EVERGLADES NATIONAL PARK

FLAMINGO COMMERCIAL SERVICES PLAN / ENVIRONMENTAL ASSESSMENT

PREFERRED ALTERNATIVE (ALTERNATIVE D)

INTRODUCTION

The Draft Flamingo Commercial Services Plan/Environmental Assessment (Draft Plan/EA) was released November 17, 2007, initiating a public comment period that lasted until January 25, 2008. During this review process, three public meetings were held (December 3, 2007 in Dania Beach, FL; December 4, 2007 in Miami, FL; and on December 13, 2007 in Key Largo, FL) and an additional meeting was held in Naples, FL on January 18, 2008, to gather additional input and public comment. Approximately 120 people attended these meetings. In addition, the park received 603 separate written correspondences by mail and e-mail during the public comment period from individuals, organizations and public agencies, of which 504 were form letters. A total of 2,407 comments were contained in these correspondences. The comments largely addressed support for alternatives B and/or C, with most favoring alternative C. Most of the comments also focused on developing facilities that incorporated sustainable and ecological design principles.

The following alternative, referred to as Alternative D, combines elements of Alternatives B and C from the Draft Plan and is the preferred alternative that reflects the National Park Service's consideration of public comment and additional review by park staff. Once finalized, the preferred alternative will be incorporated into the General Management Plan (GMP) planning effort now underway.

ELEMENTS COMMON TO ALL ALTERNATIVES

The elements common to all alternatives outlined in the Draft Plan would remain the same for the preferred alternative. These include the following:

- Demolition of the lodge buildings and cottages
- Restoration to natural conditions previously disturbed areas within the Flamingo developed area that are no longer needed for facilities
- Maintenance of the marina area including the fueling stations, marina basins and marina store
- Preservation of the historically significant Mission 66 visitor center and service station
- Reconstruction of the amphitheater
- Replacement of hurricane-damaged facilities (employee housing, concessioner housing, maintenance facilities, and backcountry campsites)
- Incorporation of 2004 Florida Building Code requirements and design to address effects on an area highly susceptible to major weather events (e.g., hurricanes) and vulnerability to climate change (e.g., sea level rise)
- Incorporation of Architectural Barriers Act Accessibility Standards and Americans With Disabilities Act design and accessibility requirements
- Use of integrated pest management (IPM) and sustainable maintenance practices
- Incorporation of sustainable design principles

PREFERRED ALTERNATIVE (ALTERNATIVE D)

The preferred alternative, Alternative D, consists of a combination of elements from Alternatives B and C of the Draft Plan/EA, and takes into consideration both public input and the original purpose, need, and objectives of the Commercial Services Plan. Pages 4 through 6 provide an overview of the elements that make up the preferred alternative while Table 1: *Overview of Preferred Alternative Elements* (page 15) provides a full detailed description. Table 1 also includes references linking each preferred alternative element back to its origin in the Draft Plan, citing from which alternative (A, B and/or C) it was derived. Table 2: *Summary of Environmental Consequences for the Preferred Alternative* (page 21) describes the environmental impacts of the preferred alternative. A comparison of the original Draft Plan alternatives can be found within Chapter 2 – Alternatives in the "Draft Flamingo Commercial Services Plan/Environmental Assessment" file that can still be viewed on the NPS park planning website for this project.

Like Alternative C, the preferred alternative would provide a mix of commercial services to accommodate a wide range of visitor preferences and needs, with an emphasis on eco-friendly concepts and sustainable design features. The mix of accommodations would reflect the market for a more eco-friendly destination (a single, elevated lodge; elevated cottages; houseboats; ecotents; RV campground with electric hookups; backcountry chickees in Florida Bay), and the numbers and sizes of these facilities would reflect what is likely necessary for profitability by a future concessioner. Like Alternative B, the RV campsite would remain at T Loop but would be upgraded with electrical hookups, Eco Pond would remain a visitor use area while the area it occupies would continue to restore itself in the coming years, and an environmentally-friendly swimming pool would be provided as part of the new lodge.

The site design and the redevelopment of the Flamingo area would allow the area to function more efficiently for visitors, the concessioner and the park than it did in the past. The new design would facilitate pedestrian and bicycle access and circulation throughout the Flamingo area. The lodge and cottages would be located in proximity to the marina and visitor center, while the RV campsite would remain at T Loop. A Flamingo circulator shuttle would transport visitors to key destinations within the Flamingo area and a "Yellow Bike" system would provide overnight guests with enhanced access to the marina, restaurant, lodging and other visitor services, while reducing the frequency of private vehicle use.

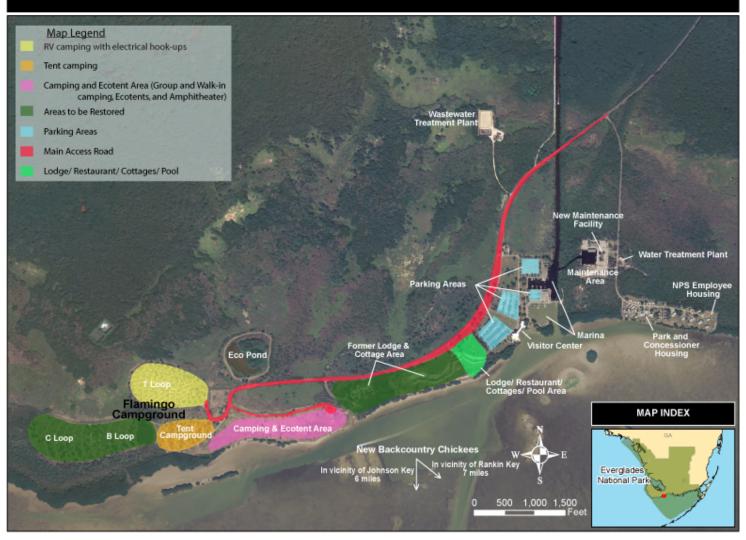
As a result of this reconfiguration, approximately 50 acres within the Flamingo developed area would be restored to their previous natural conditions, including 28 acres at the former B and C Loops and 22 acres in the old lodge and cottage areas. Figure 1 depicts the site development and services proposed under the preferred alternative.

Because funding may not be immediately available to support the construction of all the proposed facilities at the same time, the plan may be implemented and constructed in phases. Most likely, the sequence for implementation would be in the following four phases:

- 1. Houseboats; additional food service in the marina area; backcountry chickees; electric hook-ups for the RV sites; solar hot showers at the camping area restrooms; Flamingo circulator shuttle; additional canoes, kayaks and bicycles
- 2. Cottages, gift shop, Snake Bight Tram
- 3. Ecotent facilities
- 4. Lodge (with restaurant, lounge and swimming pool)

A detailed financial analysis for implementing the preferred alternative, including more details on project phasing is provided in the accompanying document that is also open for public comment through May 15, 2008, "Flamingo CSP – Preferred Alternative Financial Analysis".





ACCOMMODATIONS

The preferred alternative would offer a variety of accommodations, similar to those in Alternative C. The only difference occurs in the location of the RV campground, which would remain in the T Loop as described in Alternative B.

• Lodge – 1 permanent structure: 30 units (estimated 50-year life);



Figure 2. Alternative D, Example Lodge Design*

(Courtesy Royal Concrete Concepts)
(*no first floor living space at Flamingo; final design to be determined when site design is complete)

- Cottages 24 permanent units (estimated 50-year life);
- RV Sites 40 RV sites in the T Loop with electric hookups (potentially with solar-based power)
- Tent Camping 130 sites, including 55 drive-in at A Loop, 72 walk-in and 3 group sites located with the proposed ecotents along the Florida Bay shoreline.
- Ecotents 40 semi-permanent structures with solar-based power
- Houseboats 8 boats (32 beds)
- Florida Bay backcountry chickees 2 double chickees (each double chickee would accommodate up to 2 groups and a maximum of 12 campers)

Conceptual sketches of how these proposed facilities may appear are found in Figures 2 through 4. Principles of sustainability would be incorporated into the designs of each based on best management practices (BMPs) available at the time of construction.

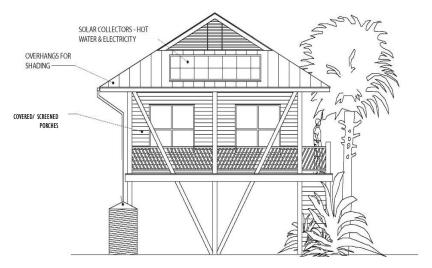


Figure 3. Alternative D, Conceptual Cottage Design

(final design to be determined when site design is complete)

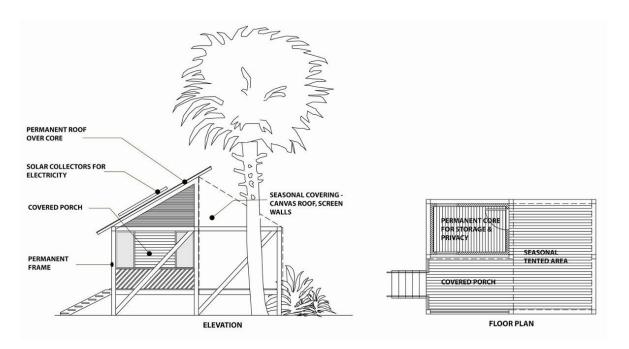


Figure 4. Alternative D, Conceptual Ecotent Design

(final design to be determined when site design is complete)

FOOD SERVICE

Food service would be the same as proposed in Alternative C: a combination of an informal sit-down service and other types of food service would be provided. The food services offered could be modified to accommodate variable demand throughout the year. There would be a full restaurant at the lodge and lounge provided at the lodge. A snack bar/open air lounge would be provided in the marina area to supply food service and a social gathering area for visitors.

OTHER FACILITIES AND AMENITIES

Screened gathering areas would be located near the visitor center and lodge, and covered picnic areas (pavilion areas) would be located in several strategic locations in the Flamingo area.

Eco Pond would remain a visitor use area, allowing for self- and guided-tours and programs. Since Eco Pond is no longer connected to the Flamingo wastewater treatment system, the presence of water in Eco Pond would be rainfall-driven; there would no longer be any manual manipulation occurring at the site. The trail around the pond would be maintained and exotic species actively removed. Interpretive signage would be provided explaining the past, present and future stories of Eco Pond.

The wilderness permitting process for backcountry trips would continue to operate from the Visitor Center.

An eco-friendly swimming pool (built and maintained with energy efficient and filtration technologies, and minimal chemical use) would be located adjacent to the lodge and cottages.

Postal service (stamps, postcards) would be provided with U.S. Postal Service cooperation.

Support for science and research efforts in the park that could utilize Flamingo as a temporary base of operation would be met through personnel using available overnight accommodations and by establishing computerized work stations for park staff, university and agency cooperators.

ACCESS

Access into and around Flamingo would be reconfigured to conform with the new site design. The exact number of parking spaces needed and the layout and design for parking would be determined during the site planning and design process.

All new parking areas would use pervious or semi-pervious materials with incorporation of stormwater BMPs applicable to the Flamingo area.

A seasonal circulator shuttle within Flamingo would be provided by the concessioner providing convenient connections for visitors and employees between the major Flamingo facilities and destinations. Bicycling would be encouraged by the provision of a "Yellow Bike" service that would offer coaster-type bikes to overnight guests at no charge. These bikes would be used for transit throughout the Flamingo area.

VISITOR ACTIVITIES

Visitor Center

Visitor Center activities and information services, including those provided by the concessioner, would be relocated to the site of the former Flamingo restaurant.

Trails/Backcountry Access

New walking/bicycle paths would be provided within Flamingo to provide connectivity between the various visitor use areas, using pervious or semi-pervious materials. Bicycle restrictions would be

maintained in accordance with existing wilderness regulations for the surrounding area, but bicycle paths/facilities within the Flamingo developed area would be increased and upgraded to facilitate safe and convenient transportation and recreation. Additionally, walking paths/trails to access the new facilities, and destinations such as wildlife and/or night sky viewing areas would be provided. Boardwalks would be installed where needed to reduce impacts to the ground surface. Non-motorized water trails for canoes and kayaks would continue to be maintained and enhanced information on backcountry opportunities including access to the new backcountry chickees would be provided.

Guides and Livery Services

A variety of camping and backcountry supplies would be available at the marina store.

A wide range of outfitting and livery services for backcountry access and transportation would be provided. Livery services to trailheads in proximity to Flamingo (e.g., Coot Bay Pond, West Lake, etc.) and backcountry destinations would be available.

Private fishing guide and charter services would continue to operate from Flamingo through the concessioner and under commercial use authorizations (CUAs).

Tours

A range of boat tours offering interpretative services would continue to be provided and would expected to be enhanced, as one or more tour boats could added to the fleet for Florida Bay and backcountry tours. Guided land- and water- based tours and canoe and kayak tours would continue and be expanded.

Reinstituted tram tours on Snake Bight Trail would operate seasonally.

Boating

Canoe, kayak, and skiff rentals would continue, with dock rental space available. The existing boat ramps would be maintained. Additionally, a new boat transfer service between Whitewater Bay and Florida Bay would be provided, and there would be better publicized information regarding canoe/kayak launch and staging areas.

Fishing

Bait and tackle supplies, and fishing licenses would continue to be sold at the marina store. The screened fish cleaning station would be enlarged and the disposal process would function in a more environmentally sound manner by connecting it to the Flamingo wastewater system. The concessioner would offer fish cleaning services.



RESTORED AREAS

Approximately 50 acres of lands previously disturbed but no longer needed for facilities would be restored to natural conditions. This would include 28 acres in the B and C Loops of the campground, and 22 acres that include the west side of former lodge area and the entire former cottages area.

SUSTAINABLE DESIGN

New construction would incorporate the following BMPs:

 Porous paving to reduce the runoff generated by any parking areas; porous paving allows stormwater to infiltrate the ground instead of running off into the surrounding waters. By minimizing runoff, the potential for erosion and/or the transport of surface pollutants into adjacent waters would be greatly decreased.

Figure 5. Recycled Plastic Lumber

- The final design layout for Flamingo would include landscaping that reduces the amount of manicured lawns and promotes the growth of native vegetation. This would reduce the time and energy consumption required to maintain Flamingo. Using native vegetation would provide beneficial impacts to wildlife and provide additional interpretive opportunities by educating the public on the value of native landscaping and site restoration efforts.
- Ecotents would provide a type of lodging that exemplifies sustainability, providing a low-cost, low-impact lodging option available on a seasonal basis.



Figure 6. Best Management Practices. Porous Pavement



Figure 7. Example of Applying
"Design with Climate" Principles,
Mexico

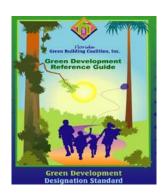


Figure 8. Sustainable Design Certifications

ENERGY

Because of Flamingo's sub-tropical climate, NPS would incorporate "Design with Climate" principles into building design to off-set overall energy consumption. Such design principles include: using overhangs to shade walls and openings; using site features and vegetation to provide shading to walls with eastern and western exposure; using shading devices such as louvers, covered porches, and trellises with natural vines to block sun without blocking out breezes and natural light; orienting broad building surfaces away from the hot late-day western sun; using lighter-colored wall and roofing materials to reflect solar radiation; using shutters and screens, avoiding glass and exposures to direct solar gain; providing shading on east, south and west facades; providing covered walkways and balconies; maximizing insulation, particularly in the roof; including cross ventilation, if possible, in rooms; using high performance glass that maximizes view and light but minimizes heat gain; using automatic set back thermostats tied to room occupancy; using compact florescent lighting; using ondemand hot water heaters.

- Solar power would be used wherever possible.
- Current energy BMPs available at the time of construction would also be used wherever possible.

WATER CONSUMPTION

- Overall water consumption would be reduced with the use of water saving devices (e.g., bathroom fixtures) and sustainable design principles.
- Current water consumption BMPs available at the time of construction would be used wherever possible.

MATERIALS

 Using locally produced and "hurricane resistant" materials (such as hurricane-resistant pre-cast concrete or equally strong materials) wherever possible, would minimize transportation costs, energy use requirements, and potential structure repair or replacement efforts.

CONSTRUCTION

All construction within Flamingo would be in compliance with the Florida Building Code, particularly the section on High Velocity Hurricane Zone provisions. Flamingo is located in the highest wind speed and exposure zones for hurricanes and storms. BMPs that may be used to protect Flamingo's facilities include elevating buildings for flood protection and design features that reduce/minimize impacts from wind and storm activities.

In addition, the semi-permanent ecotents proposed under this alternative would be constructed using the BMPs available at the time of construction.

GENERAL OPERATIONS



NPS would institute environmentally friendly and sustainable maintenance programs aimed at: reducing the total amount of waste generated on site; expanding Flamingo's recycling programs; increasing the use of biodegradable, non-toxic cleaning products; choosing merchandise based on the amount of recycled content, biodegradability, and minimum packaging; and using native vegetation for landscaping.

Lodge, cottages, and parking areas would incorporate:

• Recycled plastic lumber in lieu of wood for the construction of any required boardwalks. Recycled plastic lumber is clean, nontoxic, and nonporous, and lasts longer than wood. It is virtually maintenance free, has lower long-term maintenance costs, diverts plastic waste from landfills, and reduces overall wood use.

MITIGATION

The mitigation measures provided in the Draft Plan would apply to the preferred alternative. Mitigation measures would be used to prevent or minimize potential adverse impacts associated with the preferred alternative. These measures were included in the evaluation of impacts of all action alternatives. Mitigation measures that could be undertaken during project implementation include, but are not limited to:

WILDLIFE AND WILDLIFE HABITAT

- The use of previously undisturbed areas would be minimized to the extent possible by selectively choosing staging areas, parking all vehicles on existing roads and parking lots, and clearly defining and marking construction zones and perimeters.
- Steps would be taken to minimize the introduction of non-native species and could include
 washing equipment before entering the park; minimizing disturbances; initiating revegetation of
 disturbed areas immediately after construction; salvaging topsoil and native vegetation from the
 area; and limiting the amount of topsoil imported.
- Revegetation efforts would include using seeds from native species during revegetation; monitoring reclamation; and implementing exotic species control as necessary.
- Pre- and post-construction erosion control BMPs would be implemented, including the installation and inspection of silt fences, straw bale barriers, sediment traps, or other equivalent measures, and revegetation of area.

- Pre- and post-survey construction surveys for selected species (e.g., crocodiles, Eastern indigo snakes) would be implemented.
- Spill prevention, control, and countermeasure procedures, as well as stormwater pollution
 prevention measures, would be implemented to reduce the potential for petroleum products from
 leaking equipment or vehicles to reach surface waters.
- Environmental awareness and interpretive programs (e.g., guided boat tours, guided tours at Eco Pond, step-on guides for buses) would be implemented to help educate visitors with the intent of reducing impacts on wildlife and wildlife habitat.
- As per NPS 2006 Management Policies, artificial lighting would not be used in locations where its presence could disrupt wildlife dependent on the dark; minimal-impact lighting techniques used (e.g., consideration of yellow versus white lights, use of timers); artificial lighting would be shielded and directed, where necessary, in consideration of natural night sky conditions.
- Native vegetation would be used in all manicured or landscaped areas, and any landscaping done during site development and consolidation of facilities would emphasize reduction of grass fields.

THREATENED, ENDANGERED, OR SPECIAL STATUS SPECIES

- Construction activities occurring near sensitive habitats would be timed to avoid periods of breeding, nesting, and rearing of young.
- Pre-construction surveys would be conducted to identify any federal- and state-listed species
 occurring in the area. Should individuals or nest sites be identified, additional measures would be
 taken to avoid impacts (e.g., fencing nest sites, providing information to contractors about the
 species).
- Construction of the new chickees would include standard manatee and sea turtle protection measures, including no wake zones and monitoring during construction.
- Measures listed under "Protection of Wildlife and Wildlife Habitat" and other resource protection mitigation would also serve to reduce impacts on special status species.

WATER RESOURCES

- Measures listed under "Protection of Wildlife and Wildlife Habitat" related to use of pre- and post-construction erosion control BMPs, spill prevention, control, and countermeasure procedures, and stormwater pollution prevention would also protect water quality.
- Construction would be limited to previously disturbed areas, avoiding wetland habitats.
- A spill prevention, control, and countermeasures plan would be completed and implemented for any fuel storage tanks, which would meet all applicable standards for construction and leak detection. Areas used for refueling would be limited to areas where these activities currently occur.
- Equipment containing fuels would be checked frequently for leaks.
- Environmental awareness and interpretive programs (e.g., guided boat tours, guided tours at Eco Pond, step-on guides for buses) would include information about water quality, wetlands, and floodplains to help educate visitors with the intent of reducing impacts on these resources.
- The overall developed footprint in the 100-year floodplain would be reduced where possible. In accordance with EO 11988, flood protection would be provided by elevating all structures, which would be built to the 2004 Florida Building Code standards for a High Hazard Hurricane Zone.

- The NPS would operate the area using the Everglades National Park Hurricane Plan, which is coordinated with the Monroe County Emergency Management Department.
- Construction of the chickees in proximity to Rankin and Johnson Keys would include the use of silt curtains to contain disturbed sediments and reduce water quality impacts.

SOILS AND GEOLOGY

- Measures listed under "Protection of Wildlife and Wildlife Habitat" related to use of pre- and
 post-construction erosion control BMPs, spill prevention, control, and countermeasure
 procedures, and stormwater pollution prevention would be followed to protect soils from erosion
 and contamination.
- Any construction would be limited to previously disturbed areas, limiting impacts to soils, and only those areas absolutely necessary for construction would be cleared and grubbed.
- Construction/demolition activities would be limited to times when the areas are not too wet and able to support the weight of the vehicles and other construction equipment.
- Erosion and sediment control BMPs would be inspected and maintained on a regular basis and after each measurable rainfall to ensure they are functioning properly.

AIR QUALITY

- Low sulfur diesel fuel would be used in off-road construction equipment.
- Where practicable, diesel engine retrofit technology would be used in off-road equipment to further reduce emissions. Such technology could include Diesel Oxidation Catalyst/Diesel Particulate Filters, engine upgrades, engine replacements, or combinations of these strategies.
- Unnecessary idling times on diesel-powered engines would be limited to 3 to 5 minutes.
- Water or appropriate liquids would be used for dust control during demolition, land clearing, grading, on materials stockpiled on the ground surfaces, and other activities.
- Open-body trucks for transporting materials would be covered.
- Dust related to the construction site would be controlled through a soil erosion sediment control procedure that includes:
 - Spraying of a suppressing agent on dust pile (non-hazardous, biodegradable);
 - Containment of fugitive dust; and
 - Adjustment for meteorological conditions as appropriate.
- "Clean Fuel" technology would be considered and used, if possible, for the proposed tram and internal shuttle.

WILDERNESS

- Measures listed above under "Protection of Wildlife and Wildlife Habitat", "Protection of Water Quality", etc. would serve to protect wilderness values and quality.
- Wilderness permitting for use of backcountry areas would include provision of educational materials about wilderness values and protection measures.
- Construction of the new chickees near Rankin and Johnson Keys (in submerged wilderness) would follow the minimum tool analysis for construction and would include provisions to

minimize impacts to natural resources that contribute to wilderness values, including use of silt curtains during construction.

CULTURAL RESOURCES

- A Cultural Resource Survey would be performed to identify resources in the area of potential effects (APE) for the preferred alternative.
- Monitoring will be done if any excavation exceeds the depth of existing ground disturbance. In
 the event that cultural resources are encountered during any necessary excavation work, project
 work would be halted and the discovery process would be initiated.
- Historic or important structures (Mission 66) would be fully documented by a qualified architectural historian before demolition, if necessary.
- Any architectural development in the Flamingo area would be compatible with the historic structures or any historic district that is proposed, as appropriate.
- On-going tribal consultation would be conducted for all proposed undertakings.

VISITOR USE AND EXPERIENCE, INCLUDING NIGHT SKY AND SOUNDSCAPES

- Construction information and general information about the redevelopment of Flamingo would be posted at the park, distributed to visitors, and made available on the park's web site. Signage and notices would be used to inform visitors about the purpose of the project and to protect visitor and staff safety during construction activities.
- When possible, construction activities would be timed to avoid high visitor use periods.
- Artificial lighting, including minimum illumination levels, light-emitting diodes (LEDs), limited color spectrum (e.g., yellow) lights, and timers and sensors would be used, where applicable.
- The use of artificial lighting would be restricted to areas where security, basic human safety, and specific cultural resource requirements must be met.
- Artificial lighting would be shielded, where necessary, to prevent the disruption of the night sky, physiological processes of living organisms, and similar natural processes.
- The NPS would take action to prevent or minimize all noise that through frequency, magnitude, or duration adversely affects the natural soundscape.
- The reconstructed or newly constructed facilities (walks, ramps, curb ramps, entrances, elevators, and rest rooms) would conform to the Architectural Barriers Act Accessibility Standards (ABAAS).
- BMPs, such as appropriate mufflers for heavy equipment, appropriate generator sizes for RVs, and noise-muffling construction materials would be used during construction. Construction equipment would be required to have working mufflers.

SOCIOE CONOMICS

• Facilities would be designed and constructed to withstand hurricanes, storms, and flooding to reduce the possible adverse socioeconomic effects of structural damage. This would include the use of elevated structures that meet or exceed hurricane building standards.

FINANCIAL ANALYSIS OF THE PREFERRED ALTERNATIVE

A financial analysis of the preferred alternative was conducted to estimate the financial feasibility of implementing the Commercial Services Plan. The accompanying document titled "Flamingo CSP – Preferred Alternative Financial Analysis" provides a detailed financial analysis for implementing the preferred alternative, including assumptions used to develop the financial model, financial performance and profitability estimates, and details on project phasing.

The preferred alternative described in the financial analysis considers the environmental issues of Everglades National Park and Flamingo area resources, known desired and anticipated visitor experiences sought, and likely profit requirements of a potential concessioner. It is estimated that a concessioner would be able to achieve a \$3.4 million Earnings Before Interest, Taxes, Depreciation and Amortization annually given visitation and operating parameters. At the estimated level of investment and future cash flows, the preferred alternative would yield an average annual return on investment of 17.6%, projected on a 20-year contract. A required return on investment for a project of this type is estimated to be between 15 and 20% annually. To achieve a return of 15%, no additional funding would be required. To achieve a higher return on investment of 18% to 20%, somewhere between \$456,000 and \$2.7 million in alternative funding beyond what a concessioner might be expected to contribute would be required.

"Class C" capital cost estimates were prepared for the preferred alternative and can be found in Table 3: *Preferred Alternative Class C Cost Estimates in 2008 dollars* (page 25). Class C estimates are cost estimates that occur at the conceptual level of planning. All estimates for construction include government factors to account for the remote location, federal wage rate factor, design contingency, government general conditions, prime fees, contracting method adjustment, and escalation. All of these estimates were based on single-unit costs, and costs were not adjusted to account for possible volume discounts or similar cost savings; therefore, these figures are conservative, and are represented in 2008 dollars. As CSP implementation moves forward, Class B (Budgetary Estimates) would be developed at the schematic design phase and Class A (Actual Estimates) would be developed for the associated construction documents.

The Class C cost estimates were used to inform the financial feasibility of implementing the preferred alternative. This included an analysis of phasing options, potential return on investment rates, and the possible need to seek funding from additional sources in order to make implementation more feasible. Overall, the preferred alternative presents the most financially advantageous alternative for concession operations since it has the potential for capturing a larger visitor audience and also includes operating efficiencies created by the use of alternative energy sources and adaptations to the seasonality of the expected visitation to Everglades National Park and the Flamingo area. In any case, implementing the preferred alternative may need to occur in phases if financing for all proposed services and facilities is not available at one time.

HOW THE PREFERRED ALTERNATIVE MEETS THE OBJECTIVES

As stated in the "Purpose and Need" chapter of the Draft Plan, the preferred alternative must meet all objectives to a large degree to be considered reasonable. The preferred alternative must also address the stated purpose of the plan and resolve the need for action. The preferred alternative addresses the purpose of the plan, resolves the need for action, and as presented in Table 4: *Extent to Which the Preferred Alternative Meets the Project Objectives* (page 26), the preferred alternative fully meets or meets to a large degree each of the project objectives.

THE ENVIRONMENTALLY PREFERRED ALTERNATIVE

In accordance with Director's Order 12: Conservation Planning, Environmental Impact Analysis, and Decision-making (NPS 2001), the NPS is required to identify the "environmentally preferred alternative"

in all environmental documents, including environmental assessments. According to the Council on Environmental Quality (CEQ) guidelines, the environmentally preferred alternative is the alternative that will promote the national environmental policy, as expressed in Section 101 of the National Environmental Policy Act (NEPA).

Section 1505.2(b) requires "... specifying the alternative or alternatives which were considered to be environmentally preferable." Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources. Section 101 calls for federal government actions to:

- (1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- (2) assure for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings;
- (3) attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
- (4) preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
- (5) achieve a balance between population and resource use that will 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.

Based on the above criteria, both Alternatives C (identified in the Draft Plan as the environmentally preferred alternative) and D (the preferred alternative) have been determined by the NPS to be the environmentally preferred alternatives. All of the alternatives would fulfill responsibilities for succeeding generations.

Both Alternatives C and D would include more sustainable design elements that would continue to conserve energy and water and minimize waste for generations to come. Alternative D involves less land disturbance and initial construction, which minimizes potential impacts to the Flamingo cultural landscape and other cultural and natural resources that can be adversely affected by noise and ground disturbance, while Alternative C would allow for the greatest amount of site consolidation and restoration, which would assure more pleasing surroundings for future generations.

Alternatives C and D also best meet the criterion of attaining the widest range of beneficial uses of the environment without degradation or other undesirable consequences, with its emphasis on sustainability, energy conservation, and eco-friendly accommodation and services. Alternative D, with its less intense development, may better preserve the important cultural aspects of Flamingo; while, like Alternative C, it provides diversity and variety of individual choice.

All of the alternatives would achieve a balance between resource use and population that would permit high standards of living, but Alternatives C and D would allow for a wider sharing of amenities with their provision of overnight accommodations and expanded services. Alternative C and Alternative D to a somewhat lesser extent, incorporate more features and operational elements to enhance the quality of renewable resources and approach the maximum recycling of depletable resources, especially with regard to site consolidation and provision of trails and emphasis on alternative transportation.

Overall, Alternatives C and D best meet the majority of the criteria listed in Section 101 of the National Environmental Protection Act.

Table 1: Overview of Preferred Alternative Elements

Included in each element category for the Preferred Alternative (Alternative D) is mention of where the information was derived from: Alternative A, B and/or C, as they are described in the Draft Plan.

Element	Alternative D – Preferred Alternative		
	Accommodations		
Overnight (Includes elements from Alternatives B and C)	Modern overnight accommodations that meet the full range of park visitor needs. Facilities will be sited in a more compact and efficient manner than previously existed. See Figure 1 for Preferred Alternative Site Plan/Layout. Lodge—30 rooms, located in proximity to east end of the old lodge site Cottage units—24 units, located in proximity to the proposed lodge Ecotents—40, located along shoreline in proximity to walk-in and group camping areas Tent camping—130 total sites 55 drive-in sites—Loop A (same as present location) 72 walk-in sites, located in proximity to current walk-in sites 3 group sites, located in proximity to current group sites RV sites—40 sites with electric hook-ups, located in the T Loop (same as present location) Houseboats—8 boats/32 beds Two backcountry chickees in Florida Bay, located in proximity to Johnson and Rankin Keys		
Restrooms and Baths (Same as Alternative C)	Public restrooms at marina, fish cleaning station, West Lake day use area, camping areas, and visitor center Hot (pay) shower at marina Restrooms and hot showers in each lodge and cottage unit Common restrooms and solar-heated showers facilities at tent, RV and ecotent areas Restroom and shower on each houseboat Portable restroom at each chickee		

Element	Alternative D – Preferred Alternative		
	Sustainable Design		
Sustainable Design (Same as Alternative C)	Would incorporate sustainable design principles and elements in all new construction and adaptively reused facilities; provide greater consolidation of the development footprint in the Flamingo developed area to increase energy conservation and emission reduction; include increased use of porous pavement and surfaces for parking and other uses; use recycled material for construction of boardwalks and other site features; increased use of native landscaping to enhance native habitats while reducing lawn areas; and use of solar power/alternative energy sources and energy conservation features that demonstrates and teaches environmental stewardship.		
	Restoration		
Restored areas (Same as Alternative B)	Approximately 50 acres of lands previously disturbed but no longer needed for facilities would be restored to their previous natural conditions		
	 28 acres—B and C Loops 22 acres – west side of former lodge area and former cottage area 		
	Food Service		
Restaurant (Same as Alternative C)	Restaurant in lodge large enough to provide a combination of sit down service with other types of food service to accommodate variable demand throughout the year.		
Lounge (evening/overnight use) (Same as Alternative C)	Lounge within restaurant would be provided to include light fare, refreshments, and gathering area. There would also be a mini-lounge in the marina area.		
Marina Area (Same as Alternative C)	Marina store would continue to provide limited snacks, sandwiches, beverages, and grocery items. There would also be a snack bar and mini-lounge in the marina area offering light fare and beverages, while providing a social gathering area.		

Element	Alternative D – Preferred Alternative		
	Other Facilities and Amenities		
Gathering Areas/Associated Recreation Areas (Includes elements from Alternatives A, B and C)	Open area underneath visitor center Amphitheater (replacement facility funded at current location) Screened gathering areas near: visitor center, lodge, ecotents, campground Covered picnic areas (variable screens); i.e. several pavilion areas throughout Flamingo area Board and game room (tie-in with gathering area at lodge) Meeting space(s) in lodge Screened "eco-friendly" swimming pool		
Environmental/ Eco- friendly Recreation Services (Includes elements from Alternatives B and C)	Eco Pond – Provide programs and tours at Eco Pond; site mirrors the wet/dry seasons and relies on rainfall for maintaining water in the pond rather than artificial manipulation as part of wastewater treatment facility; maintain basic services: safe, maintained trail around the pond free of exotic vegetation. Provide interpretive signs explaining historic and current function of the site, and its eventual reversion to natural conditions. Provide night sky viewing opportunities at the amphitheater and other locations away from lighted areas. Encourage visitors to enjoy natural areas and participate in tours and programs along Florida Bay and in nearby areas including Snake Bight and Christian Point. Other facilities and services: Enhanced trails—canoe and walking/bicycling Designated wildlife viewing areas Bicycle rentals		
Marina Services (Includes elements from Alternatives B and C)	Marina store offers more products and services than presently available; marina operation complies with State of Florida's "Clean Marina" program or equivalent environmental standards.		
Postal Services (Same as Alternative C)	Additional postal services would be provided (i.e., seasonal postal contact station) with USPS cooperation.		
Fuel Service (Same as Alternatives A, B and C)	Boat and vehicle service provided at existing facility next to marina store.		

Element	Alternative D – Preferred Alternative		
	Access		
Parking (Same as Alternative B)	Free parking at: Visitor center Marina store Lot for Florida Bay access Lot for Whitewater Bay access Campground Parking would be reconfigured to accommodate predicted demand and to accommodate day-use and overnight guests.		
Internal Visitor Circulation (Same as Alternative C)	Seasonal circulator shuttle throughout Flamingo area and "Yellow Bike" system provide alternative transit options for visitors.		
Snake Bight Tram (Same as Alternatives B and C)	Tram operated by concessioner for guided tours between the Visitor Center and Snake Bight Trail.		
Shuttle and/or bicycle trail between main park entrance and Flamingo (Same as Alternatives B and C)	To be addressed in General Management Plan; GMP may propose shuttle and dedicated bicycle/pedestrian path between main park entrance and Flamingo.		
Visitor Activities			
Visitor Center (further guidance in the GMP) (Same as Alternatives B and C)	Visitor Center activities and information services, including those provided by the concessioner, would be relocated to the site of the former Flamingo restaurant.		
Amphitheater (Same as Alternatives B and C)	Amphitheater would be rebuilt in same general location as previously located, but location may eventually be adjusted based on more detailed site analysis for implementing the CSP.		

Element	Alternative D – Preferred Alternative		
Wilderness permitting (Same as Alternative A)	Continue issuing wilderness permits from Visitor Center.		
Trails (Same as Alternative C)	Provide new walking/bicycle paths within the Flamingo developed and visitor use areas using pervious or semi- pervious materials to enhance connections throughout the area, including those to wildlife, recreational access and night sky viewing areas. Maintain bicycle restrictions in accordance with existing wilderness regulations. Upgrade trails to increase accessibility (meet ADA requirements) and safety. Promote enhanced non-motorized water trails for canoes/kayaks seeking day and overnight experiences.		
Guide and Livery Services (Same as Alternative C)	Outfitting/camping/backcountry supplies available. Wide range of outfitting, livery and guide services for backcountry access: including education programs, outdoor recreation activities, backcountry transportation, environmental awareness (e.g., Leave No Trace, Outward Bound, etc.). Livery services to Florida Bay, Coot Bay Pond, Hells Bay, Noble Hammock, Nine-mile Pond, and West Lake.		
Boating (Same as Alternative B)	Existing obsolete boat lift would not be replaced; new boat transfer service between Whitewater and Florida Bays would be provided Canoe and skiffs rentals available Dock rental space available on both Florida and Whitewater Bay sides Boat fueling available Boat ramps maintained for Florida and Whitewater Bay access Canoe/kayak launches provided for Florida and Whitewater Bays and backcountry areas Houseboat rentals available		
Fishing (Same as Alternative C)	Bait and tackle supplies available at marina store Fishing licenses available Enlarged do-it-yourself fish cleaning screened facility that is tied into the wastewater treatment facility is provided Fish cleaning services available from concessioner		

Element	Alternative D – Preferred Alternative		
Tours (Same as Alternative C)	Existing boat tours could be supplemented by additional boat tours to the backcountry and Florida Bay Day and multi-day guided trips offered (hiking, canoeing to Cape Sable and backcountry, etc.) Interpretive and educational hikes provided for various interpretive themes (history/cultural resources, night sky viewing, wildlife and vegetation viewing, photography, etc.) Additional land- (hike/bike)and water-based (canoe/kayak) tours could be offered by other commercial operators (CUAs)		
	Science and Research Support		
Science and Research Support (Same as Alternative C)	Overnight accommodations could be used by science and research personnel Provide support facilities for short- and long-term science and research efforts such as computerized work stations Through the GMP, the park would address other potential needs such as climate controlled equipment storage facilities and facilities for sample preparation, specimen collection/preservation and data analysis		

Table 2: Summary of Environmental Consequences for the Preferred Alternative

For each impact topic, there is a discussion of the impacts associated with the Preferred Alternative (Alternative D), mention if the impact topic information was derived from Alternative A, B and/or C as they are described in the Draft Plan, and a statement regarding the impairment standard, where applicable to the impact topic.

Impact Topic	Alternative D - Preferred Alternative
Geologic Resources/ Soils	Implementation of alternative D would result in long-term negligible adverse impacts to the geologic and the topographic conditions of the site. Both long- and short-term minor adverse impacts to soils would occur as a result of activities associated with the demolition and construction activities, the continuation of recreational activities, and the continued shoreline erosion. Long-term moderate beneficial impacts to soils would occur by reducing the developed footprint and restoring two large areas to a more natural condition.
	(Alternative C)
	There would be no impairment of geologic resources or soils.
Air Quality	Under alternative D, Flamingo would increase the range of services available to visitors. Additional operations at Flamingo would result in localized, mostly intermittent or short-term, negligible to minor, adverse impacts on air quality within the analysis area, and the use of an internal shuttle and "Yellow Bike" system would serve to reduce levels of emissions from motor vehicles. Air quality would remain within state and federal standards.
	(Alternative C)
	There would be no impairment of air quality.
Soundscapes	Alternative D would have primarily long-term but seasonal, minor adverse impacts on soundscapes in the area of analysis, with short-term, minor impacts during demolition and construction of facilities, and fill removal and grading of areas to be restored. There would be long-term, minor, beneficial impacts from the restoration of the western portions of the campground (B and C Loops) and the conversion of T Loop to an RV campground with electric hookups.
	(Alternative B)
	There would be no impairment of soundscapes.
Water Quality	Construction and demolition activities under alternative D would have short-term, localized, minor adverse impacts on water quality. Increases in visitation are expected as a result of the new facilities and services provided, which could have long-term, minor adverse impacts throughout the Flamingo area. There would also be long-term, minor to moderate, beneficial effects from the reduction in the footprint and restoration of previously disturbed areas.
	(Alternative B)
	There would be no impairment of water quality.

Impact Topic	Alternative D - Preferred Alternative	
Wetlands	Construction and demolition activities in previously disturbed areas would have no direct impacts on wetlands. There would be short- to long-term, minor adverse impacts resulting from on-going visitor use in and around the developed areas, since all areas surrounding Flamingo are wetlands. The restoration of unused lands would result in the creation of at least 50 acres of wetland, a moderate beneficial effect, and overall alternative D would have mostly beneficial impacts on wetlands. (Alternative B) There would be no impairment of wetlands.	
Floodplains	The continuation of use at Flamingo and the rebuilding efforts in the Flamingo area would result in long-term, localized moderate adverse impacts on floodplains, but there would be moderate beneficial effects from the removal of the lodge and cottages, consolidation and elevation of structures, use of flood resistant design, and restoration of a large area of	
	floodplain to natural elevations and conditions. Therefore, alternative D would have long-term, minor to moderate beneficial effects on area floodplains.	
	(Alternative C)	
	There would be no impairment of floodplains.	
Wilderness Area	Because the Flamingo developed area and the land immediately surrounding it is not designated wilderness, demolition grading, and construction-related activities under alternative D would have short-term, negligible indirect effects on terrestrial and submerged wilderness in that area. Long-term, localized minor to moderate adverse impacts on the wilderness character of the bay bottom would occur from the occasional grounding of boats, and increased visitor use/boating extending into the surrounding waters, keys, and backcountry areas could result in minor adverse effects. There would also be short and long term minor adverse impacts from the construction and use of the two proposed chickees in Florida Bay, as well as long-term benefits to wilderness experience. Long-term, minor indirect beneficial effects on submerged wilderness of Florida Bay would result from the improved quality of surface runoff associated wit restoration of previously disturbed areas to native conditions.	
	(Alternatives B and C)	
	There would be no impairment of wilderness.	
Wildlife and Wildlife Habitat	Construction activities under alternative D would have short-term, localized, negligible to moderate adverse impacts on wildlife, wildlife habitat, and vegetation. Increases in visitation are expected as a result of the new facilities and services provided, which could have long-term, minor to moderate adverse impacts throughout the Flamingo area. There would also be long-term, minor to moderate, beneficial effects from the reduction in the footprint and restoration of previously disturbed areas.	
	(Alternative B)	
	There would be no impairment of wildlife or wildlife habitat.	

Impact Topic	Alternative D - Preferred Alternative	
Threatened and Endangered Species and Species of Special Concern	listed species, as well as species of special concern. Long-term impacts from visitor use would occur from off-trail use, noise, and the effects of outboard engines on seagrass and other submerged vegetation, as well as propeller strikes, having minor adverse impacts throughout the Flamingo area. There would also be long-term, minor to moderate, beneficial effects from the restoration of previously disturbed areas. (Alternatives B and C)	
	There would be no impairment of threatened and endangered species and species of special concern.	
Cultural Resources	Because there would be limited ground-disturbing activity in previously undisturbed areas, there is potential for this alternative to expose currently unknown archeological resources. There are artifacts and features associated with a late 19 th /early 20 th century occupation of the community, including significant historic roads and associated canals. There are no known intact prehistoric archeological resources in the project area. Significant historic Mission 66 resources would be preserved. With mitigation, there would be long-term, minor, adverse impacts to cultural resources as a result of implementation of alternative D.	
	(Alternatives B and C)	
	There would be no impairment of cultural resources.	
Visitor Use and Experience	Visitors at Flamingo would experience a noticeable increase and diversity in available visitor experiences in the immediate Flamingo area, as well as provision of access to the surrounding frontcountry and backcountry areas, resulting in long-term, moderate beneficial impacts to visitor use and experience. Cumulative impacts would be long-term, moderate, and beneficial.	
	(Alternative C)	
Night Sky	Under alternative D, there would be long-term minor to moderate adverse impacts on night sky at Flamingo, with long-term, minor, beneficial effects due to the consolidation of uses with night lighting and the restoration of several large areas to natural conditions, especially in the more undeveloped western portion of the Flamingo area.	
	(Alternative C)	
	There would be no impairment of night sky.	

Impact Topic Alternative D - Preferred Alternative			
Socioeconomics	Alternative D would result in both short and long-term minor beneficial impacts to the Region of Influence (ROI). Redesigning Flamingo in a manner that provides for greater levels of visitation and a wider variety of visitor preferences would serve to underscore Flamingo's return as a key destination within the park to both local and regional residents and business operators, as well as to visitors who travel to Flamingo from areas outside of the region and lead to Flamingo being known as a key eco-tourism destination. The effects on economic development in the ROI from construction spending and revenue generation from operations would be about the same as alternative C, i.e., negligible, but would result in an increase in employment, spending, and tax revenues. Visitation levels would be about the same as alternative C. Increases in visitation would result in increased economic activity by visitors, and this would result in increased park resources being provided to support the increased activity. These increases would result in higher revenues for local businesses that cater to park visitors and personnel. These increased revenues themselves would prompt beneficial secondary impacts throughout the local economy. (Same as Alternative C)		
Energy Resources	Short-term, minor, adverse impacts on energy consumption at Flamingo would continue due to construction of facilities and restoration activities. Continued power and fuel consumption would have long-term minor adverse effects. However, incorporation of sustainable development technologies and LEED standards in new structures, as well as an internal circulator shuttle and bike service, would have long-term, minor to moderate beneficial impacts on energy consumption and potential energy conservation. Depending on how and where the redesigned amenities receive their energy, Flamingo may have an opportunity to produce most of its own energy. This would effectively lower the cost of purchasing power from Florida Power and Light Company, and offer an example of energy efficient ecotourism. (Same as Alternative C)		
Park Management and Operations	Implementation of alternative D would require approximately \$590,000 per year (in 2008 dollars) in additional funding to accommodate needed staff increases and \$255,000 per year (in 2008 dollars and assuming \$100,000/year is reimbursed by the concessioner for water and wastewater expenses) in support services such as vehicles, operation of the water and wastewater treatment plants, interpretive supplies, etc. Short-term, moderate, adverse impacts would occur to the maintenance division as some deferred maintenance would occur while waiting for funding increases. For all divisions, the impacts under alternative D would be long-term, minor, and adverse, assuming an increase in base funding occurs, with long-term, moderate, beneficial impacts occurring for employees living at Flamingo. If no increase in base funding occurs, impacts to all divisions would be long-term, moderate, and adverse as services would need to be reduced in other areas of the park to accommodate support for Flamingo area activities.		
	(Same as Alternative C)		

Table 3 – Preferred Alternative Class C Cost Estimates (in 2008 dollars)

Item	Alternative D – Preferred Alternative	
	Quantity	Cost
Canoes	20	\$24,000
Kayaks	60	\$39,000
Bicycles	50	\$10,000
Skiffs	5	\$70,000
Lodge w/ restaurant and lounge	30 units (14,250 gross sq. feet)	\$6,260,000 (additional costs compared to alternative C to meet new accessibility requirements)
Cottages (1 BR units)	24 units (500 sq. feet/unit)	\$2,923,000 (additional costs compared to alternative C to meet new accessibility requirements)
Ecotents	40 (260 sq. feet/unit)	\$1,789,000
Bath house (for ecotents)	1	\$600,000
Houseboats	8 (4 beds/boat)	\$2,000,000
Snack bar/mini lounge (Marina)	1	\$330,000
Swimming pool	1	200,000
Elec hook-ups for RV sites	40	\$160,000
Gift shop	1	\$685,000
Concessioner housing		\$4,425,000 to \$7,075,000
Tour boats	2	\$350,000
Restrooms w/ hot showers(Camping areas)	5	\$250,000
Internal circulator shuttle	1	\$50,000
Snake Bight tram	1	\$70,000
TOTAL		\$20,235,000 to \$22,885,000

*Costs for lodging are in "ready to use" condition and include all furnishings.

Table 4: Extent to Which the Preferred Alternative Meets the Project Objectives

For each objective, there is a discussion of how the Preferred Alternative (Alternative D) meets that objective and the identification of where the Preferred Alternative was derived from - Alternative A, B and/or C as they are described in the Draft Plan.

Objective	Alternative D Preferred Alternative		
Planning Guidance Objectives			
Ensure that any future commercial services facilities at Flamingo give strong consideration to the unique location and environmental conditions that affect development. This includes emphasis on NPS policies regarding sustainable design principles, "green" environmental practices, and safety and accessibility requirements; building code requirements for high-hazard flood zones; and recognition of intense seasonal weather conditions.	Fully meets the objective. The focus of this alternative is sustainable and green design and operation, as well as building to meet high hazard zone building codes. Internal shuttle and bike system would add to meeting this objective. (Alternative C)		
Provide concessioner(s) with a reasonable opportunity to earn a profit at Flamingo.	Fully meets objective. This alternative is financially viable, and there is enhanced opportunity to capture a greater visitor audience. (Alternative C)		
Work with a broad range of stakeholders in order to increase the likelihood of successfully implementing the Flamingo CSP.	Fully meets the objective. For all alternatives, a wide range of stakeholders were consulted to develop the range of services offered. (Alternatives A, B and C)		
Visitor Use and Experience Objectives			
Allow for a wide range of appropriate visitor uses that may restore and expand the types of services, visitor capacity, and/or season of services available to the public in the Flamingo area.	Fully meets the objective. The additional visitor services and accommodations provide for a wide range of visitor uses. (Alternative C)		

Objective	Alternative D Preferred Alternative
Ensure that the Flamingo CSP identifies the types and levels of visitor activities and services, consistent with protecting park resources and providing quality visitor experiences.	Fully meets the objective. All alternatives have a basis in the types and levels of visitor services that can be provided consistent with protection of park resources.
	(Alternatives A, B and C)
Enhance visitor understanding, enjoyment, and appreciation of park resources through commercial services provided at the Flamingo area.	Fully meets the objective. The additional accommodations and services planned would allow for more interpretive and educational services to reach a wider range of visitors.
	(Alternative C)
Park Resources Objectives	
Develop a CSP for Flamingo that minimizes impacts to the natural and cultural resources of the park.	Fully meets the objective. The plan under any of the alternatives would minimize impacts to park resources. This alternative adds some opportunities to decrease impacts related to energy consumption and water use.
	(Alternatives B and C)
Park Operations Objectives	
Develop a CSP for Flamingo that maximizes operational efficiencies for both the NPS and the concessioner(s).	Meets objective to a large degree. Provides efficiencies in relation to the overnight accommodation locations and operations, moderate degree of site consolidation and alternative transportation options that support efficient circulation, with most efficient use of staff to serve a large number of visitors.
	(Alternatives B and C)