

and wetland management (pages 39-40 and 84, see attached statement of findings), and other environmental regulations. The GMP/EA sites future needs for state and federal permits for dredge, fill, and dock construction (page 83) and relates the proposal and alternatives to the Florida coastal zone management program (page 84). Based on informal consultation with the state and the state's response to the GMP/EA, the NPS has determined that the proposed action is consistent with the Florida coastal zone management plan.

Compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, was completed in accordance with the 1981 amendments to the Programmatic Memorandum of Agreement executed in December, 1979 among the Advisory Council on Historic Preservation, the NPS and the National Conference of State Historic Preservation Officers on the NPS's planning process.

Pursuant to those 1981 amendments, on February 7, and May 5, 1983 respectively, the Council and Florida State Historic Preservation Officer indicated their concurrence in the selection of the preferred alternative for the Biscayne National Park GMP.

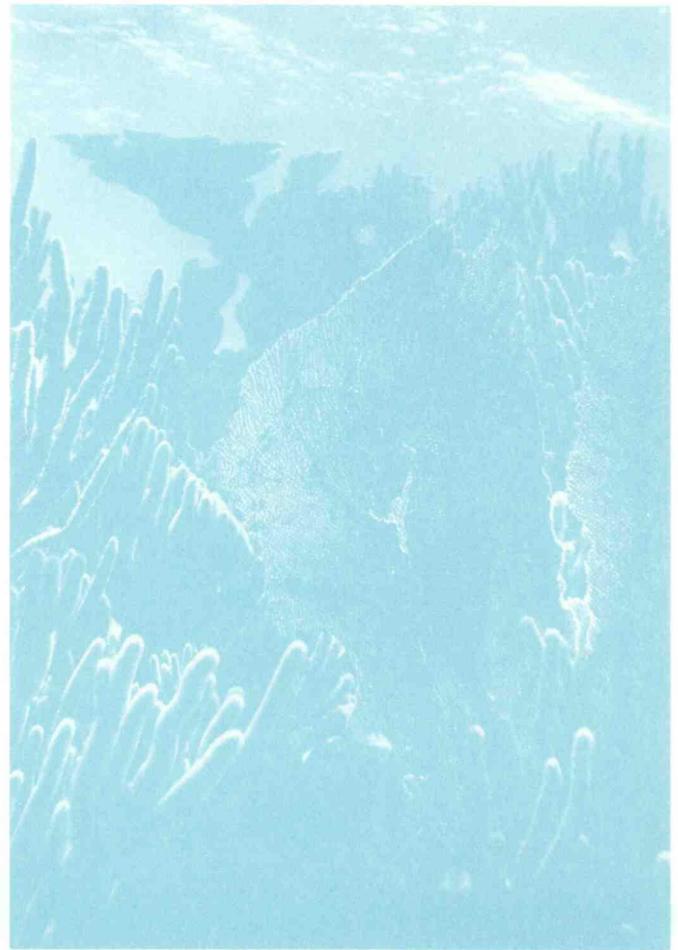
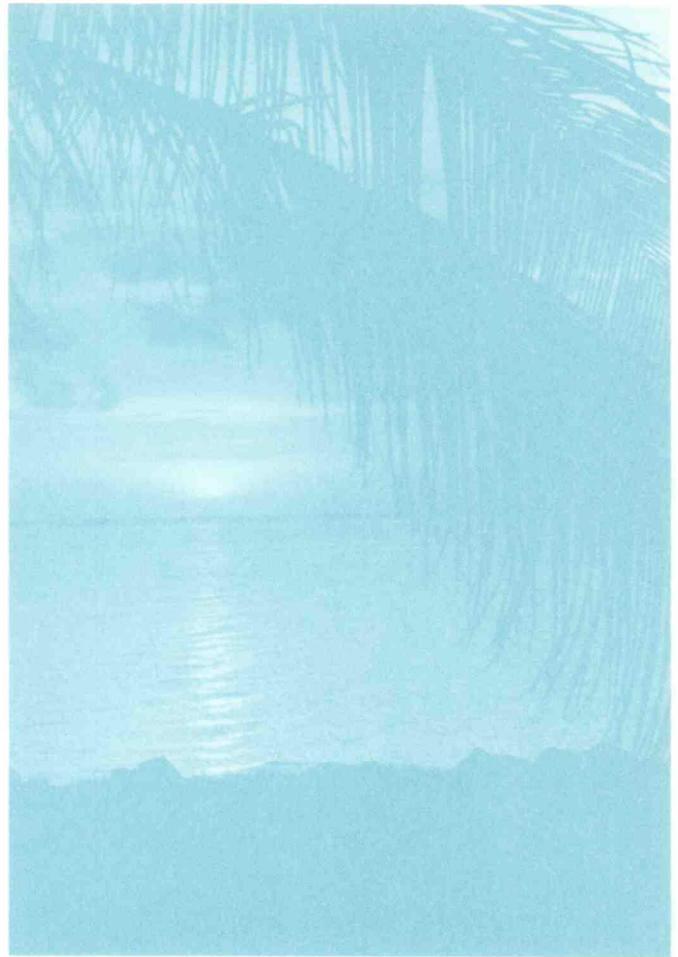
#### CONCLUSION

After a review of the GMP/EA and the public response to it, the GMP and DCP proposals as described in the GMP/EA are adopted with one revision. The revision is to permit overnight primitive camping at designated sites and on boats within the harbor at Boca Chita Key. No additional developments or amenities beyond those proposed in the GMP/EA will be provided at Boca Chita.

As proposed, a recommendation of no designated wilderness within the park will be made to the president and congress in a separate document.

It is further concluded that the implementation of the revised proposal does not constitute a major federal action significantly affecting the human environment and that an environmental impact statement will not be prepared.

**PART ONE:  
GENERAL MANAGEMENT PLAN/  
DEVELOPMENT CONCEPT PLAN  
AND ENVIRONMENTAL ASSESSMENT**



## PURPOSE OF AND NEED FOR THE PLAN

When Public Law 96-287 established Biscayne National Park on June 28, 1980, it also directed the secretary of interior to produce "a revised comprehensive general management plan for the park." The plan presented in this document fulfills that legislative requirement and provides guidance for meeting management objectives for the park (see appendix B).

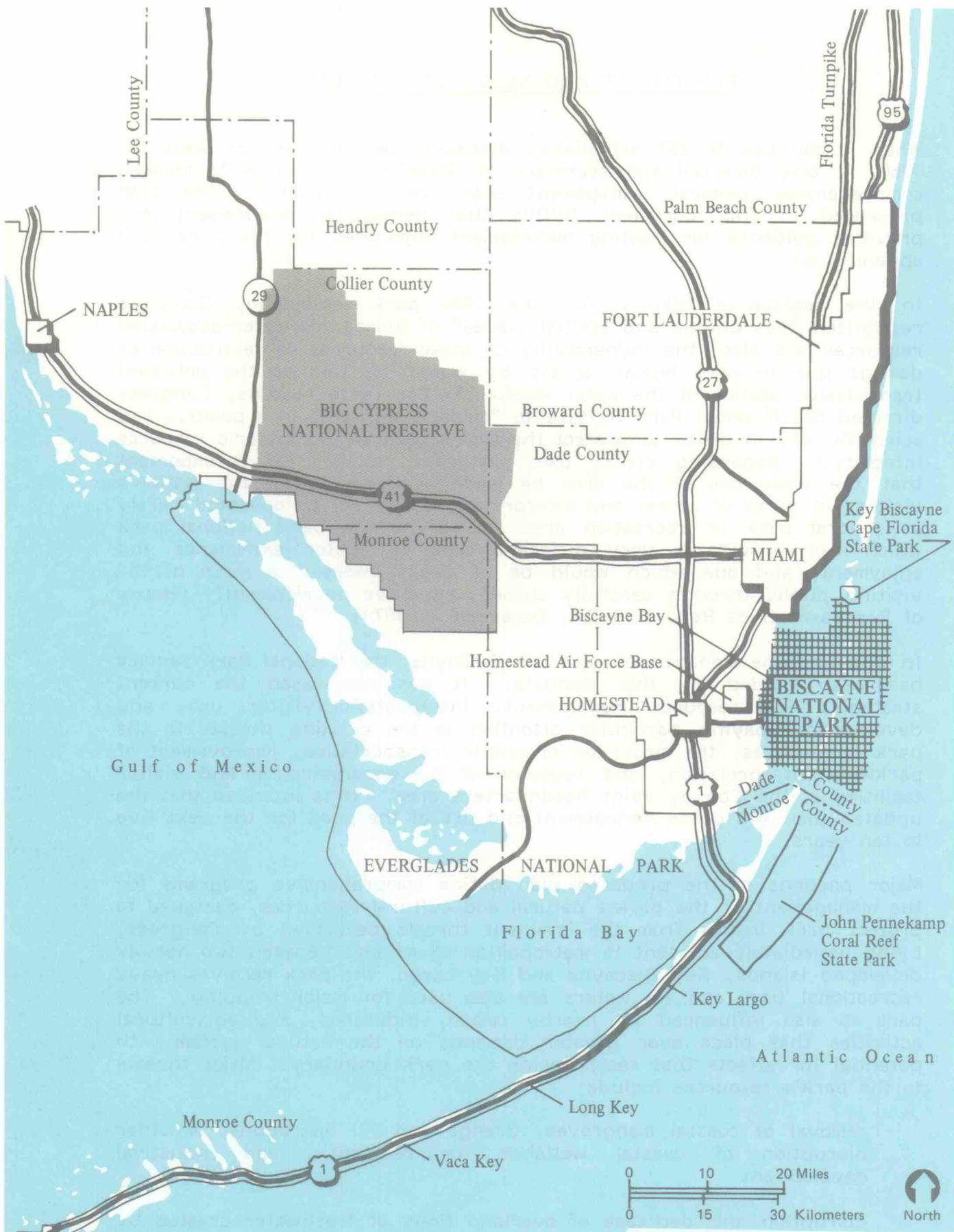
In the legislative history for the 1980 park legislation, Congress recognized "the unique and special values" of Biscayne's water-associated resources and also "the vulnerability of these resources to destruction or damage due to easy human access by water, as well as the pollutant transmission ability of the water medium." For these reasons, Congress directed the National Park Service to "manage this area in a positive and scientific way in order to protect the area's natural and historic resource integrity." Regarding visitor use, Congress stated: "It is important that the resources of the area be made available to all the Nation's visitors in terms of access and interpretation, and not be operated merely as a local park or recreation area. Biscayne can be a national park which can provide a very different type of visitor experience and enjoyment, and one which would be of great interest to much of the visiting public through carefully chosen, sensitive development" (House of Representatives Report 96-693, December 7, 1979).

In updating the management plan for Biscayne, the National Park Service has been guided by this mandate. It has reassessed the current strategies for resource management, interpretation/visitor use, and development, paying particular attention to the existing threats to the park's resources, the provision of public transportation, improvement of parkwide interpretation, and redesign of the administrative and visitor facilities at the Convoy Point headquarters area. It is intended that the updated plan will guide management and use of the park for the next five to ten years.

Major portions of the proposed plan define comprehensive programs for the management of the park's natural and cultural resources, designed to protect park values from the imminent threats perceived by Congress. Lying immediately adjacent to metropolitan Miami and between two heavily developed islands, Key Biscayne and Key Largo, the park receives heavy recreational use, and its waters are also used for major shipping. The park is also influenced by nearby urban, industrial, and agricultural activities that place ever greater demands on the natural system with potential for effects that reach inside the park boundary. Major threats to the park's resources include

- removal of coastal mangroves, dredge and fill operations, or other disruption of coastal wetlands for residential and industrial development

- disruption and decrease of overland flows of freshwater created by the South Florida Water Management District's drainage canal and salinity barrier system



# REGION

Biscayne National Park / Florida

United States Department of the Interior / National Park Service

chemical and organic pollution of the bay and wetland waters by agricultural and urban wastes originating adjacent to park lands

damage caused by boaters, including propeller scarring of bay-bottom grass beds and destruction of coral by anchor and boat use

potential oil spills from commercial shipping on the Intracoastal Waterway, Hawk Channel, and offshore shipping lanes

increased air pollution caused by urban and industrial expansion in the region surrounding the park

potential radiation contamination of portions of the park by a major accident at the adjacent Turkey Point nuclear power plant

continued spread of exotic plant and animal species, which displace native vegetation and wildlife

potential depletion of native fish and invertebrate populations due to sport fishing and sponging, lobstering, and other commercial fishing

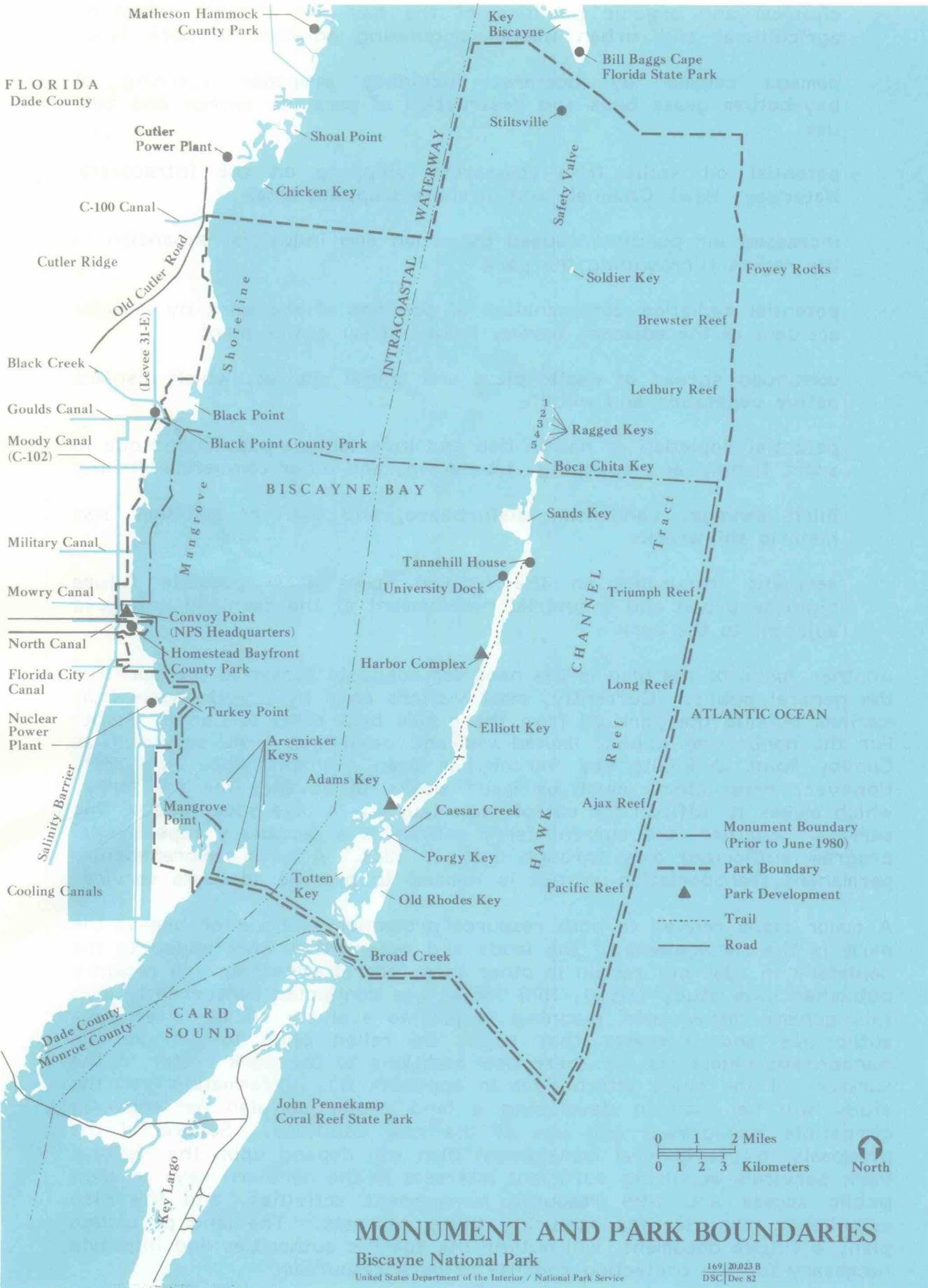
illicit salvage, vandalism, disturbance, and theft of artifacts from historic shipwrecks

aesthetic intrusions on the natural scene from possible future highrise urban and industrial development of the mainland and keys adjacent to the park

Another focus of the plan is the need for adequate access to the park for the general public. Currently, most visitors come by private boats from marinas outside the park or from the public boat ramp at Convoy Point. For the nonboating public, limited weekend passenger ferry service from Convoy Point to Elliott Key Harbor has been available since July 1981. However, reservations must be made weeks in advance for the ferry, which makes it difficult for out-of-state tourists to take advantage of this service. Further, the current ferry service is a temporary experimental program authorized only through July 4, 1983. A more comprehensive, permanent transportation system is needed to provide adequate service.

A major issue related to both resource protection and visitor use of the park is the management of the lands and waters that were added to the boundary in 1980 but remain in other than federal ownership. A recently published case study (USDI, NPS 1982a) was conducted concurrently with this general management planning project to evaluate all the alternative authorities and interests that might be relied upon to achieve the management objectives for these new additions to the park (refer to the summary of the study alternatives in appendix D). Information from the study will be used in developing a land protection plan for ensuring compatible management and use of the new additions. Several of the proposals in the general management plan will depend upon the National Park Service's acquiring sufficient interests in the northern keys to allow public access and NPS resource management activities, and the plan establishes priorities for acquiring these interests. The land protection plan, a future document, will outline the specific authorities and interests necessary for the protection and use of park resources.

FLORIDA  
Dade County



- Monument Boundary (Prior to June 1980)
- - - Park Boundary
- ▲ Park Development
- Trail
- Road

0 1 2 Miles  
0 1 2 3 Kilometers  
North

# MONUMENT AND PARK BOUNDARIES

Biscayne National Park  
United States Department of the Interior / National Park Service

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## BRIEF DESCRIPTION OF THE PARK

Biscayne National Monument was established in 1968 "in order to preserve and protect for the education, inspiration, recreation, and enjoyment of present and future generations a rare combination of terrestrial, marine, and amphibious life in a tropical setting of great natural beauty" (PL 90-606). The monument was expanded in 1974 (PL 93-477), and again in 1980 (PL 96-287), when it was redesignated Biscayne National Park. The complete legislation for the park is reprinted in appendix A. The park boundary shown on the maps in this document is the same as that shown on boundary map #169-90,004, dated May 1981. This map is a slight revision of the boundary map referred to in the enabling legislation, #169-90,003, dated April 1980.

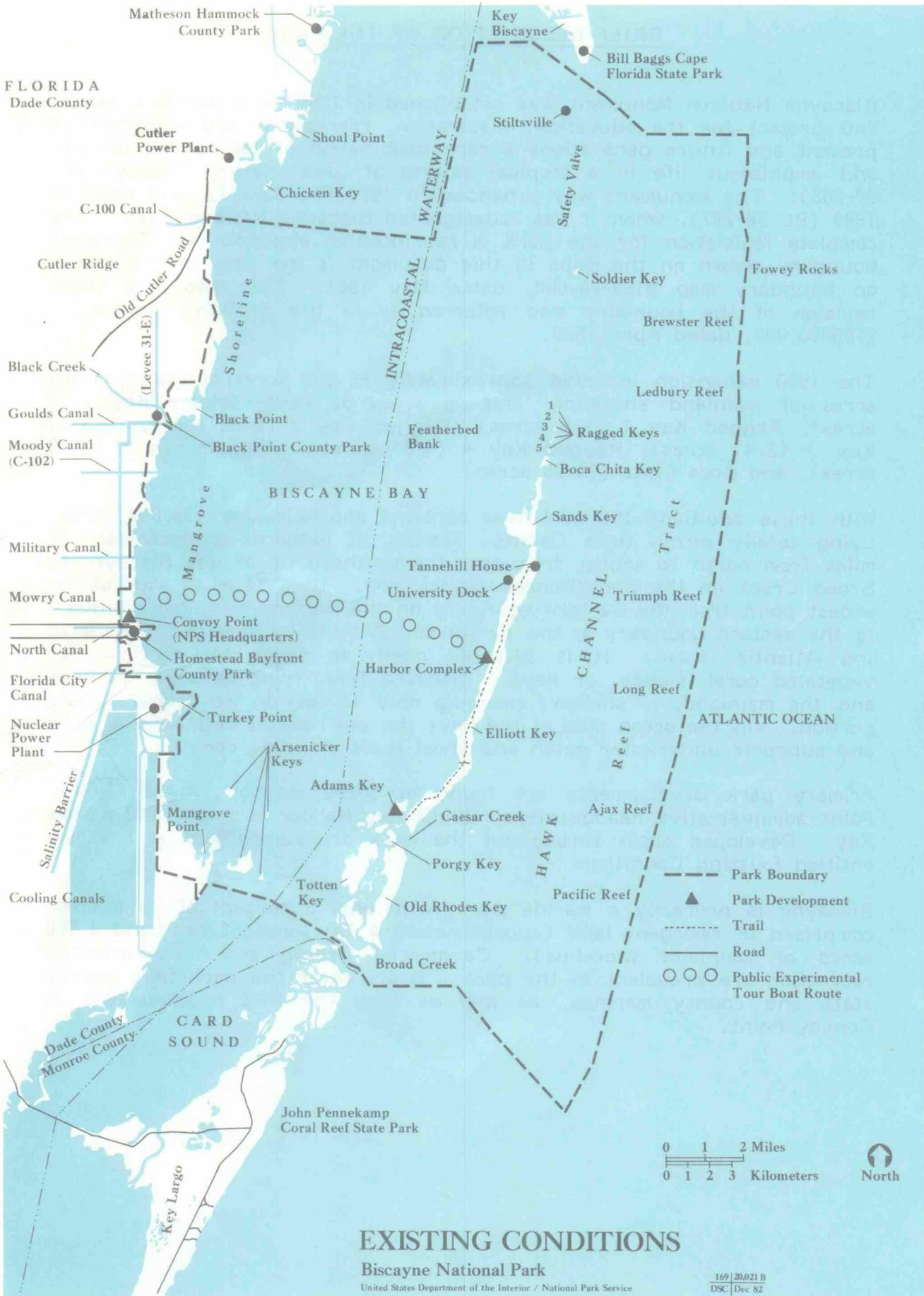
The 1980 expansion included approximately 66,500 acres of water, 4,500 acres of mainland shoreline, and 49 acres of keys--Soldier Key (3.5 acres), Ragged Key 1 (1.5 acres), Ragged Key 2 (0.52 acre), Ragged Key 3 (3.41 acres), Ragged Key 4 (4.31 acres), Ragged Key 5 (6.88 acres), and Boca Chita (28.86 acres).

With these additions the park now contains approximately 175,000 acres. Lying totally within Dade County, Florida, it extends approximately 22 miles from north to south, from near the southern tip of Key Biscayne to Broad Creek on the Dade/Monroe county line. It is 14 miles wide at the widest point from the western boundary on the mangrove-fringed mainland to the eastern boundary at the 10-fathom (60-foot) bathymetric contour in the Atlantic Ocean. It is bisected north to south by a string of vegetated coral islands, or keys. Biscayne Bay, lying between the keys and the mainland, is shallow, reaching only 13 feet in its deeper middle portion. On the ocean side of the keys the sea remains relatively shallow and supports underwater patch and shoal reefs of living coral.

Primary park developments are found at three locations: the Convoy Point administrative headquarters, Elliott Key Harbor complex, and Adams Key. Developed areas throughout the park are summarized on the map entitled Existing Conditions.

Biscayne is primarily a marine park, with only 5 percent of its surface comprised of emergent land (approximately 4,300 acres of keys and 4,500 acres of mainland shoreline). Commercial fishing and water-oriented recreation are prevalent in the park. Boats enter the park from nearby state and county marinas, as well as from the NPS headquarters at Convoy Point.

FLORIDA  
Dade County



# EXISTING CONDITIONS

## Biscayne National Park

United States Department of the Interior / National Park Service

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## EXISTING CONDITIONS

### Convoy Point

Administrative headquarters/visitor contact station  
Picnic tables  
Visitor and staff parking areas  
Tour boat/NPS boat basin  
Public boat ramp  
Maintenance and storage area  
Employee residences  
Field laboratory/dive locker

### Porgy Key

Private residence, life estate

### Adams Key

Public/NPS boat dock  
Adaptively used buildings  
    School group interpretation facility  
    Employee residences  
    Ranger station  
Picnic tables  
Sun/rain shelter  
Foot trail

### Elliott Key Harbor

Visitor information/interpretation/ranger station  
Toilet facilities  
Picnic tables  
Sun/rain shelter  
Campsites  
Snorkeling/swimming area  
Interpretive trail  
Public/NPS boat harbor  
Utility dock  
Maintenance area  
Employee residences

### University Dock

Public/NPS boat dock  
Picnic tables  
Swimming beach  
Anchorage area

### Tannehill House

Private residence, renewable special use permit

### Boca Chita (private ownership)

Boat basin  
Ornamental light tower and other structures  
Shoreline bulkhead

### Ragged Key 5 (private ownership)

Stilt house and adjacent structures  
Boat docks (in disrepair)  
Sunken houseboat

### Ragged Key 3 (private ownership)

House and adjacent structures  
Boat slip  
Shoreline bulkhead

### Ragged Key 1 (private ownership)

Boat dock (in disrepair)  
Ruins of recent structures  
Shoreline bulkhead

### Soldier Key (private ownership)

Cabin and associated structures  
Boat slip with dock  
Sunken houseboat and sailboat

### Stiltville

15 buildings on stilts and one group of  
radio transmission towers over water,  
leased by state of Florida to private  
individuals

### Bay and Reef Tract

Markers for boater safety, user area designation,  
resource protection, and interpretation

All other areas shown on map within park  
boundary have no manmade development

## PROPOSAL AND ALTERNATIVES ADDRESSING THE ISSUES

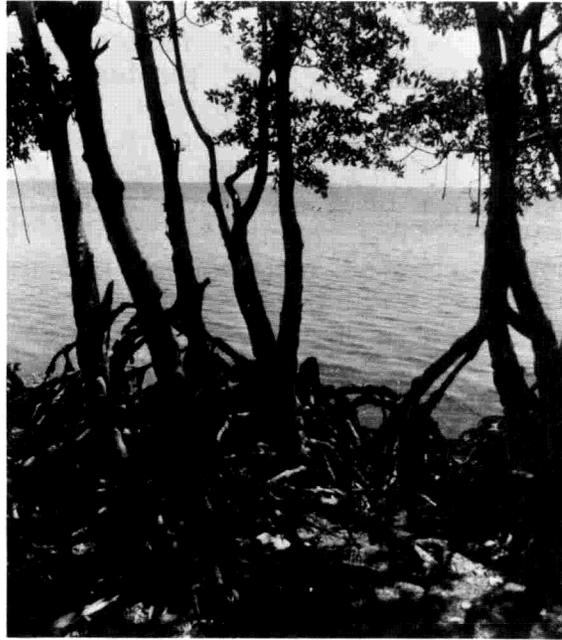
### PLANNING PERSPECTIVE

A reconnaissance of public use areas along Florida's eastern coastline reveals Biscayne National Park's unique character and importance in preserving a remnant profile of relatively pristine estuarine and marine environments. It is the only such area to comprise a complete natural profile including a mangrove shoreline on the mainland, a shallow bay with diverse bottom communities, a chain of mostly undeveloped coral keys, and living coral reefs (the northernmost in the United States). This intact environmental profile makes Biscayne National Park a nationally as well as regionally significant resource.

The park, at present seen by so few although close to so many, holds for all an opportunity to experience an island and underwater world of sights and sounds that are most often associated with far-away places. If this estuarine/marine system is properly used and protected, and if natural processes are sustained, then the park's clear waters will continue to provide a window on the beauties and mysteries of the coastal marine environment for the enjoyment of future generations. This is the intent of the plan.

In recognition of the distinct sensitivities and recreational and educational opportunities inherent in the environmental profile of the park, the park has been divided into four planning units: the mainland, the bay, the barrier system, and the reef tract. Management objectives have been established for each of these units, based on their particular resource characteristics and opportunities for compatible uses.

The Mainland. Most of the mainland shoreline within the park consists of mangroves. Preservation of the mangrove buffer is important to the health of all the park units because the mangroves filter out pollutants while contributing valuable nutrients to the bay. The mainland unit provides wildlife habitat, including important bird rookeries, and is also critical to various marine populations. Apart from the headquarters facility at Convoy Point and the county's marinas at Homestead Bayfront and Black Point parks, the only development that now penetrates the mangrove shoreline within the park is drainage canals. Over most of the shoreline, dense vegetation overhanging the water's edge bars human entrance and gives water-bound visitors a sense of what the southern Florida coast was like prior to development.



The objective for managing the mainland is to preserve it in its natural state (except for the existing headquarters site at Convoy Point) and to help visitors understand the important ecological role served by the virtually unbroken mangrove shoreline.

The Bay. Within the clear waters of the bay, dense beds of turtle grass and patches of algae, sponges, and soft coral nurture a diverse collection of other marine and estuarine life. The bay is an essential nursery for spiny lobster, pink shrimp, and several gamefish, and the rich biotic community supports an important commercial and sport fishery. The bay's water is relatively clean in spite of the constant threat of pollution from mainland industrial, agricultural, and urban sources. Shipping plies the center of the bay along the Intracoastal Waterway, and the sheltered water provides a wide range of recreational uses, including sailing, motorboating, waterskiing, swimming, and snorkeling, and fishing. The bay's broadness and shallowness make it excellent for anchorage as well as adventure and discovery.



The objective for managing the bay is to allow established recreational and commercial activities to continue with controls necessary to guarantee the protection of marine species, water quality, bay-bottom communities, and visitor safety.

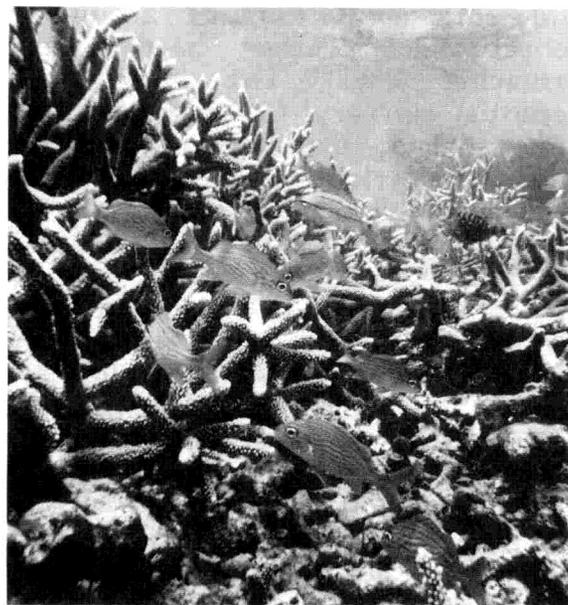
The Barrier System. The barrier system is a relatively remote fossil coral reef. From pirates and presidents to fish and fowl, natural and cultural history abound on the keys, inviting visitors to explore man's use of the islands and tidal creeks. The northern portion is mostly covered with water, but the mudflats and tidal channels of a shallow area known as the Safety Valve still constitute a distinct transition between the Atlantic Ocean and Biscayne Bay. To the south stretches a long line of low keys--some small and obviously altered by man, some larger and densely vegetated. Below Adams Key, the line of keys widens but is more frequently broken by narrow, winding creeks and lagoons.



A feeling of mystery prevails in these constricted waterways, and although a glimpse of pirates is anticipated around every curve, only wildlife is encountered.

The objective for managing the barrier system is to retain its natural character, providing the opportunity for visitors to explore undeveloped subtropical keys and the waterways winding through them, and to use the existing developed areas to provide support facilities for the park's major interpretive messages and basic visitor services.

The Reef Tract. The clean warm waters of the shallow sea beyond the barrier system foster living coral and the many other forms of colorful marine life that find shelter and food among the coral communities. Biscayne National Park includes the northernmost living patch reefs of the United States as well as shoal reefs that parallel the park's eastern boundary. Seen from above, this unit looks like a patchwork quilt, providing a kaleidoscope of greens and blues. From the surface, water and a limitless horizon pervade the visitor's experience. Below the surface, one journeys to a different world for a brief encounter with color, form, and movement alien to everyday life. Remains of sunken ships are scattered throughout the reef tract.



The objective for managing the reef tract is to preserve its cultural and natural resources and to provide a meaningful and safe surface and underwater experience for visitors.

## BRIEF COMPARISON OF THE PROPOSAL AND ALTERNATIVES

Four alternatives were considered in arriving at the proposal. Refer to the "Environmental Consequences" section for a description of the alternatives and a comparative analysis of the proposal and alternatives. Briefly, the proposal and all of the alternatives include similar strategies for the management of the park's natural and cultural resources. The differences among them involve the extent and character of visitor use within the park and the kinds and levels of development required.

Alternative 1 (the no-action alternative) represents the continuation of existing park programs with no major new federal expenditures and no public transportation system. Alternative 2 represents the programs and developments called for in a 1978 plan for the national monument. Neither alternative directly addresses the management of lands and waters added to the park by the 1980 expansion, but they offer a valuable perspective on current conditions and past planning directions.

Alternatives 3 and 4 present the practicable range of recreational and interpretive services and associated facilities that could be provided. Alternative 3 (the minimal requirements alternative) minimizes visitor services and limits access for the nonboating public to reduce development and operational costs and to avoid intrusions on the park's natural environment. Conversely, alternative 4 expands visitor access and development for visitor use.

The proposal, which constitutes the National Park Service's proposed general management plan, incorporates some aspects of each alternative, but it can most closely be characterized as a compromise between alternatives 3 and 4. Like these two alternatives, it allows for public use of the entire national seashore, including the newly authorized areas, thus satisfying the legislative intent of the park's expansion. Also like both these alternatives, it expands the park's interpretive program to foster an understanding and appreciation of its natural and cultural values. Unlike alternative 3 but like alternative 4, the proposal provides access for the nonboating public to all the park's environments by including regularly scheduled daily transportation services to the keys and the reef tract. The level of development in the proposal lies between what is called for in alternatives 3 and 4. The proposal expands upon alternative 3 by including visitor facilities on Boca Chita to make it a usable daytime recreation area and by including improvements to administrative and maintenance facilities needed to support more extensive use of the park. But the proposal cuts back on alternative 4 by excluding those additional facilities that are not essential for a quality visitor experience and that tend to intrude upon an appreciation of the natural environment.

### PROPOSAL

#### Public Access and Transportation

Water transportation is the key to discovering Biscayne National Park. If the park is to become something more than a local park or recreation

area, a public transportation system will be necessary to make a basic park experience possible for the large segment of the public who do not own boats. The proposed system will provide an opportunity for all visitors to go beyond Convoy Point and to gain a meaningful appreciation and understanding of the four primary environments that comprise Biscayne National Park.

Operating specifics of the system, such as the design and capacities of tour boats, number of trips per day, and departure times will be determined at a later date, but the following concept is desired. A 50-passenger tour boat will pick up passengers at the NPS headquarters site at Convoy Point and carry them to Elliott Key Harbor and back. It will be of special design, with a shallow draft to allow navigation of the canal at Convoy Point and the entrance to Elliott Key Harbor during most tidal conditions, and it will be equipped with an audio system to aid in interpretation and visitor safety.

Smaller boats, also based at Convoy Point, will provide public interpretive tours of the major creeks south of Adams Key and snorkeling trips through Caesar Creek to the coral reef. If feasible, the smaller boats will be designed with glass windows in the bottoms to permit viewing of subsurface features. These boats will stop at Adams Key, where interpretive presentations will specifically relate to the coral reefs, the lower keys, and the cultural history of the immediate area. The National Park Service realizes that this concept may have to be modified, and the flexibility to do so (for example, to base smaller boats at Elliott Key Harbor rather than at Convoy Point) is allowed by the general management plan.

In order to estimate the size of the parking lot at Convoy Point and to assist in determining a social carrying capacity for Elliott Key Harbor and Adams Key, assumptions have been made about the capacity of the tour boat system, as shown in table 1.

Table 1: Carrying Capacity of Tour Boat System

	<u>Boat Tour to Elliott Key</u>	<u>Interpretive Tour to Creeks</u>	<u>Snorkeling Tour to Reef Tract</u>
Number of boats	1	2	2
Number of passengers/boat	50	20	8
Number of trips/day/boat	4	3	3
Number of passengers/day	200	120	48

It is preferred that the public tour boat system be operated by a concessioner. The question remains, however, whether or not the system can be operated at a profit. A recent study (USDI, NPS 1982d) tentatively estimates that a tour boat to Elliott Key would have to run two trips per day, 292 days per year, with an average of 24 passengers paying \$6 to \$10 (\$3 to \$6 for children) per trip to operate at a slight

profit. This estimate was based on the assumption that a new 50-passenger tour boat will cost about \$300,000. Similar estimates for the smaller tour boats, based on costs of \$20,000 to \$25,000 for an 8-passenger boat and \$70,000 to \$75,000 for a 20-passenger boat, indicate that the cost of the interpretive tours to the southern creeks and the reef tract will require passenger fees of \$10 to \$15.

The report emphasizes that there is insufficient background information to provide an accurate economic projection and that the experimental free system currently in operation does not provide a sufficient data base for estimating the viability of a system that will require a passenger fee. Since Biscayne National Park is near a large metropolitan center and in a popular winter resort region, it is expected that there would be a demand for the tour boat system the year around. Nevertheless, the economic success of such a system at Biscayne National Park cannot be guaranteed.

Because of the uncertain economic feasibility of the tour boat system, the following approach to implementing the system is proposed: The National Park Service will issue a concession permit to operate the tour boat system for not more than two years initially. This will give the Park Service the type of information needed for future concession plans. Although it is preferred that all of the tour boats be based at Convoy Point, the concessioner will be allowed the flexibility to base the smaller tour boats at Adams Key or Elliott Key Harbor if it is an economic necessity. If during this experimental period it is found that a concessioner cannot profitably operate the tour boat system, a nonprofit foundation will be sought to operate it. Failing this, the system would either have to be subsidized or be abandoned. Limited NPS-operated weekend ferry service to Elliott Key, with a passenger fee, would be considered. If the tour boat system was abandoned, the park would again be used primarily by those who own boats, as has been the practice since Biscayne was designated a national monument in 1968.

In addition to the tour boat system, the National Park Service will consider additional permits for concessioner-operated charter boats. The nonboating public will also be served at Homestead Bayfront County Park, where Dade County plans to have rental canoes, sailboats, and small motorboats available by 1983.

Most of the people who visit the park will continue to arrive by water in private boats. When the National Park Service acquires sufficient interest in the newly authorized areas on the mainland, Soldier Key, Ragged Keys, and Boca Chita, the public will be allowed to land on any upland within the park boundary (excluding the private residences on Porgy Key and at Tannehill on Elliott Key and any areas placed off-limits to protect sensitive resources such as nesting sea turtles or birds). However, the only docking facilities provided by the Park Service will be at Boca Chita, University Dock, Elliott Key Harbor, and Adams Key.

For the immediate future, visitors will continue to be able to launch trailered boats at the Convoy Point ramps. When new boat ramps are constructed at adjacent Homestead Bayfront County Park in 1984, the ramps at Convoy Point will be closed to public use.

## Visitor Use and Interpretation

The park will remain a significant recreational resource for the south Florida region, where residents and tourists can enjoy a great variety of water-oriented activities. This use of the park will be integrated with a comprehensive program of interpretation that will provide national and regional visitors the opportunity to learn about the park's extraordinary marine and terrestrial environments. Specifics of the park's interpretive program will be described in an interpretive prospectus that will be written at a later date.

Much of the park lies hidden in an underwater world that is alien to man. Interpretive efforts will strive to reveal the mysteries of this world by providing opportunities for visitors to see for themselves some of the plants and animals that inhabit these environments and to watch them in their natural settings. Beyond this, interpretive programs will relate the importance of the marine resources to man, recognizing that to a large extent all life is dependent upon the sea. Visitors will be encouraged to enjoy the underwater environments, and to participate in the preservation of marine resources, by offering them information and instruction on educational and recreational pursuits.

The terrestrial resources afford their own fascination. People have sporadically inhabited the keys since at least 500 B.C., but most traces of human activity have been erased by persistent natural forces. Because the islands remain virtually undeveloped, they have become a haven for birds and animals that have been displaced from their natural habitats by development on the mainland and along the rest of the Florida keys. These and other aspects of the complex interrelationship between man and nature will be dealt with in the interpretive program.

Visitor use and interpretation will be closely correlated with the major terrestrial and marine environments in the park. By visiting both Convoy Point and Elliott Key, visitors will have an opportunity to participate in a variety of interpretive programs and activities. Visitors with the time and desire to meet the park on more intimate terms may do so by taking the public tour boats to the lower keys for an interpretive tour or to the reef tract for snorkeling. This will allow visitors to experience the four park environments.

The Mainland. The National Park Service recognizes the need to conserve the natural values of the mangroves and wetlands along the shore. To protect these sensitive environments, visitor activities will be confined to Convoy Point and the canal spoil banks.

Convoy Point will be redesigned to serve as the park's major orientation and information center and the entry point for nonboating visitors. Interpretive programs will highlight the park's significance, orient visitors to the remnant profile represented by the park environments, and inform visitors of the various activity options, skill requirements, and hazards associated with discovering this park. A short interpretive boardwalk along the shore and an interpretive canoe trail will help visitors understand how this shrinking resource--the mangrove shoreline--contributes to the health of the bay. Guided bay tours on a

PROPOSED VISITOR USE AT BISCAYNE NATIONAL PARK

MAINLAND

BAY

BARRIER SYSTEM

REEF TRACT



fishing from spoil banks  
along dredged canals  
canoeing along shoreline

**At Convoy Point**

large tour boat to Elliott  
Key Harbor  
smaller tour boats with  
glass bottoms to reef  
tract for snorkeling  
and to lower keys for  
guided tour  
picnicking  
park orientation/  
interpretation  
guided glass-bottomed  
barge tours of bay  
interpretive boardwalk  
through mangrove fringe  
other interpretive programs  
bird watching

fishing  
snorkeling  
swimming  
wading  
motorboating  
waterskiing  
sailing  
boat camping  
bird watching  
scuba diving

fishing  
hiking  
exploring the upland  
exploring the creeks  
and channels  
beachcombing  
bird watching  
backcountry camping

**At Adams Key**

boat docking  
picnicking  
interpretive trail (guided  
and self-guided)  
interpretive exhibits  
school group interpretation

**At Elliott Key Harbor**

boat docking  
picnicking  
interpretive trail (guided  
and self-guided)  
interpretive exhibits  
guided glass-bottomed  
barge tours of bay  
swimming  
wading  
guided snorkeling in bay  
other interpretive programs  
designated camping

**At University Dock**

picnicking  
sunbathing on sandy beach  
swimming  
wading  
boat docking and mooring

**At Boca Chita**

boat docking  
picnicking  
interpretive exhibit  
sightseeing from tower

snorkeling over coral  
reefs and shipwrecks  
scuba diving  
fishing  
motorboating  
sailing

glass-bottomed barge will help visitors appreciate the underwater communities in the bay. Other visitor activities will include picnicking and bird watching, and sightseeing and fishing along the jetty. Docking and equipment rental facilities for canoeing, sailing, and motorboating will be available at the adjacent Homestead Bayfront County Park. Canoe rentals will also be available at Black Point County Park.

Homestead Bayfront County Park can be characterized as an active recreational area with no interpretive programs. The visitor use area on the National Park Service side of Convoy Point will be characterized as more passive. It is important, therefore, that the public tour boat system for the national park be based at the National Park Service facility, where visitors will receive an interpretive introduction and orientation to the park in more quiet surroundings.

Visitors with sufficient time and energy can board a small tour boat that will take them on a guided interpretive snorkeling excursion to various points along the reef tract. Interpreters aided by such devices as waterproof interpretive cards will serve as guides to open the door to a meaningful and safe exploration of the reefs. Visitors may also choose to board a larger boat or barge for a guided interpretive trip through a maze of islands and tidal creeks associated with Totten and Old Rhodes keys. An abundance of birdlife and the mosaic patterns created by the meandering creeks and encroaching vegetation provide a perfect setting for portraying the ecological and human history stories of the islands.

The number of people that can be expected to be at Convoy Point at any one time will depend primarily on the schedules of the tour boats. An expected high number of people will occur if three tour boats return from Elliott Key Harbor, the reef tract, and the lower keys at the same time, with full loads of people, and three more full loads are waiting for the next tours. This will total 156 people. An additional 30-44 visitors can be expected to arrive by car or boat out of curiosity or to use the various visitor facilities at the site. Thus, a total of 200 visitors can be expected at Convoy Point at any one time. They will probably distribute themselves throughout the site as follows: visitor contact pavilion, 30-50; picnic area, 30-50; boardwalk, 10-20; jetty, 10-20; random open space, water's edge, restrooms, parking lot, and dock, 40-60. This high number of people will be at Convoy Point for only a relatively short time when the tour boats depart. Most of the time, Convoy Point will have less than 50 visitors and will be relatively quiet.

There will be pedestrian access from the existing road along the salinity barrier (levee 31-E) to the other canal spoil banks along the mainland for fishing and sightseeing. Vehicular traffic will no longer be allowed on the spoil banks, but parking areas will be designated nearby.

The Bay. Recreational uses, including motorboating, sailing, waterskiing, boat camping, sportfishing, snorkeling, and swimming, will continue, with restrictions imposed to protect marine species, water quality, bottom communities, and visitor safety and to minimize visitor use conflicts. Selected shallows and biologically sensitive areas will be marked by buoys and placed off limits to boaters, and additional areas will be closed to waterskiing. Brochures will advise visitors of the shallow and restricted areas.

The Barrier System. Except for a few development sites, the keys will be maintained as natural areas. Day use will generally be allowed anywhere the National Park Service has sufficient interest in the lands--the exception being if part of the islands are placed off limits to protect sensitive resources such as nesting sea turtles or birds. Backcountry camping will be managed under a free permit system.

Elliott Key Harbor will be the primary destination for the 50-passenger tour boat out of Convoy Point, one of the primary destinations for private boaters, and the major interpretive center in the park. The visitor experience will be characterized as "interpretation through participation." Glass-bottomed barge tours of the bay, snorkeling lessons and tours, and guided and self-guided interpretive trails will bring visitors into contact with the resources of the bay, the barrier islands, and the shoreline edge of the outer reef tract. Park interpreters will describe the human history--a story molded by the events of this changing environment. For the many visitors who will not have a first-hand opportunity to dive and explore the underwater world of the reef tract, an audiovisual/exhibit presentation at the visitor information/orientation pavilion will bring them as close as possible to an experience with this northernmost extension of a living coral reef. The harbor will also continue to be a popular recreation destination, offering facilities for private boat docking, picnicking, swimming, and camping. Camping on land at Elliott Key Harbor (as opposed to boat camping) tends to be an off-season activity and does not compete with other uses of the harbor complex during the peak summer season. This use pattern occurs mainly because the mosquitoes and other biting insects that cause discomfort to campers are especially bad during the summer.

The visitor carrying capacity of Elliott Key Harbor is limited by social factors more than natural environmental factors because the impact of visitors on the natural environment is expected to be insignificant. The social carrying capacity, or the number of people that the harbor complex can accommodate at any one time without adversely affecting the visitor experience, is quite subjective since it is a function of visitors' perceptions. People who go to Elliott Key Harbor, either by tour boat or by private boat, will usually know beforehand that it is the most developed area on the keys and is designed for relatively intense visitor use. They will therefore be more tolerant of crowds of people. Visitors will tend to disperse themselves throughout the complex. Based upon observations and recent experience with park visitors, a reasonable social carrying capacity is estimated to be 370 people, distributed as follows: visitor contact pavilion, 30-50; swimming area, 75-100; picnic areas, 50-100; boat slips, 30-50; hiking trails, 20-30; random open space, water's edge, and restrooms, 30-40. The number of visitors at the harbor complex at any one time is expected to not exceed 362 people, based on the following assumptions: 50 people per tour boat, 4 trips per day, 75% at the complex at any one time = 150; 66 private boats, 3.2 people per boat = 212. This high number would occur on only a few weekends throughout the year, since past visitor use has shown that the harbor gets very little use by private boaters on weekdays.

Adams Key will be maintained as a secondary day use area for the boating public and as a site for school group interpretive programs. Boat docking and picnicking will be available, and there will be trails for guided and self-guided interpretive walks. Interpretive exhibits will emphasize the natural history of the coral reefs and the creeks and keys south of Adams Key, and the cultural history of the immediate area.

The social carrying capacity at Adams Key is less than at Elliott Key Harbor because the available area is much smaller and supports fewer visitor activities and facilities. The social carrying capacity at Adams Key is estimated to be 130 people, based on the following distribution: dock, 5-10; school group interpretive program, 10-20; indoor exhibits, 8-15; outdoor exhibits, 8-15; picnic area, 15-35; hiking trail, 10-20; random 10-15. However, the number of visitors at Adams Key at any one time is expected to not exceed 102 people, based on the following assumptions: 2 scheduled tour boats to the coral reef with 8 people per boat = 16 (relatively short stays); 2 scheduled tour boats to the lower keys with 20 people per boat = 40 (relatively short stays); 8 private boats with 3.2 people per boat = 26; school group for interpretive program = 20. In reality, the number of people will be less than 102, because the four tour boats will probably not be at Adams Key all at the same time. Visitors to Adams Key as part of boat tours and school groups will probably be more tolerant of this number of people than private boat visitors. If private boaters want to visit the island under less crowded conditions, they will be able to determine in advance what days school groups will be on the island, and when the tour boats are scheduled to be there. They can then plan their visits accordingly.

The swimming area at University Dock on Elliott Key--which is one of two sandy (coral sand) swimming beaches in the park--will continue to be designated, and overnight boat anchorage (boat camping) will continue to be allowed offshore. Overcrowding is not expected to be a problem and will be self-regulating.

When the National Park Service acquires the necessary interests in Boca Chita, the island will become a major day use harbor and recreation area for private boaters. Facilities will be available for boat docking and picnicking, and the ornamental light tower (not a true lighthouse) will be open to the public as an elevated place where visitors can view many of the features of the park.

The social carrying capacity at Boca Chita will be relatively high for a small island, due to its openness and the nature of the recreational day use for which it is intended. The carrying capacity is estimated to be 200 people, distributed as follows: picnic area, 50-100; harbor side, 30-50; random, 30-50. The number of visitors at any one time will depend on the design of the docking facilities in the harbor, which can accommodate an estimated 30 boats (18- to 25-foot class) along the existing bulkhead, or approximately 60 boats if slips are provided. Based on the average of 3.2 people per boat, the number of visitors expected at Boca Chita at any one time will not exceed 192.

The Reef Tract. The reef tract will be managed to allow continued dispersed water recreation, including motorboating, sailing, sportfishing,