except the frontcountry zone (where airboats could operate) would be larger.	Same as NPS preferred alternative except the shape of the frontcountry zone would be slightly different because of the elimination of commercial airboat tours.
Commercial Airboating	Four commercial airboat tour operators based along Tamiami Trail would continue to provide guided trips into the East Everglades Addition (plus food/beverage service, wildlife shows, gift shops, etc.) for visitors with little input or oversight from the National Park Service; these businesses would continue to operate at their own discretion without a permit from the National Park Service.	Authorized commercial airboat operations would continue and would be placed under concessions contracts with the park. To support park and ecosystem restoration goals, the park would seek to minimize/consolidate the number of commercial airboat facilities shared by as many as four operators. The concessions contract(s) would include several provisions, as follows: Only services that are necessary and appropriate to Everglades National Park would be provided (e.g., airboat tours, food service, and limited merchandise sales). Interpretive and educational information for airboat tour visitors would be guided by park interpretive/educational standards and coordinated with the park's interpretive staff, as is already done at the Shark Valley, Gulf Coast, and Flamingo areas. A variety of airboat tours would be provided (not necessarily all by the same operator). Consistent with Public Law 101-229, commercial airboats would travel on designated routes and in a manner that protects biological resources.	Same as NPS preferred alternative except that: A wider range of airboat tours, including specialized tours to more destinations, would be provided. Livery services for transportation of paddlers and campers to designated locations in the East Everglades would be provided.	Commercial airboat operations within the park would end in this alternative, so visitors would no longer have the opportunity to take a commercial guided airboat tour. One fill site that is now used as commercial airboat base of operations would be used instead for visitor activities and programs such as picnicking, wildlife viewing, a canoe/kayak launch, and camping. If not needed for other purposes, the sites would be restored to natural conditions.
Paddling and Camping	Backcountry paddling would remain an option for visitors (with a special use permit required for overnight visits), but with no paddling trails or designated primitive campgrounds, such use would likely remain at very low levels.	Canoe/kayak launches would be provided along Tamiami Trail, allowing for both short- and long-distance paddling opportunities. The locations of these access points would be coordinated with Tamiami Trail Modifications: Next Steps. Permits would be required for overnight use in the East Everglades Addition, as is the case in other areas of the park. Long-distance paddling routes (unmarked) would allow visitors to connect through Shark River Slough to the main park road, Alternative Wilderness Waterway, or Whitewater Bay/Gulf of Mexico. Tree islands in both the frontcountry and backcountry zones would be identified for day and camping use. To protect wetlands and wildlife, including threatened and endangered species, routes and sites might be periodically closed or have limited access during nesting seasons or low water periods. Other tree islands not specifically identified for visitor use would be closed. Public use areas could be maintained cooperatively via contractual agreements with commercial airboat concessioners or other stakeholder organizations.	Same as the NPS preferred alternative except that long-distance paddling opportunities would not be provided, and public use areas on tree islands would not be maintained via contractual agreements with commercial airboat concessioners or other stakeholder organizations.	Same as the NPS preferred alternative except that public use areas on tree islands would not be cooperatively via contractual agreements with commercial airboat concessioners or other stakeholder organizations.

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Administrative and Operational Facilities	East Everglades administrative and operational activities would continue to operate out of adapted former residences within the East Everglades Addition, which are not well suited to park operational uses. This situation leads to operational inefficiencies and is inconsistent with the intent of the Everglades Expansion Act.	A new East Everglades administrative/operations center would be built near, but outside the park boundary near Chekika on land recently acquired under Public Law 108-483. This center would include a ranger/visitor contact station, a fire management station, housing for several law enforcement rangers, a helicopter landing zone, equipment and vehicle storage, wayside/exhibit kiosks, and offices. Residences in the park that are now being used for these purposes would be demolished once the operations center is functional and the sites restored to natural conditions.	Same as NPS preferred alternative.	Same as NPS preferred alternative.
Other Management Considerations	There are nine former hunting camps of various ages and conditions on tree islands in the East Everglades Addition. Use of such sites would continue without permits or regulations (aside from the permit requirement for overnight use).	Some East Everglades cultural sites would be maintained and protected through a site stewardship program. Shark River Slough cultural/archeological resources would be integrated into interpretive programs.	n/a	Some East Everglades Addition cultural sites would be maintained and protected through a stewardship program. Shark River Slough cultural/archeological resources would be integrated into interpretive programs.
Chekika	Chekika, a former state recreation area, would remain open for day use on a seasonal basis. Other area infrastructure, such as trails, roads, and borrow pits, would be informally used by the public for activities such as wildlife viewing, bicycling, and fishing.	Chekika would remain open at least seasonally as a day use area, with education and recreation programs focused on park natural and cultural resources and ecosystem restoration efforts. Borrow pits/ponds at Chekika would be filled in and restored to allow for more natural conditions.	Chekika would remain open at least seasonally as a day use area and for primitive camping. The level of education and resource-based programs would be increased.	Chekika would remain open at least seasonally for day use and would also serve as one of the park's environmental education venues; this could include overnight programs.
Other Visitor Opportunities	n/a	Education and recreational opportunities (e.g., hiking, bicycling, wildlife viewing, and learning about Everglades restoration and history) would be expanded along Tamiami Trail, around SW 237th Avenue near Chekika, at some tree islands, and near the park's eastern boundary. This would be accomplished in cooperation with public and private entities that are involved in Tamiami Trail modification projects, eastern boundary water modification projects, restoration of natural flows into the park, and regional greenway efforts near the park. Previously disturbed sites would be used to the maximum extent possible.	Same as NPS preferred alternative.	Same as NPS preferred alternative.
TAMIAMI TRAIL / SHARK VALLEY				
Alternative Transportation	n/a	NPS staff would pursue alternative transportation options (probably during the high visitor use season to start) from the Miami area to visitor destinations along Tamiami Trail (e.g., to commercial airboat tour sites and Shark Valley). Such options would likely involve cooperation and/or partnerships with other entities.	n/a	Same as the NPS preferred alternative.
Visitor Orientation/ Visitor Opportunities along Tamiami Trail	Many travelers along Tamiami Trail would remain unaware of their proximity to the national park and the educational and recreational opportunities available along the more than 20 miles of the road that borders the park.	A visitor information kiosk and a series of turnouts would be provided along Tamiami Trail for visitor orientation and an overview of natural and cultural resource issues, including ecosystem restoration. Locations would be coordinated with Tamiami Trail modifications related to ecosystem restoration.	Same as NPS preferred alternative.	NPS staff would pursue with other partners (e.g., local, state, and federal management entities involved in Everglades restoration and Tamiami Trail rebuilding) a new multiagency visitor contact facility near the intersection of Tamiami Trail and Krome Avenue to provide a centralized location for visitors to get information about outdoor recreational and educational opportunities, resource issues, and ecosystem restoration efforts throughout the Tamiami Trail corridor.
Shark Valley	Shark Valley would remain the primary area of park orientation and interpretation along the northern boundary of the park. Visitors would continue to hike, bike, or ride an interpretive tram on the 15-mile Shark Valley loop road and visit the Shark Valley observation tower at the halfway point.	Same as alternative 1 plus: <ul style="list-style-type: none">▪ Additional evening programs would be established▪ Two shelters/rest stops would be added along the loop road within the footprint of existing development.▪ The reservation system for tram tours and bicycles would be expanded to minimize parking and congestion in this area.▪ Pre-trip information would also be expanded to encourage	<ul style="list-style-type: none">▪ Same as alternative 1 except:▪ Additional evening programs would be established▪ Several shelters/rest stops would be added along the loop road within the footprint of existing development.▪ Use current administrative area as overflow and/or bicyclist parking area.	Same as alternative 2.

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		visitation during off-peak hours, spread use out throughout the day, and inform visitors about what to expect.		
Administrative and Operational Facilities	Law enforcement, interpretation, and maintenance operations for the Tamiami Trail District would remain in existing facilities.	Law enforcement, maintenance operations for the park's Tamiami Trail District, along with some resource management administrative facilities and housing for several law enforcement rangers, would be relocated and centralized at a new operations facility at a previously disturbed site within the national park, e.g., a portion of the Gator Park site after NPS acquisition of the land. A ranger residence and interpretive operations would remain at Shark Valley. Current facilities would be removed once the new district facility is operational.	Same as NPS preferred alternative.	Same as alternative 1.
Partnerships	n/a	The National Park Service would coordinate with other land management agencies along Tamiami Trail to identify and pursue cooperative projects for improved operational efficiency. Park staff would pursue working cooperatively with the Miccosukee Tribe to integrate education programs and opportunities offered by both entities and to determine the feasibility of sharing resources and facilities to meet park and tribal goals.	Same as NPS preferred alternative.	Same as NPS preferred alternative.
GULF COAST / TEN THOUSAND ISLANDS / EVERGLADES CITY				
NPS Facilities at Gulf Coast	<p>Everglades City would continue to serve as the western gateway to the park. The 20 acres of NPS land in Everglades City would remain as the center for visitor services and park operations for the Gulf Coast. Visitor services include visitor information and orientation at the small Gulf Coast Visitor Center, concessioner-operated boat tours, and a small concessions store. Space is very tight in the small boat basin that is used for NPS maintenance and ranger operations and concessions tours. An NPS canoe launch is available near the visitor center, but it is in poor condition.</p> <p>The NPS structures at Everglades City would continue to serve park interpretive, resource management, law enforcement/protection, and maintenance operations. These facilities have very limited work and storage space. This site would also continue to support concessions operations.</p>	Visitor and administrative facilities at Gulf Coast would be in the developed zone. The Marjory Stoneman Douglas Visitor Center would be constructed to replace existing facilities, as required in the Everglades National Park Protection and Expansion Act of 1989. Operation of the visitor center would focus on interpretation, orientation to address visitor opportunities available in the western portion of the park, protection of resources, and issuing backcountry permits. The size and the scope of the \$7.9 million facility improvements would be consistent with the value analysis performed in 2012 to address the scaled-down version of improvements at the Gulf Coast. A modest-sized visitor center would be constructed on currently disturbed land while other areas of the site would be reclaimed and rehabilitated. New parking would be constructed at the boat basin. A new canoe/kayak ramp and launch would be constructed to support both NPS and concessions operations.	Same as NPS preferred alternative.	Same as NPS preferred alternative.
Boat Access	Boat access to marine waters, at marinas and ramps in the local/regional community, would remain limited.	NPS staff would pursue working cooperatively with public and private interests to provide improved boat access outside the park to Gulf Coast waters.	Same as NPS preferred alternative.	Same as NPS preferred alternative.
Visitor Opportunities	Boat tours, canoe/kayak rentals, interpretive tours, fishing tours, and paddling tours would continue to be offered in the Gulf Coast and Ten Thousand Islands area via commercial service providers.	The concession operation at Everglades City would offer expanded opportunities to visit Ten Thousand Islands, the Gulf Coast, and Wilderness Waterway through boat tours and canoe/kayak rentals. Other commercial services would be pursued to provide visitors with more opportunities such as interpretive, fishing, and paddling tours. Additional land-based interpretive programs and activities would link the park and neighboring communities. A cultural heritage interpretive water trail would be established in the Ten Thousand Islands area.	Same as NPS preferred except that a cultural heritage trail would not be established.	Same as NPS preferred alternative.
Alternative Wilderness Waterway	n/a	A new Alternative Wilderness Waterway route would be established to provide enhanced opportunities for a quieter, more tranquil experience. This route would be minimally marked to preserve scenery and minimize maintenance requirements. The route would be marked by GPS waypoints.	As in the NPS preferred alternative, a new Alternative Wilderness Waterway route would be established. However, in this alternative the route would be unmarked, but highlighted in the mandatory boater education program, marine navigation charts, GPS systems, etc. Also,	As in the NPS preferred alternative, a new Alternative Wilderness Waterway route would be established. Some segments would be in the boat access zone, and continued relatively infrequent use of these segments by motorboats would be anticipated. Some segments would

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		Most segments of the Alternative Wilderness Waterway would be in the boat access zone, and continued relatively infrequent use of these segments by motorboats would be expected. To provide wilderness paddling experiences, a few segments would be in the backcountry (nonmotorized) zone based on narrowness or shallowness of the water, low clearance to mangroves, and available alternate routes for motorboats; see “NPS Preferred Alternative” map.	except for existing idle speed, no-wake areas, the entire Alternative Wilderness Waterway would be in the boat access zone (meaning no new boating restrictions). Continued relatively infrequent use of these segments by motorboats would be anticipated.	be designated idle speed, no-wake areas or backcountry (nonmotorized) zones; see “Alternative 4” map.
Chickees and Campsites	Visitors could continue to camp at backcountry chickees and campsites along the Gulf Coast and interior waterways.	Same as NPS alternative 1 plus as many as eight new backcountry chickees would be provided.	Same as NPS preferred alternative.	Same as NPS preferred alternative.
Gopher Creek	At Gopher Creek, the existing idle speed, no-wake designation along the first (easternmost) mile or so would remain.	Same as alternative 1, plus where the creek opens up into a series of very shallow ponds, bays, and creeks, Gopher Creek would be managed as a pole/troll zone to protect very shallow, submerged marine wilderness and important wildlife resources.	Same as alternative 1.	Manage Gopher Creek as a backcountry (paddle only zone to better protect resources and enhance wilderness opportunities.
SPECIAL REGULATIONS				
	Existing closures and restrictions would be retained. The closure of Little Madeira and Joe bays (also known as the Crocodile Sanctuary) would be made permanent with a special regulation in the <i>Code of Federal Regulations</i> (CFR) in 36 CFR 7.	<p>Implementing the pole/troll zones and identifying designated airboat routes in the East Everglades Addition would restrict uses of these areas and so would require special regulations under sections 1.5 and 3.8(b)(2) of 36 CFR. Closure of Little Madeira and Joe bays and other special protection zones would be made permanent with a special regulation.</p> <p>Closures or use restrictions deemed necessary under adaptive management or user capacity programs (to protect cultural or natural resources or desired visitor experiences) would be accomplished through either special regulations or the superintendent’s compendium.</p> <p>The closure of some tree islands in the East Everglades Addition to protect cultural and natural resources would be accomplished through the authority in section 1.5 of 36 CFR (Superintendent’s Compendium) because it would not likely be a substantial alteration of public use patterns.</p> <p>Implementing the idle speed, no-wake areas would be accomplished under the discretionary authority of the park superintendent to set speed limits (36 CFR 3.8).</p> <p>Establishing the mandatory boater education/permit process is authorized under section 1.6 and 3.3 of 36 CFR.</p>	Same as the NPS preferred alternative.	Same as the NPS preferred alternative.
COSTS AND STAFFING				
Staffing	The NPS staffing level under the no-action alternative would be FTE staff members. Volunteers and partnerships would continue to be key contributors to NPS operations.	The staffing level needed to implement the NPS preferred alternative would be 249 FTE staff members—35 positions more than under the no-action alternative. Volunteers and partnerships would continue to be key contributors to NPS operations.	The NPS staffing level needed to implement alternative 2 would be 240 FTE staff members—26 more positions than under the no-action alternative. Volunteers and partnerships would continue to be key contributors to NPS operations.	The NPS staffing level needed to implement alternative 4 would be 251 FTE staff members—37 more positions than under the no-action alternative. Volunteers and partnerships would continue to be key contributors to NPS operations.
Costs	<p>Annual operating costs of this alternative would be \$17 million.</p> <p>One-time capital costs (for Flamingo improvements) would be \$10.8 million.</p>	<p>Annual operating costs for this alternative would be \$22.1 million.</p> <p>One-time costs (including new construction and nonfacility costs such as major resource plans and projects) would be \$40.8 million, inclusive of Flamingo improvements.</p>	<p>Annual operating costs for this alternative would be \$20.9 million.</p> <p>One-time costs (including new construction and nonfacility costs, such as major resource plans and projects), would be \$36.1 million, inclusive of Flamingo improvements.</p>	<p>Annual operating costs for this alternative would be \$22.1 million.</p> <p>One-time costs (including new construction and nonfacility costs such as major resource plans and projects) would be \$38.7 million, inclusive of Flamingo improvements.</p>

SUMMARY OF IMPACTS OF IMPLEMENTING THE ALTERNATIVES

[Note: this table focuses on impacts of the GMP alternatives. Cumulative impacts (those resulting from the incremental impact of the GMP alternative when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such actions) are discussed in chapter 5.]

TABLE 6. SUMMARY OF THE IMPACTS OF THE IMPLEMENTING ALTERNATIVES

ALTERNATIVE 1: NO ACTION		NPS PREFERRED ALTERNATIVE	ALTERNATIVE 2	ALTERNATIVE 4
Natural Resources				
Hydrologic Resources	No aspects of the no-action alternative would appreciably affect surface waters (timing, distribution, amount of flow, or water quality) or wetlands. Propeller scarring and boat groundings in Florida Bay would likely continue to be relatively widespread, resulting in short-term, minor, adverse water quality impacts from increased turbidity.	The impacts of the NPS preferred alternative on water resources would be long term, localized, minor to moderate, and beneficial (e.g., decreased turbidity) in Florida Bay, and short term, localized, negligible to minor, and adverse (e.g., turbidity, sedimentation) during construction projects.	The impacts of alternative 2 on water resources would be long term, localized, minor, and beneficial (e.g., slightly lower incidence of sea bottom disturbance that increases turbidity), and short term, localized, minor, and adverse (e.g., turbidity, sedimentation).	The impacts of alternative 4 on water resources would be long term, localized, moderate, and beneficial (e.g., decreased turbidity) in Florida Bay, and short term, localized, negligible to minor, and adverse (e.g., turbidity, sediment resuspension) during construction projects.
Landscape and Soils	Long-term impacts on soils (from facility upgrades and visitor use) would be localized, negligible to minor, and adverse.	Impacts on soils under the NPS preferred alternative would be long-term localized, minor, and adverse. These impacts would result from visitor use and construction.	Impacts on soils under alternative 2 would be long-term localized, minor to moderate, and adverse. These impacts result from visitor use and construction.	Impacts on soils under alternative 4 would be long-term localized, minor to moderate, and adverse. These impacts result from visitor use and construction.
Vegetation	Short-term impacts on vegetation from construction-related facility upgrades would be localized, negligible to minor, and adverse. Impacts from continuing current management in Florida Bay would be long term, baywide, moderate, and adverse.	Short-term impacts on vegetation from construction-related facility upgrades would be localized, negligible to minor, and adverse. Construction of new and expanded facilities would result in long-term, localized, and negligible to minor, adverse impacts. New programs and changes in motorboat access in Florida Bay would result in long- term, baywide, moderate, beneficial impacts.	Short-term adverse impacts on vegetation under alternative 2 (from facility upgrades or construction) would be localized and minor to moderate. Beneficial impacts would be short and long term and negligible to minor. Long-term impacts (from visitor use and construction) would be localized, negligible to moderate, and adverse.	Short-term impacts on vegetation from construction-related facility upgrades would be localized, negligible to minor, and adverse. Construction of new and expanded facilities would result in long-term, localized, minor to moderate, adverse impacts. New programs and changes in motorboat access in Florida Bay would result in long-term, baywide, moderate to major beneficial impacts.
Wildlife	Effects of the no-action alternative on wildlife, primarily resulting from visitor and operational activities, would be long-term, localized, moderate, beneficial impacts and long-term, moderate, adverse impacts.	The NPS preferred alternative would have short- and long-term, moderate, adverse impacts, and short- and long-term, minor to moderate, beneficial impacts.	Alternative 2 would have short- and long-term, moderate, adverse impacts, and long-term, negligible to minor, beneficial impacts	Alternative 4 would have short- and long-term, minor to moderate, adverse impacts, and short- and long-term, minor to moderate, beneficial impacts.
Fisheries	Long-term impacts on fish and fish habitat under the no-action alternative would be localized, negligible to minor, and adverse, mostly from continued visitor use.	Under the NPS preferred alternative, most adverse impacts on fish and fish habitat would be short and long term, localized, and negligible to minor, mostly from continued visitor activities and during construction. Additionally, there would be long-term, moderate, beneficial impacts on the fisheries because of increased refuge (reduced fishing pressure), more informed/ responsible behavior by boaters, and recovery and restoration of damaged seagrass beds resulting from the establishment of pole/troll zones.	Under alternative 2, adverse impacts on fish and fish habitat would be short and long term, localized, and moderate from continued visitor activities (including continued full access by motorboats to Florida Bay) and from construction.	Under alternative 4, some adverse impacts on fish and fish habitat would be short and long term, localized, and negligible to minor; however, the implementation of alternative 4 would have long-term, moderate benefits for the fisheries in the park due to increased refuge (reduced fishing pressure), more informed/ responsible behavior by boaters, and the recovery and restoration of damaged seagrass beds resulting from the establishment of pole/troll zones
Essential Fish Habitat	Implementing the no-action alternative would not change existing use or management of essential fish habitats and, therefore, would not result in any new impacts. However, there would be the continuation of long-term; minor to moderate, adverse impacts on shallow-water habitats from boat groundings and propeller scarring (other sections in this chapter include more details on specific resource impacts). As described previously, essential fish habitat has specific criteria and categories of impacts. Based on those criteria and categories, there would be a continuation of adverse effects on essential fish habitat under the no-action alternative.	Implementing the NPS preferred alternative would result in long-term, moderate, beneficial impacts on shallow-water habitats. Other sections in this chapter include more details on specific effects on resources. As described previously, essential fish habitat has specific criteria and categories of impacts. Based on those criteria and categories, there would be no adverse effects on essential fish habitat under the NPS preferred alternative.	Implementing alternative 2 would result in long-term, negligible, beneficial impacts on shallow-water habitats. Other sections in this chapter include more details on specific effects on resources. As described previously, essential fish habitat has specific criteria and categories of impacts. Based on those criteria and categories, there would be no adverse effects on essential fish habitat under this alternative.	Implementing alternative 4 would result in long-term, moderate, beneficial impacts on shallow-water habitats. Other sections in this chapter include more details on specific effects on resources. As described previously, essential fish habitat has specific criteria and categories of impacts. Based on those criteria and categories, there would be no adverse effects on essential fish habitat under this alternative.

TABLE 6. SUMMARY OF THE IMPACTS OF THE IMPLEMENTING ALTERNATIVES

ALTERNATIVE 1: NO ACTION		NPS PREFERRED ALTERNATIVE	ALTERNATIVE 2	ALTERNATIVE 4
Federal Special Status Species				
Florida Panther	Continued airboat activity and visitor use of tree islands and the backcountry of the park would continue to result in short-term impacts on Florida panther habitat and behavior. These activities would constitute a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	The NPS preferred alternative would have long-term, minor benefits on panthers, primarily as a result of constraining private airboat use to designated routes within the frontcountry zone in the East Everglades Addition. Continued visitor activities in habitat used by panthers have discountable short-term effects on panther habitat and foraging behavior. Activities implemented under the NPS preferred alternative would constitute a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Continued visitor activities in habitat used by panthers would have discountable short- and long-term consequences on the panther. Actions under alternative 2 would result in long-term, minor, adverse impacts and long-term, minor, beneficial impacts and would constitute a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Alternative 4 would result in long-term, minor, beneficial impacts on panthers and their habitat as a result of constraining private airboat use to designated routes within the frontcountry zone in the East Everglades Addition and from discontinuing commercial airboat operations. Continued visitor activities in habitat used by panthers would have short-term, adverse, effects on panther behavior, namely denning and foraging. Activities implemented under alternative 4 would constitute a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.
Key Largo Woodrat and Key Largo Cotton Mouse	Overall, continued current management would have discountable effects on the Key Largo woodrat and Key Largo cotton mouse as a result of human activities at the ranger station and areas surrounding the Tarpon Basin. This would result in a <i>may affect, not likely to adversely affect</i> finding for the Key Largo woodrat and Key Largo cotton mouse under section 7 of the Endangered Species Act.	Overall, the NPS preferred alternative would have negligible adverse effects on the woodrat and cotton mouse. This would result in a <i>may affect, not likely to adversely affect</i> finding for the woodrat and cotton mouse under section 7 of the Endangered Species Act.	Under alternative 2, some continuing negligible, adverse, impacts on woodrats and cotton mice may occur. This would result in a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Under alternative 4 some continuing, negligible, adverse impacts on woodrats and cotton mice may occur. This would result in a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.
Manatee	Motorboat activity and visitor access in the park’s marine waters would result in the continuation of long-term adverse effects on manatee from boat and propeller strikes and habitat disturbance and would constitute a <i>may affect, likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Motorboat activity and visitor access in the park’s marine waters would result in continued, long-term, minor, adverse effects on the manatee from boat and propeller strikes and habitat degradation. Changes to the management of recreational boating in Florida Bay (more pole/troll zones, restricted motorboat access in places, etc.), combined with a boater safety and resource protection plan, improved boater education, increased on-the-water law enforcement, and seagrass restoration, would result in reduced boat strikes, decreased underwater noise from motorboats, improved habitat, and moderate benefits. This would constitute a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Continued motorboat activity and visitor access in the park’s marine waters would result in long-term, moderate, adverse effects on the manatee from boat and propeller strikes and habitat disturbance. Improved boater education, increased on-the-water law enforcement, seagrass restoration, and a manatee management plan would result in reduced boat strikes and improved habitat and create minor benefits. This would constitute a <i>may affect, likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Motorboat activity and visitor access in the park’s marine waters would result in continued, long-term, minor, adverse effects on the manatee from boat and propeller strikes and habitat degradation. Changes to the management of recreational boating in Florida Bay (pole/troll zones, restricted motorboat access in places, etc.), combined with manatee management plan, improved boater education, increased on-the-water law enforcement, seagrass restoration, and boating restrictions along the newly established Alternative Wilderness Waterway, would result in reduced boat strikes, decreased underwater noise from motorboats, improved habitat, and moderate benefits. This would constitute a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.
Bottlenose Dolphin	Continued human and boat access in the park’s marine waters would present minimal continued hazards to bottlenose dolphins in bays and estuaries in the park, resulting in a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	The NPS preferred alternative would reduce impacts on the bottlenose dolphin, their food sources, and their habitats, producing long-term, minor beneficial impacts—a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Alternative 2 would have long-term negligible beneficial effects on bottlenose dolphin, a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Alternative 4 would reduce impacts on bottlenose dolphins, resulting in long-term, minor, beneficial impacts, equating to a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.
Wood Stork	Any adverse effects from the no-action alternative on wood storks would be continued, long term, minor, and adverse as a result of visitor activities. This would constitute a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	The NPS preferred alternative would have localized, long-term, minor beneficial effects on wood storks from reduced potential for human disturbance. This would constitute a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Any adverse effects from alternative 2 on wood storks would be continued, long term, minor, and adverse as a result of visitor activities. This would still constitute a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Alternative 4 would have long-term, minor to moderate, beneficial effects on wood storks from reduced potential for human disturbance on roosting, nesting, and foraging habitat. This would constitute a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.
Piping Plover and Roseate Tern	The no-action alternative would have both beneficial and adverse continuing effects on piping plovers, roseate terns, and critical habitat for piping plovers. Any adverse impacts from the no-action alternative would be minor and insignificant, resulting in a <i>may affect, not likely to adversely affect</i> finding for the piping plover and roseate tern under section 7 of the Endangered Species Act.	Overall, the NPS preferred alternative would benefit the piping plover, roseate tern, and piping plover critical habitat with limited, localized, minor benefits compared to continued current management. This would result in a <i>may affect, not likely to adversely affect</i> finding for the piping plover and roseate tern under section 7 of the Endangered Species Act.	Overall, alternative 2 would contribute long-term, minor, adverse impacts to piping plovers, roseate terns, and critical habitat for piping plovers. This would result in a <i>may affect, not likely to adversely affect</i> finding for the piping plover and roseate tern under section 7 of the Endangered Species Act.	Overall alternative 4 would benefit the piping plover, roseate tern, and critical habitat for the piping plover, with limited minor benefits compared to continuing current management. This would result in a <i>may affect, not likely to adversely affect</i> finding for the piping plover and roseate tern under section 7 of the Endangered Species Act.

TABLE 6. SUMMARY OF THE IMPACTS OF THE IMPLEMENTING ALTERNATIVES

	ALTERNATIVE 1: NO ACTION	NPS PREFERRED ALTERNATIVE	ALTERNATIVE 2	ALTERNATIVE 4
Everglade Snail Kite	The no-action alternative would have a continued minor adverse effect on snail kites from airboating in the East Everglades Addition. This would constitute a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Overall, the NPS preferred alternative would have minor adverse and beneficial impacts on the Everglade snail kite. This would result in a <i>may affect, not likely to adversely affect</i> finding for the Everglade snail kite under section 7 of the Endangered Species Act	Alternative 2 would have long-term, minor, adverse and beneficial effects on the Everglade snail kites in the East Everglades Addition resulting in a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Alternative 4 would have long-term beneficial effects on Everglade snail kite from changes in airboat use in the East Everglades Addition. This would result in a <i>may affect, not likely to adversely affect</i> finding for the Everglade snail kite under section 7 of the Endangered Species Act.
Eastern Indigo Snake	Continued visitor activities in habitat used by the eastern indigo snake under the no-action alternative would have short-term, minor, adverse effects that would constitute a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	The NPS preferred alternative would have long-term, minor, beneficial effects on the eastern indigo snake populations, primarily as a result of changes in private airboat use in the East Everglades Addition. Continued visitor activities in habitat used by the eastern indigo snake and proposed construction activities would have short-term, minor, adverse effects. Activities implemented under the NPS preferred alternative would constitute a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Alternative 2 would have short- and long-term, minor (mostly continuing), adverse effects on indigo snakes. Activities implemented under alternative 2 would constitute a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Alternative 4 would have long-term, moderate beneficial effects on eastern indigo snake populations primarily as a result of changes in private airboat use and discontinuation of commercial airboat use in the East Everglades Addition. Continued visitor activities in habitat used by the eastern indigo snake and proposed construction activities would have short-term minor adverse effects on the snake and its habitat. Activities implemented under alternative 4 would constitute a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.
American Alligator	The park would continue to protect American alligators and their habitat, a long-term beneficial impact. However, visitor and management activities in alligator habitat under the no-action alternative would have minor, adverse effects that would constitute a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Overall, the NPS preferred alternative actions would improve protection of American alligators and their habitat. Visitor and management activities in alligator habitat under the NPS preferred alternative would have short- and long-term minor adverse effects that would constitute a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Overall, the park would continue to protect American alligators and their habitat. However, visitor and management activities in alligator habitat under alternative 2 would have minor, adverse effects, constituting a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Overall, the park would continue to protect American crocodiles and their habitat. However, visitor access to and activities in habitat used by the American crocodile under alternative 4 would have long-term, negligible, adverse effects and long-term minor benefits that would constitute a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.
American Crocodile	The park would continue to provide protection of American crocodiles and their habitat, although some continuing minor adverse effects from visitor and administrative uses would be expected. Impacts from the no-action alternative would constitute a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Under the NPS preferred alternative the park would continue to protect American crocodiles and their habitat and would reduce the likelihood of human-related disturbance in crocodile habitat. Any adverse minor impacts would be insignificant, resulting in a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	The park would continue to provide protection of American crocodiles and their habitat, although some minor adverse effects from visitor and administrative uses would be expected. Impacts from alternative 2 would constitute a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Overall, the park would continue to protect American crocodiles and their habitat. However, visitor access to and activities in habitat used by the American crocodile under alternative 4 would have long-term, negligible, adverse effects and long-term minor benefits that would constitute a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.
Sea Turtles	The no-action alternative would benefit sea turtles through habitat protection, and it would also result in some continued long-term, minor, adverse effects from human activities (primarily motorboating). This alternative would result in a <i>may affect, likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	The NPS preferred alternative would reduce impacts on sea turtles and their habitats, resulting in long-term, minor benefits and a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Alternative 2 would benefit sea turtles through habitat protection, and it would also result in some continued, long-term, minor, adverse effects from human activities (primarily motorboating). This alternative would result in a <i>may affect, likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Alternative 4 would reduce impacts to sea turtles and their habitats, producing localized, long-term, minor benefits and a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.
Smalltooth Sawfish	The no-action alternative would result in localized and long-term, minor, adverse effects on the smalltooth sawfish—a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	The NPS preferred alternative would result in long-term, minor, beneficial effects to the smalltooth sawfish—a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Alternative 2 would result in long-term, minor, adverse and beneficial impacts on the smalltooth sawfish and its habitat and would result in a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.	Alternative 4 would result in long-term, minor, beneficial effects on the smalltooth sawfish—a <i>may affect, not likely to adversely affect</i> finding under section 7 of the Endangered Species Act.
Natural Soundscape	The no-action alternative would have localized, long-term, minor to moderate, adverse impacts on the soundscape at Everglades National Park resulting from noise associated with human activities and vehicle operations (such as automobiles, buses, motorboats, airboats, or aircraft).	The NPS preferred alternative would have long-term, local, minor to moderate, adverse, as well as minor to moderate beneficial impacts on the natural soundscape at Everglades National Park resulting from noise associated with human activities and vehicle operations (e.g., automobiles, buses, motorboats, airboats, aircraft).	Alternative 2 would have long-term, local, minor to moderate, adverse as well as negligible to minor, beneficial impacts on the natural soundscape at Everglades National Park resulting from noise associated with human activities and vehicle operations (e.g., automobiles, buses, motorboats, airboats, and aircraft).	Alternative 4 would have long-term, local, minor to moderate, adverse as well as minor to moderate, beneficial impacts on the natural soundscape at Everglades National Park resulting from noise associated with human activities and vehicle operations (e.g., automobiles, buses, motorboats, airboats, and aircraft).

TABLE 6. SUMMARY OF THE IMPACTS OF THE IMPLEMENTING ALTERNATIVES

ALTERNATIVE 1: NO ACTION		NPS PREFERRED ALTERNATIVE	ALTERNATIVE 2	ALTERNATIVE 4
Wilderness Character	Management actions and visitor use would have a variety of impacts on wilderness character under the no-action alternative. For both the main portion of the wilderness and the East Everglades Addition eligible wilderness, the alternative would have a long-term, minor adverse impact primarily due to continuing motorboat and airboat use, and resource management/research activities in the areas. In the Florida Bay submerged wilderness, adverse impacts to wilderness character would be moderate to major, and long term due to continuing scarring of the water bottom.	Management actions and the wilderness proposal forecast Everglades Addition in the NPS preferred alternative would have a variety of impacts on wilderness character. For the main portion of the existing wilderness, excluding Florida Bay, the alternative would have a minor, long-term, adverse impact due to the development and use of several chickees. In the Florida Bay submerged wilderness, the preferred alternative would have a moderate, long-term, beneficial impact to wilderness character due to the pole/troll zones and the mandatory boat education program/permit system. In the East Everglades Addition, the NPS preferred alternative would have a major, long-term (in perpetuity), beneficial impact on wilderness character, primarily due designating wilderness over a large area and eventually eliminating private airboats in the area.	Under alternative 2, management actions and the wilderness proposal for the East Everglades Addition would have a variety of impacts on wilderness character. For the main portion of the wilderness, excluding Florida Bay, the alternative would have a minor, long-term, adverse impact primarily due to the development and use of several chickees. In the Florida Bay submerged wilderness, alternative 2 would have a minor to moderate, long-term, beneficial impact to wilderness character primarily due to management actions that would reduce bottom scarring. In the East Everglades Addition, alternative 2 would have a major, long-term, beneficial impact on wilderness character, primarily due to the designation of wilderness over a large area.	Under alternative 4, management actions and the wilderness proposal for the East Everglades Addition would have a variety of impacts on wilderness character. For the main portion of the wilderness, excluding Florida Bay, the alternative would have a minor, long-term, adverse impact due to the development and use of several chickees. In the Florida Bay submerged wilderness, the preferred alternative would have a moderate, long-term, beneficial impact to wilderness character due to the pole/troll zones and the mandatory boat education program/permit system. In the East Everglades Addition, alternative 4 would have a major, long-term (in perpetuity), beneficial (in perpetuity) impact on wilderness character, primarily due to the designation of wilderness over a large area and eventual elimination of private airboats in the area.
Cultural Resources				
Archeological Resources	Implementation of the no-action alternative would have permanent, negligible to minor, adverse impacts on the park’s prehistoric and historic archeological resources listed in or eligible for listing in the National Register of Historic Places.	Implementation of actions proposed by the NPS preferred alternative would have long-term beneficial impacts, and permanent, negligible to minor, adverse impacts on the park’s prehistoric and historic archeological resources listed in or eligible for listing in the National Register of Historic Places. Section 106 Summary —After applying the Advisory Council on Historic Preservation’s criteria of adverse effect (36 CFR 800.5, <i>Assessment of Adverse Effects</i>), the National Park Service concludes that implementing the NPS preferred alternative would result in <i>no adverse effect</i> on archeological resources.	Implementation of actions proposed by alternative 2 would have long-term beneficial impacts, and permanent, negligible to minor, adverse impacts on the park’s prehistoric and historic archeological resources listed in or eligible for listing in the National Register of Historic Places. Section 106 Summary —After applying the Advisory Council on Historic Preservation’s criteria of adverse effect (36 CFR 800.5, <i>Assessment of Adverse Effects</i>), the National Park Service concludes that implementing alternative 2 would result in <i>no adverse effect</i> on archeological resources.	Implementation of actions proposed in alternative 4 would have long-term beneficial impacts, and permanent, negligible to minor, adverse impacts on the park’s prehistoric and historic archeological resources listed in or eligible for listing in the National Register of Historic Places. Section 106 Summary —After applying the Advisory Council on Historic Preservation’s criteria of adverse effect (36 CFR 800.5, <i>Assessment of Adverse Effects</i>), the National Park Service concludes that implementing alternative 4 would result in no adverse effect on archeological resources.
Historic Structures, Sites, and Districts	Implementation of the no-action alternative would have long-term beneficial impacts, and long-term or permanent, negligible to minor, adverse impacts on the park’s historic structures, sites, and districts listed in or eligible for listing in the National Register of Historic Places.	Implementation of actions proposed by the NPS preferred alternative would result in long-term beneficial impacts, and long-term or permanent, negligible to minor, adverse impacts on the park’s historic structures, sites, and districts listed in or eligible for listing in the National Register of Historic Places. Section 106 Summary —After applying the Advisory Council on Historic Preservation’s criteria of adverse effect (36 CFR 800.5, <i>Assessment of Adverse Effects</i>), the National Park Service concludes that implementing the NPS preferred alternative would result in <i>no adverse effect</i> on historic structures, sites, and districts.	Implementation of actions proposed by alternative 2 would result in long-term beneficial impacts, and long-term or permanent, negligible to minor, adverse impacts on the park’s historic structures, sites, and districts listed in or eligible for listing in the National Register of Historic Places. Section 106 Summary —After applying the Advisory Council on Historic Preservation’s criteria of adverse effect (36 CFR 800.5, <i>Assessment of Adverse Effects</i>), the National Park Service concludes that implementing alternative 2 would result in <i>no adverse effect</i> on historic structures, sites and districts.	Implementation of actions proposed by alternative 4 would have long-term beneficial impacts, and long-term or permanent, minor to major , adverse impacts on the park’s historic structures, sites, and districts listed in or eligible for listing in the National Register of Historic Places. Section 106 Summary —After applying the Advisory Council on Historic Preservation’s criteria of adverse effect (36 CFR 800.5, <i>Assessment of Adverse Effects</i>), the National Park Service concludes that implementing alternative 4 could result in determinations of <i>no adverse effect</i> on historic structures, sites, and districts slated for preservation, and <i>adverse effect</i> on historic structures, sites and districts that may possibly be removed or substantially altered.

TABLE 6. SUMMARY OF THE IMPACTS OF THE IMPLEMENTING ALTERNATIVES

ALTERNATIVE 1: NO ACTION		NPS PREFERRED ALTERNATIVE	ALTERNATIVE 2	ALTERNATIVE 4
Cultural Landscapes	Implementation of the no-action alternative would have long-term beneficial impacts and negligible to minor adverse impacts on the park’s cultural landscapes.	Implementation of actions proposed in the NPS preferred alternative would have long-term beneficial impacts, and long-term or permanent, negligible to minor, adverse impacts on the park’s cultural landscapes. Section 106 Summary —After applying the Advisory Council on Historic Preservation’s criteria of adverse effect (36 CFR 800.5, Assessment of Adverse Effects), the National Park Service concludes that implementing the NPS preferred alternative would result in <i>no adverse effect</i> on cultural landscapes.	Implementation of actions proposed in alternative 2 would have long-term beneficial impacts, and long-term or permanent, negligible to minor, adverse impacts on the park’s cultural landscapes. Section 106 Summary —After applying the Advisory Council on Historic Preservation’s criteria of adverse effect (36 CFR 800.5, Assessment of Adverse Effects), the National Park Service concludes that implementing alternative 2 would result in <i>no adverse effect</i> on cultural landscapes.	Implementation of actions proposed in alternative 4 would have long-term beneficial impacts, and long-term or permanent, minor to major, adverse impacts on the park’s cultural landscapes. Section 106 Summary —After applying the Advisory Council on Historic Preservation’s criteria of adverse effect (36 CFR 800.5, Assessment of Adverse Effects), the National Park Service concludes that implementing alternative 4 would result in <i>no adverse effect</i> on cultural landscapes slated for preservation, and <i>adverse effect</i> on cultural landscapes that have structures and character-defining features that may be removed or substantially altered.
Ethnographic Resources	Implementation of the no-action alternative would have long-term beneficial impacts, and long-term or permanent, negligible to minor, adverse impacts on the park’s ethnographic resources.	Implementation of actions proposed by the NPS preferred alternative would have long-term beneficial impacts, and long-term or permanent, negligible to minor, adverse impacts on the park’s ethnographic resources. Section 106 Summary —After applying the Advisory Council on Historic Preservation’s criteria of adverse effect (36 CFR 800.5, Assessment of Adverse Effects), the National Park Service concludes that implementing the NPS preferred alternative would result in <i>no adverse effect</i> on ethnographic resources.	Implementation of actions proposed by alternative 2 would have long-term beneficial impacts, and long-term or permanent, negligible to minor, adverse impacts on the park’s ethnographic resources. Section 106 Summary —After applying the Advisory Council on Historic Preservation’s criteria of adverse effect (36 CFR 800.5, Assessment of Adverse Effects), the National Park Service concludes that implementing alternative 2 would result in <i>no adverse effect</i> on ethnographic resources.	Implementation of actions proposed in alternative 4 would have long-term beneficial impacts, and long-term or permanent, negligible to minor, adverse impacts on the park’s ethnographic resources. Section 106 Summary —After applying the Advisory Council on Historic Preservation’s criteria of adverse effect (36 CFR 800.5, Assessment of Adverse Effects), the National Park Service concludes that implementing alternative 4 would result in <i>no adverse effect</i> on ethnographic resources.
Museum Collections	Implementation of the no-action alternative would have long-term or permanent, minor to moderate, adverse impacts on museum collections.	Implementation of actions proposed by the NPS preferred alternative would have long-term beneficial and short-term negligible impacts on museum collections.	Implementation of actions proposed in alternative 2 would have long-term beneficial and short-term, negligible impacts on museum collections.	Implementation of actions proposed in alternative 4 would have long-term beneficial and short-term negligible impacts on museum collections.
Other Topics				
Visitor Use	Maintaining the current access; scenic resources; range of visitor opportunities; experience; and recreation-oriented facilities, including those associated with implementation of the Flamingo Commercial Services Plan, would have a long-term, minor to moderate impact in promoting increased visitor use, although construction activities would have short-term, limited, adverse impacts. To the extent that increased use could be accommodated while achieving the park’s other environmental, ecological and cultural resource protection and restoration goals, implementation of this alternative would represent a long-term, minor to moderate, beneficial impact on visitor use.	Increases in visitor opportunities related to additional visitor services and recreation-oriented facilities, off-site information and education opportunities, and access under the NPS preferred alternative would have a long-term, minor, beneficial impact on visitor use. Implementation of boating management actions in Florida Bay (e.g., pole/troll zones) would result in short- and long-term changes in boating use, including the type and distribution and potentially the level of use. Establishing concession arrangements with commercial airboat operators might result in long-term changes in visitor use, but the timing, magnitude, and increase or decrease in visitation are uncertain. The net effect is anticipated to be a minor to moderate increase in visitor use. To the extent that increased use can be accommodated while achieving the park’s other environmental, ecological and cultural resource protection and restoration goals, implementation of this alternative would represent a long-term, minor to moderate, beneficial impact.	Increases in visitor opportunities related to additional visitor services and recreation-oriented facilities, off-site information and education opportunities, and access under the alternative 2 would have a long-term, minor, beneficial impact on visitor use. Alternative 2 would open Little Madeira Bay and Joe Bay to fishing and to visitors, providing an opportunity to explore a new area and increasing use. Boating use in Florida Bay would remain similar to current trends and patterns. Establishing concession arrangements with commercial airboat operators might result in long-term changes in visitor use, but the timing, magnitude, and increase or decrease in visitation are uncertain. The net effect is anticipated to be a minor to moderate increase in visitor use. To the extent that increased use could be accommodated while achieving the park’s other environmental, ecological and cultural resource protection and restoration goals, implementation of this alternative would represent a long-term, minor to moderate, beneficial impact.	Increases in visitor opportunities related to additional visitor services and recreation-oriented facilities, off-site information and education opportunities, and access under alternative 4 would have a long-term, minor, beneficial impact on visitor use. Implementation of boating management in Florida Bay would result in short- and long-term changes in boating use, including the type and distribution and potentially the level of use, with an anticipated net effect of less boating than under the no-action alternative. Despite elimination of commercial airboat tours in the park, the net effect of alternative 4 is anticipated to be a minor to moderate increase in visitor use compared to the no-action alternative because commercial airboat patrons would remain uncouneted in the no-action alternative. To the extent that increased use could be accommodated while achieving the park’s other environmental, ecological and cultural resource protection and restoration goals, implementation of this alternative would represent a long-term, minor to moderate, beneficial impact.
Visitor Experience and Opportunities	The no-action alternative would result in the continuation of long-term, minor to moderate, adverse impacts as well as long-term, minor to moderate, beneficial impacts. The other plans and projects in and around the park collectively would have a long-term, minor to moderate, beneficial impact on the visitor experience at the park.	The NPS preferred alternative would have long-term, minor to moderate, adverse impacts as well as long-term, moderate to major, beneficial impacts.	Alternative 2 would have long-term, minor to moderate, adverse impacts as well as long-term, moderate to major, beneficial impacts.	Alternative 4 would have long-term, moderate to major, adverse impacts as well as long-term, moderate to major, beneficial impacts.

TABLE 6. SUMMARY OF THE IMPACTS OF THE IMPLEMENTING ALTERNATIVES

	ALTERNATIVE 1: NO ACTION	NPS PREFERRED ALTERNATIVE	ALTERNATIVE 2	ALTERNATIVE 4
Regional Socioeconomic Environment	The economic and social effects of the no-action alternative include minor, short- and long-term economic benefits and negligible indeterminate effects on population growth and demands on community services and facilities. Long-term consequences on attitudes and lifestyle are indeterminate, but in general more likely to be adverse than beneficial.	The economic effects of the NPS preferred alternative would include negligible short-term and negligible to minor long-term economic benefits, the latter due to increased visitation expected under this alternative. Short- and long-term consequences include a negligible contribution to population growth and demands on community infrastructure and services and indeterminate consequences on lifestyles and attitudes.	The economic and social effects of implementing alternative 2 would include negligible to minor short-term and minor long-term economic benefits comparable to those under the no-action alternative. Short- and long-term effects on lifestyles and attitudes would be indeterminate. Long-term social consequences would include a negligible contribution to long-term population growth and demands on community infrastructure and services.	The economic and social effects of alternative 4 include negligible to minor short- and long-term economic benefits due to the elimination of commercial airboating. Long-term social consequences would include a negligible to minor contribution to long-term population growth and demands on community infrastructure and services.
Park Operations	The park continues to operate well, however, continuation of the no-action alternative would have beneficial and adverse effects on park operations. Overall, the no-action alternative would have long-term, minor, adverse impacts on NPS operations.	As elements of the NPS preferred alternative are implemented the park would be expected to function more effectively than it would under the no-action alternative. The NPS preferred alternative would result in long-term, moderate, beneficial impacts on park operations.	As elements of alternative 2 are implemented, the park would be expected to function more effectively than it would under the no-action alternative. Alternative 2 would result in long-term, minor to moderate, beneficial impacts on park operations.	As elements of Alternative 4 are implemented the park would be expected to function more effectively than it would under the no-action alternative. The NPS preferred alternative would result in long-term, moderate, beneficial impacts on park operations.

Everglades National Park

Preferred Alternative Pole/Troll Distance Analysis

National Park Service
U.S. Department of the Interior



Legend

Distance Intervals

0 - 0.5 Miles, 101,748 ac., 77%

0.51 - 1 Mile, 23,688 ac., 18%

1.01 - 1.5 Miles, 4,997 ac. 4%

> 1.5 Miles, 1,480 ac., 1%

Backcountry Zone, 2,138 ac., 0.5%

Idle Speed Zone, 880 ac., 0.2%

Pole/Troll Zone, 131,392 ac., 33%

2 Zone Identification Number

Flamingo Boat Launch

Channels

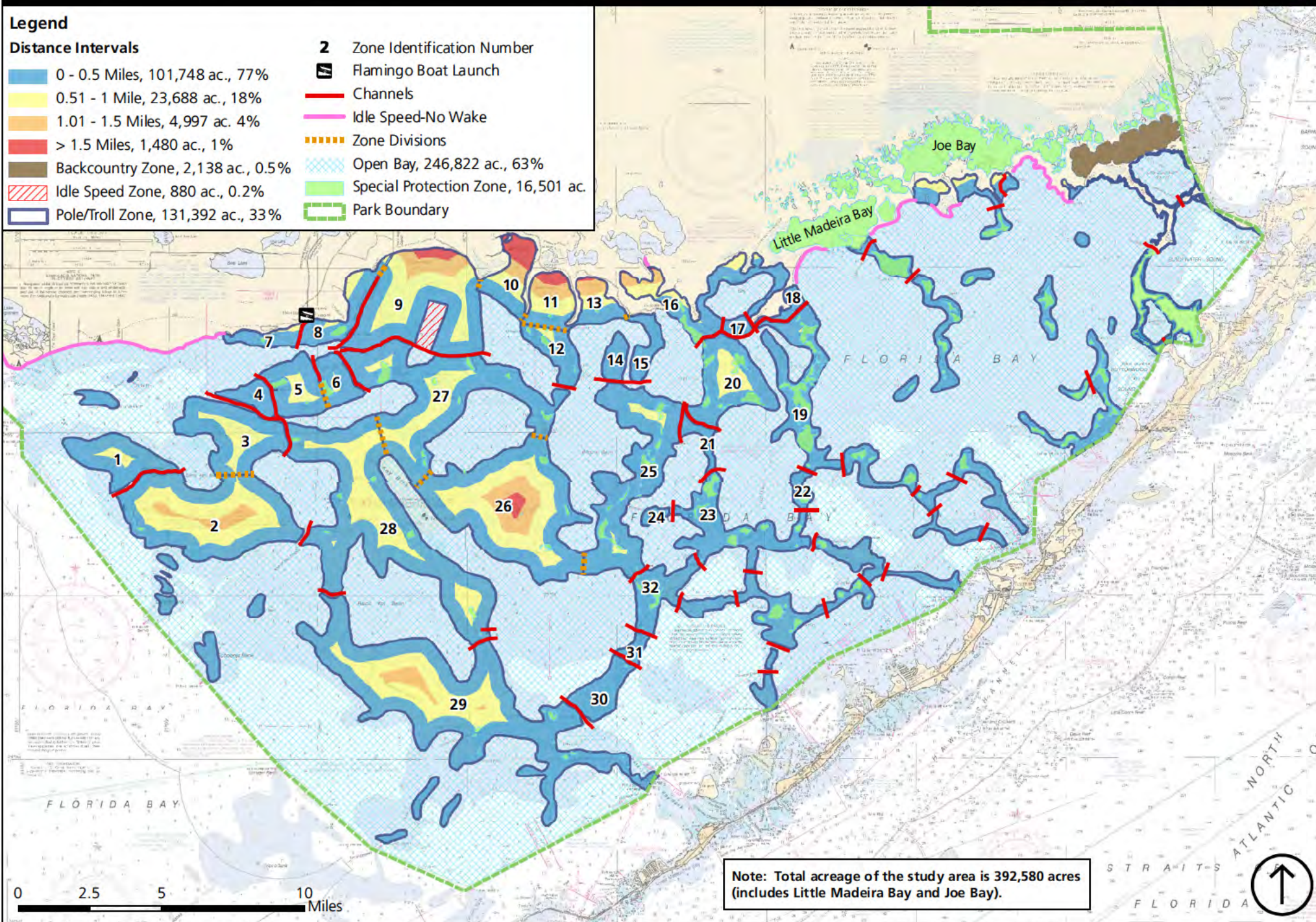
Idle Speed-No Wake

Zone Divisions

Open Bay, 246,822 ac., 63%

Special Protection Zone, 16,501 ac.

Park Boundary



Everglades National Park

Preferred Alternative Pole/Troll Vessel Density Analysis Florida

National Park Service
U.S. Department of the Interior



Legend

Number of Vessels per Square Mile

- 0-5 Vessels per Square Mile
- 5.1-25 Vessels per Square Mile
- 25.1-100 Vessels per Square Mile
- Aerial Vessels (Small)

Zone Identification Number

Flamingo Boat Launch

Idle Speed-No Wake

Zone Divisions

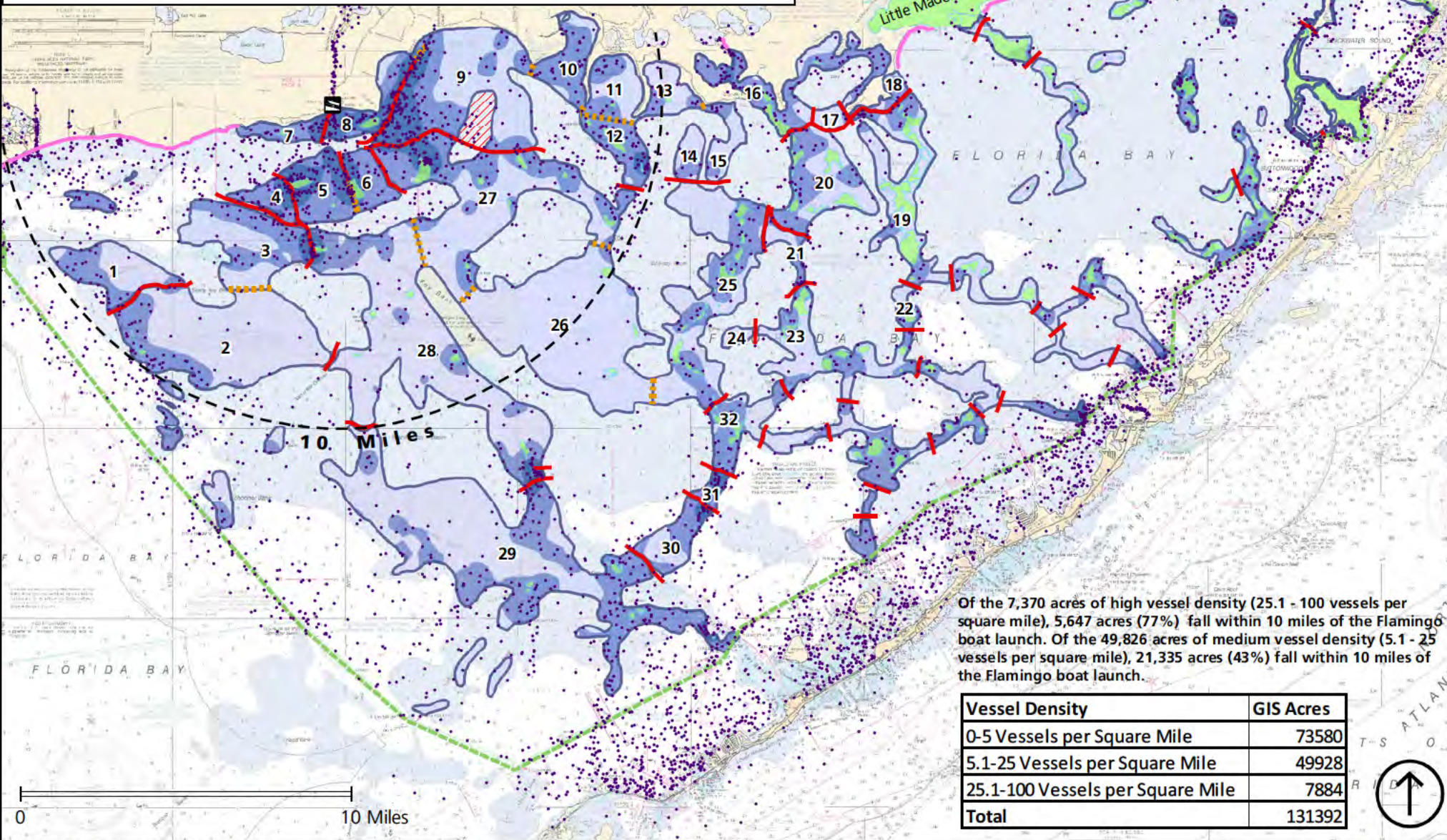
Special Protection Zone

Backcountry Zone

Idle Speed Zone

Pole/Troll Zone

Park Boundary



Of the 7,370 acres of high vessel density (25.1 - 100 vessels per square mile), 5,647 acres (77%) fall within 10 miles of the Flamingo boat launch. Of the 49,826 acres of medium vessel density (5.1 - 25 vessels per square mile), 21,335 acres (43%) fall within 10 miles of the Flamingo boat launch.

Vessel Density	GIS Acres
0-5 Vessels per Square Mile	73580
5.1-25 Vessels per Square Mile	49928
25.1-100 Vessels per Square Mile	7884
Total	131392

Everglades National Park

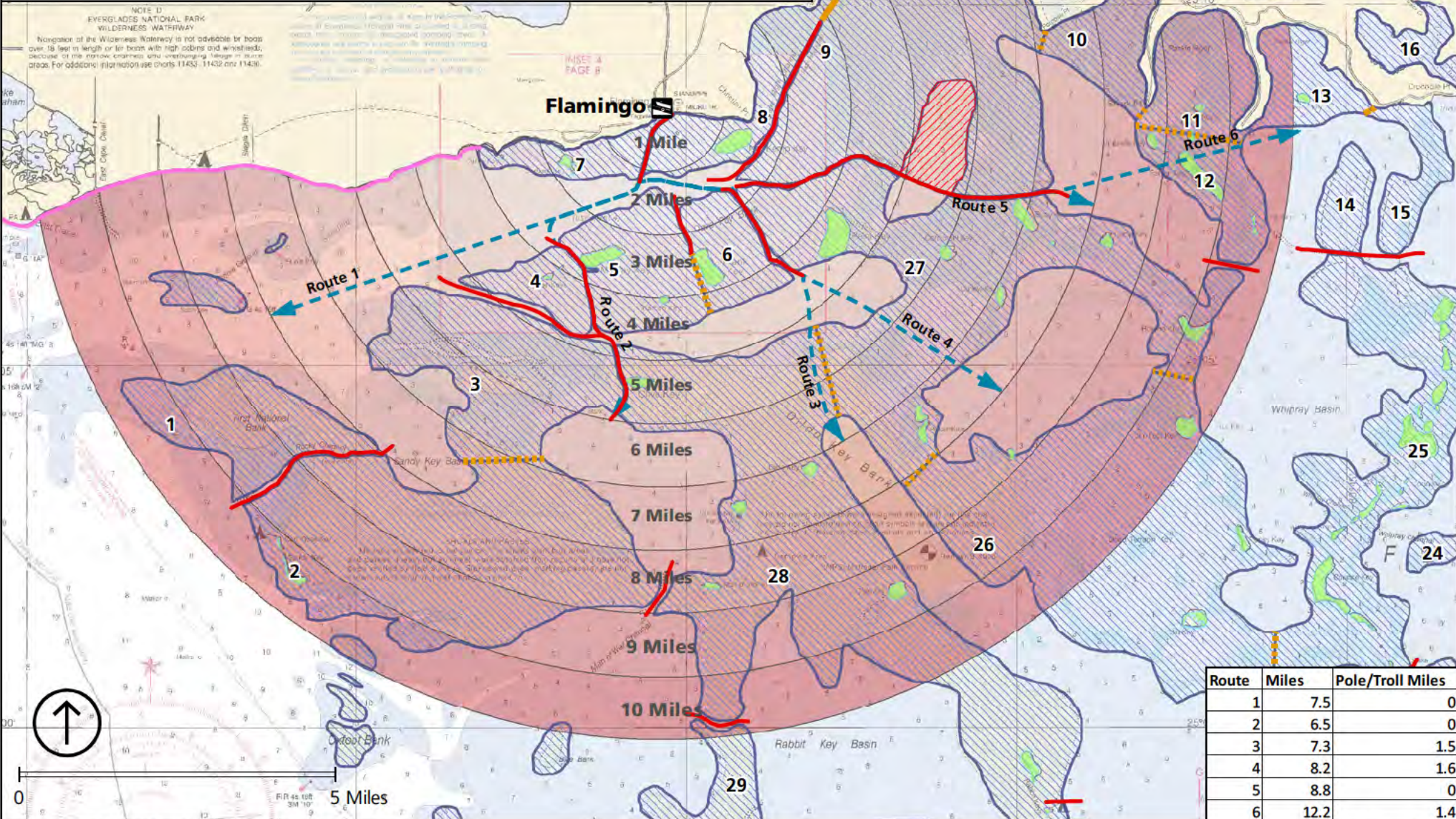
Preferred Alternative Pole/Troll Analysis: Flamingo Area Florida

National Park Service
U.S. Department of the Interior



Legend

- Flamingo Boat Launch
- Potential Boat Routes
- Pole/Troll Zone (PTZ)
- Idle Speed Zone
- Channels
- Idle Speed-No Wake
- Zone Divisions
- Park Boundary
- Special Protection Zone
- Distance from Flamingo (miles)**
 - 1
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7
 - 8
 - 9
 - 10



Everglades National Park

Alternative 4 Pole/Troll Distance Analysis

National Park Service
U.S. Department of the Interior

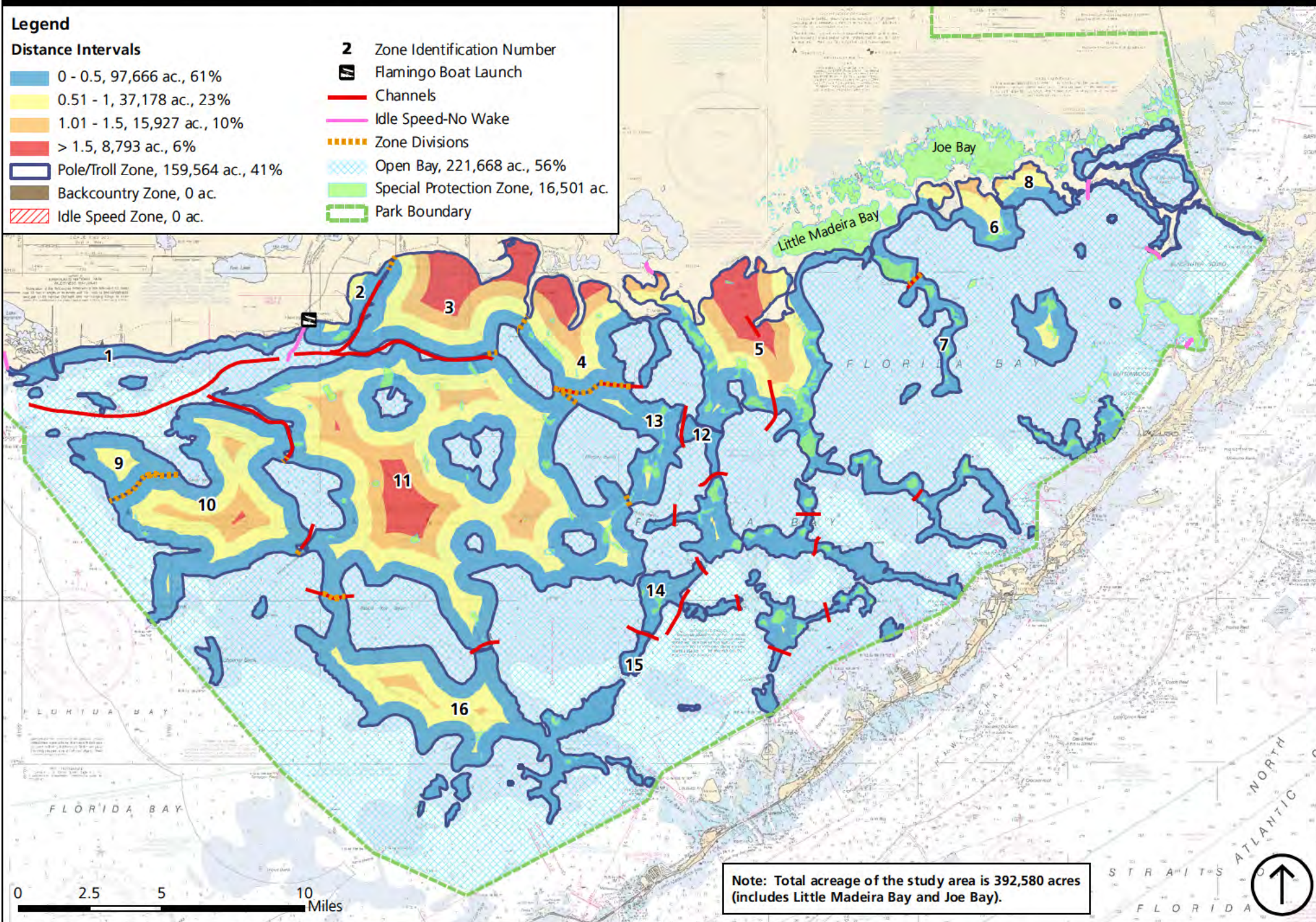


Legend

Distance Intervals

- 0 - 0.5, 97,666 ac., 61%
- 0.51 - 1, 37,178 ac., 23%
- 1.01 - 1.5, 15,927 ac., 10%
- > 1.5, 8,793 ac., 6%
- Pole/Troll Zone, 159,564 ac., 41%
- Backcountry Zone, 0 ac.
- Idle Speed Zone, 0 ac.

- 2 Zone Identification Number
- Flamingo Boat Launch
- Channels
- Idle Speed-No Wake
- Zone Divisions
- Open Bay, 221,668 ac., 56%
- Special Protection Zone, 16,501 ac.
- Park Boundary



Everglades National Park

Alternative 4 Pole/Troll Vessel Density Analysis Florida

National Park Service
U.S. Department of the Interior



Legend

Number of Vessels per Square Mile

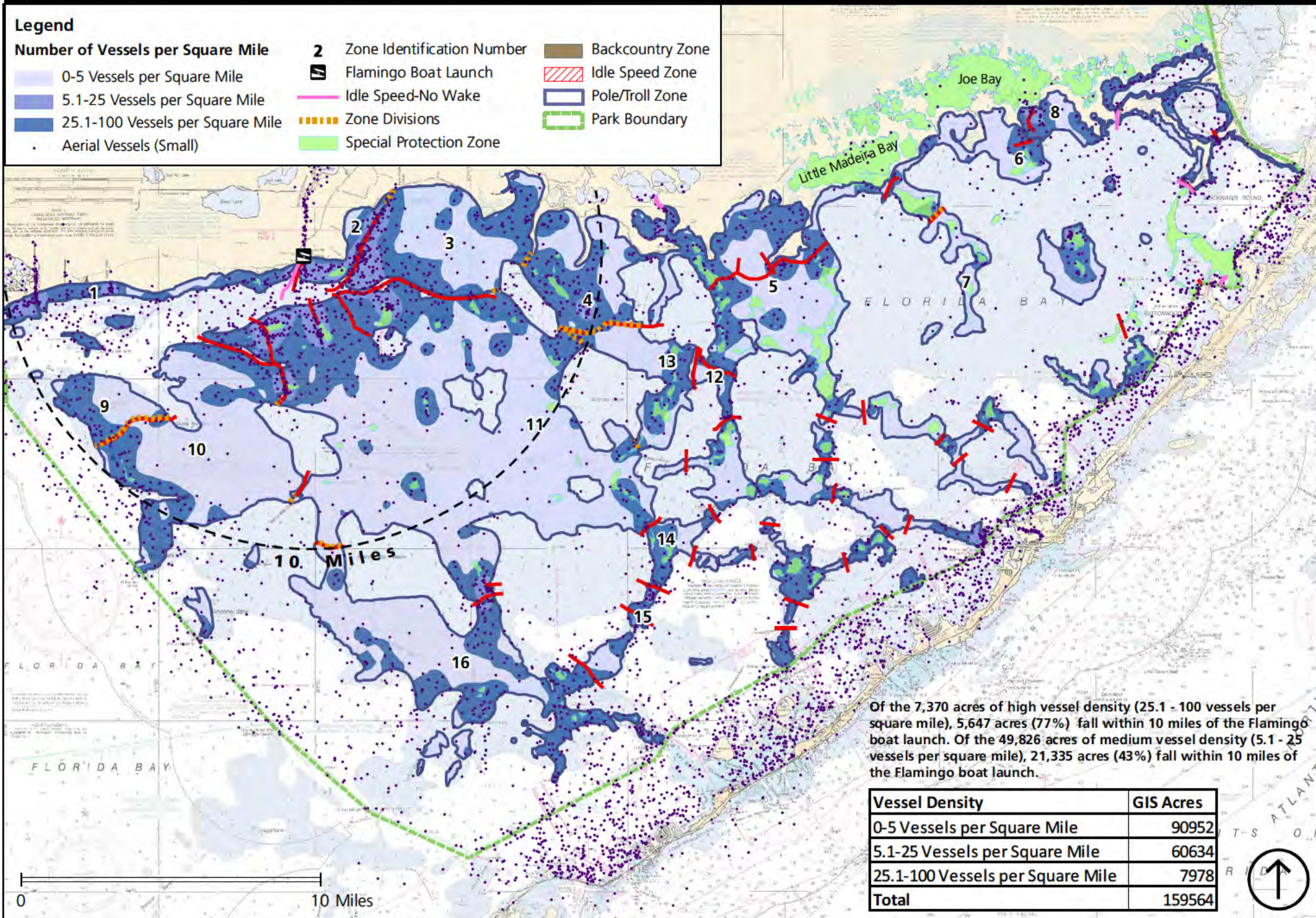
- 0-5 Vessels per Square Mile
- 5.1-25 Vessels per Square Mile
- 25.1-100 Vessels per Square Mile
- Aerial Vessels (Small)

Zone Identification Number

- Flamingo Boat Launch
- Idle Speed-No Wake
- Zone Divisions
- Special Protection Zone

Backcountry Zone

- Idle Speed Zone
- Pole/Troll Zone
- Park Boundary



Everglades National Park

Alternative 4 Pole/Troll Analysis: Flamingo Area

Florida

National Park Service
U.S. Department of the Interior



Legend

- Flamingo Boat Launch
- Potential Boat Routes
- Pole/Troll Zone (PTZ)
- Channels
- Idle Speed-No Wake
- Zone Divisions
- Park Boundary
- Special Protection Zone
- Distance from Flamingo (miles)**
 - 1
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7
 - 8
 - 9
 - 10

