

Biscayne National Park



South Atlantic Fishery Management Council
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Florida Fish and Wildlife Conservation Commission

This presentation is an overview of the Biscayne National Park (BNP) management plans in relation to fisheries management and the Florida Fish and Wildlife Conservation (FWC)'s role in managing the fisheries resources within the park.

Biscayne National Park



- Within sight of Miami – Nearly 2.5 million residents
- 95% covered by water
- Easily accessed from 4 public marinas and boat ramps
- Hosts over 500,000 visitors per year
- Management and environmental challenges
 - Proximity to urban areas
 - Reduced water quality
 - Marine debris
 - Vessel groundings
 - Fishing pressure



BNP is a marine park located in highly urbanized Miami-Dade County in Southeast Florida. Park waters are within sight of downtown Miami, which is home to nearly 2.5 million residents and visited by an additional 8 million people, annually. The park encompasses most of Biscayne Bay, spanning from north of Key Largo to just south of Key Biscayne, as well as a series of islands and a stretch of natural areas along the mainland border of the bay, including park headquarters, located near Homestead.

Ninety-five percent of the park's 173,000 acres are covered by water, including coral reefs, sandy shoals and a largely undeveloped mangrove shoreline. Biscayne Bay itself is relatively shallow, with an average water depth of six feet. However deeper waters are found in the park, including Hawk Channel and the reef tract running north-south in the Atlantic Ocean waters along the eastern edge of the park, beyond the keys. The vast waters of BNP can be easily accessed from both public and private facilities, with four nearby public boat ramps and marinas launching an average of 62,000 boats annually.

BNP hosts at least 500,000 visitors per year, though this number is most likely an underestimate, given the difficulty of quantifying the number of visitors that access the park by water. BNP park managers face a variety of management and environmental challenges stemming from the park's proximity to highly-developed urban areas, including reduced water quality, marine debris, vessel groundings and fishing pressure.



Biscayne National Park Cont.

- 173,900 total acres
 - 91% state waters, 8.8% federal waters
- 1968: Became a national monument
- 1980: Became a national park and expanded to current size
 - FWC maintains authority over fishing regulations in these areas (shown in orange cross-hatch)



BNP was originally established by the U.S. Congress as a national monument in 1968 “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.” When the monument was first established, both Congress and the NPS recognized the importance of the park waters to the livelihood of commercial fishermen within the Miami area, as well as their importance to recreational fishing. The Department of Interior and the NPS provided testimony to Congress that the [then current] commercial fisheries could be allowed within the park, but that commercial activities should not be expanded beyond the levels at which they were conducted at the time the monument is authorized. Subsequently, the monument’s enabling legislation stated, “The waters within...shall continue to be open to fishing in conformity with the laws of the State of Florida except as the Secretary, after consultation with appropriate officials of said State, designates species for which, areas and times within which, and methods by which fishing is prohibited, limited or otherwise regulated in the name of sound conservation or in order to in order to achieve the purposes for which the national monument was established”. Therefore, while FWC fishing regulations do apply within the waters of the original monument, those regulations can be modified by the U.S. Secretary of Commerce.

In 1980, the monument was re-designated as a national park, in recognition of the “unique and special values” of the resources within the park, as well as the “vulnerability of these resources to destruction or damage due to easy human access by water.” At that time, the boundaries of the new national park were expanded to encompass additional lands and waters donated by the state of Florida. The enabling legislation at that time stated that these additional lands and any others acquired after that date were bound by Florida state laws and regulations. Thus the fishing regulations within northern and southern extremes of the park are under the full authority of the FWC.

Diverse User Groups

- Recreational and commercial fishing
 - Flats fishing
 - Fishing for reef fish
 - Fishing for pelagics
 - Lobstering
 - Commercial shrimping, trapping, and ballyhoo fishing
- Recreational diving
 - Coral reefs
 - Historical ship wrecks
- Recreational boating and kayaking
- Hiking and birding



As is often the case when it comes to Florida's natural resources, BNP hosts a variety of diverse user groups who sometimes have competing interests. BNP waters are important to both recreational and commercial fisheries. The private and for-hire recreational sectors frequent park waters to fish the flats, target reef fish and pelagic species, and to dive for lobster. BNP waters also support a variety of commercial fishing activities, which include the food shrimp industry that uses roller-frame trawls, lobster and stone crab trap fisheries, and the commercial ballyhoo fishery that uses surface-skimming lampara nets to harvest this very popular bait species from the waters at least one mile offshore, where their large nets can legally operate.

The coral reefs and historical ship wrecks inside the park also draw large numbers of recreational divers. Other visitors enjoy recreational boating, kayaking, hiking and birding within BNP.

Park Management Plans



- **General Management Plan (GMP)**
 - Overall long-term management and zoning philosophy to address different levels of resource protection and visitor use in various areas of the park
 - No Memorandum of Understanding (MOU) with FWC
- **Fishery Management Plan (FMP)**
 - Long-term plan to balance fishing with protection of natural resources
 - Ensure that fishing can continue to be sustainable
 - Series of MOUs with FWC



There are two separate park management plans that will guide park operations for the years to come. The General Management Plan (GMP) is intended to establish an overall long-term management philosophy about visitor use and activities in the park and is concerned with zoning of the park into areas where different levels of resource protection and recreational activities occur. Although FWC did not have a Memorandum of Understanding (MOU) with BNP in regards to the GMP, BNP consulted with FWC periodically on its development, and staff from both agencies worked in close cooperation on the portions of the plan discussed in this presentation.

The Fishery Management Plan (FMP) establishes a long-term plan to balance recreational and commercial fishing in the park with protection of the park's fisheries resources such that fishing can continue as a sustainable activity for generations to come. This plan is intended to guide fisheries management decisions over five to ten years and was developed, in part, through a series of MOUs with the FWC.

GMP History



- [1983](#): Original GMP
- [2000](#): BNP began development of GMP
- [2001-2003](#):
 - BNP public scoping meetings
 - FMP MOU signed by BNP and FWC stating no-take zones should be last resort
- [2009](#): Public meetings about Marine Reserve Zone (MRZ), a no-take zone
- [2011](#): Draft GMP (included MRZ)
 - Additional public meetings
- [2013](#): Supplemental Draft GMP ([MRZ replaced with Special Recreation Zone \(SRZ\)](#))
 - Additional public meetings
- [June 2015](#): Final GMP published ([MRZ added back](#))
- [Aug 2015](#): Congressional field hearing in Homestead



The park's original GMP was implemented in 1983. In 2000, the park began development of a new GMP, and held several scoping meetings throughout the early 2000s.

In 2002, in relation to the FMP, an MOU was signed between BNP and FWC stating in part that the FWC and park agreed to seek the least restricting actions necessary and that no-take zones should be a last resort option. In 2009, the park held public meetings about including a no-take zone called the Marine Reserve Zone (MRZ) as part of the GMP. A draft GMP was released in 2011 which included this MRZ, and was followed by substantial opposition from the local fishing community. Following the additional feedback received, a Supplemental Draft GMP was released in 2013 which replaced the MRZ with a Special Recreation Zone (SRZ), which allowed fishing access but in a limited manner, and additional public meetings were held. In 2015 however, a Final GMP was released which again included the MRZ. Because of the controversy surrounding the MRZ, a Congressional field hearing was held in Homestead that same year.

FMP History



- 2000: BNP began development of FMP
- 2002: FWC and BNP signed MOU
- 2002 - 2004: Advisory board meetings and public commenting
- 2007: MOU renewed
- 2008: BNP and FWC agreed on a preferred alternative; draft FMP released
- 2012: MOU renewed for 2 years
- 2014: Final FMP released



During the same time, BNP also began developing the FMP in 2000. This development began with BNP staff asking the FWC to actively participate in and collaborate on the plan. This was done in recognition that, because of overlapping authority to regulate fishing, BNP and FWC should work together on fishery resource management by jointly developing a plan and subsequent regulations. The MOU previously mentioned was approved by both agencies in 2002, and included shared goals to work cooperatively on fishery management programs for the park. As part of the agreement, FWC and the park agreed to seek the least restrictive actions necessary, that no-take zones should be a last resort. An advisory board was convened, which held a series of meetings to develop recommendations for the FMP, along with the collection of public comments from 2002-2004. Staff briefed the Commission on the status of the FMP following the release of the Advisory Board recommendations, and again periodically between that time and today. The MOU was renewed for another five years in September 2007.

In 2008, BNP developed a series of alternatives for public consideration and comment. BNP and FWC staff then decided on a preferred alternative for the FMP that will be discussed in the next slides. The draft FMP was then released in 2008. BNP held public workshops in July of 2009. In August 2010, FWC sent a letter from then Chairman Barreto to then Superintendent Mark Lewis confirming the Commission's intent to initiate rulemaking following the approval of the FMP. Staff brought additional updates to the Commission in November 2011, May 2012, June 2012, and November 2013. In October 2012, the FWC and BNP renewed the existing MOU for an additional two years, continuing it through October 2014. The final FMP was released in 2014.

Memorandum of Understanding (MOU)



- Facilitated management, protection, and study of BNP fish resources
- Improved inter-agency coordination
- Recognized management goals inside a national park may be different then elsewhere in the state
- Confirmed that FWC and BNP agree properly regulated fishing will continue within BNP
- Specified that no-fishing zones (marine reserves) should not be considered in the FMP unless less restrictive measures have been tried and failed
- Acknowledged that FWC will play crucial role in implementing and promulgating new regulations
- Last MOU expired October 2014



The MOUs between BNP and FWC were originally developed to facilitate the management, protection and scientific study of fish and aquatic resources within the park by improving communication, cooperation and coordination with the FWC. In the MOUs, the two agencies acknowledge that more restrictive management measures may be necessary within BNP, relative to adjacent state waters to achieve the objectives of a national park. Through the MOUs, the FWC and BNP also agreed that properly regulated recreational and commercial fishing will continue in BNP.

The MOUs also emphasized that the FWC believes no-fishing zones (referred to by the NPS as marine reserves) are overly restrictive and specifies that this type of management measure should not be considered within the FMP unless less restrictive measures have been tried, and have failed to accomplish mutual goals for the park. The Commission's opposition to no-fishing zones has been a point of contention throughout the development of both the FMP and the GMP and the Commission has insisted that this portion of the MOU be retained each time the MOU was renewed.

FMP Management Actions



Goal: Increase abundance and average size of targeted fish and invertebrate species inside BNP by at least 20%

- A suite of changes to FWC's fishing regulations will be considered to achieve this goal
 - Modified size and bag limits
 - Spearfishing limitations: no SCUBA or trigger mechanisms
 - Coral reef protection areas
 - Trap-free zone north and east of park headquarters
 - No-trawl zone within the bay
 - Possible elimination of lobster mini-season
 - Park will consider commercial fishing phase out via a use-or-lose permit



Photo courtesy of Jiangang Luo

The primary actions proposed under the FMP preferred alternative are summarized on this slide. In order to achieve the goal provided in the FMP of increasing the abundance and average size of targeted fish and invertebrate species in the park by at least 20%, FWC will consider changes to the size limits and bag limits for targeted species.

Other potential changes include prohibitions on spearfishing using triggered mechanisms or air such as SCUBA. These spearfishing regulations would be less restrictive than other state parks and sanctuaries in Florida, which largely prohibit spearfishing altogether.

Trap-free zones will also be considered north and east of park headquarters at Convoy point and in various coral reef protection areas, with deployment of any type of traps in these zones potentially prohibited.

Finally, a no-trawl zone will be proposed within the bay and FWC will consider eliminating the two-day recreational lobster sport season (mini season) in the park to protect coral reef habitat from diver-related damage.

The FMP also proposed to slowly phase out commercial fishing in the park via a special use permit issued by BNP. If implemented, this permit would be created by the National Park Service and be a use-or-lose permit issued to current fishers with a history of landings in the park and would be non-transferable. The permit would create a mechanism to phase out commercial fishing when the fishermen currently fishing park waters leave the fishery.

Size and Bag Limit Considerations

Minimum Size Limits		
Grouping	Species Common Name	Proposed Changes
Snapper	Gray snapper	10 → 12" TL
	Lane snapper	8 → 10" TL
	Mutton snapper*	18 → 19" TL
	Schoolmaster snapper	10 → 12" TL
	Yellowtail snapper	12 → 14" TL
Grouper	Red grouper	20 → 24" TL
Hogfish	Hogfish*	no change (16" FL)
Grunt	Bluestriped grunt	none → 10" TL
	White grunt	none → 8" TL
Triggerfish	Gray triggerfish	12 → 14" FL

Bag Limits	
Grouping	Proposed Changes
Major finfish	20 fish aggregate possession per person/per day
Baitfish	100 fish possession per person/per day
Stone Crab	½-gallon claws per person, 1 gallon per vessel (half of current)
Blue Crab	5 gallons per person (half of current)



Science Plan to Monitor Change from FMP Implementation



- Collaboration between FWC and BNP
- Intent: provide recommendations for monitoring targeted fisheries resources within BNP to assess the efficacy of FMP regulations
- Five monitoring and research categories
 - Changes in abundance and size structure
 - Changes in recreational fishing patterns
 - Changes in commercial fishing activity
 - Interpreting responses of fishery species to regulations
 - New monitoring programs for under-studied species



Photo courtesy of Bill D'Antuono



To monitor the changes seen from the implementation of the FMP, FWC and BNP worked collaboratively to develop a science plan. The intent of the science plan is to provide recommendations for monitoring targeted fisheries resources within BNP to assess the efficacy of any FMP regulations. The plan includes five monitoring and research categories, including changes in abundance and size structure, recreational fishing patterns, commercial fishing activity, as well as the interpretations of how fishery species respond to regulations, and new programs for under-studied species.

Science Plan: Targeted Species



- Targeted species prioritized based on existing monitoring framework, likelihood of species responding to management changes, and species knowledge

Tier 1: commonly fished; can be monitored using existing methods		
Gray snapper	Schoolmaster snapper	Bluestriped grunt
Lane snapper	Red grouper	White grunt
Mutton snapper	Hogfish	
Yellowtail snapper	Gray triggerfish	
Tier 2: currently lack adequate data, monitoring, or understanding		
Great barracuda	Cero mackerel	Blue crab
Porgy (Saucereye/Littlehead)	Spiny lobster	Stone crab
Black grouper		



The targeted species for the science plan have been divided into two tiers. The Tier 1 species were considered a priority because they were routinely fished in the park, could be monitored using already existing or easily developable sampling methods, and were deemed amendable to responding to management actions.

The tier 2 species were considered a second priority because they currently lack the adequate monitoring data to measure their responses, and may be added into ongoing monitoring efforts as new methods, staffing, and funding allow.

Science Plan: Measuring Success



Baselines and benchmarks

- **Baselines:** densities, frequencies of occurrences, and average sizes
 - Reef-fish visual census (RVC) data from 2008 - 2018
- **Benchmark:** 20% increases from baselines

Progress reports

- Target species include several slow-growing, long-lived fish
- May take 15 years or longer for results to be achieved
- 3 progress reports planned: 1 completed every 7 years
 - Monitoring activity conducted
 - Management activity status
 - Comparison of baseline and current metrics
 - As applicable, determine whether 20% increase in size and abundance has been met



To measure the success of the FMP's main goal (a 20% increase in the size and abundance of targeted species), baselines and benchmarks were developed using available data. The baselines used in the plan include densities, frequencies of occurrences, and average sizes of legal (or mature if no size limits are established) measured from reef-fish visual census (RVC) data from within the park between 2008 - 2018. The benchmarks for success were then chosen to be 20% improvements from those baselines.

Progress will be measured as an ongoing effort, as some of the target species are slow-growing and may take 15 years or longer for results to be achieved. Three progress reports will be completed once every seven years to measure the ongoing progress. These progress reports will report on the monitoring activity, management activity status, a comparison of baseline and current metrics, and a determination of whether the 20% increases in size and abundance have been met. The reports will also include any appropriate recommendations for adaptive management throughout the ongoing monitoring.

Managing Federal Waters in BNP

- Can Council allow FWC to promulgate fishery rules in federal waters that are consistent with this FMP?
- If the answer is no, then how/when/what will federal rulemaking process be?



Next Steps – 2019

- July 17-18: FWC Commission Meeting (Review and Discussion)
- July - August:
 - Public workshops and stakeholder meetings
 - **Public workshops – August 5th week**
 - Begin development of new MOU
- October 2-3: FWC Commission Meeting (Draft rule)
- December 11-12: FWC Commission Meeting (Final hearing)



Moving forward, our next steps will include a review and discussion presentation at the FWC Commission Meeting scheduled for July 17-18 in Stuart, Florida. FWC staff also plan to conduct public workshops and stakeholder meetings throughout the summer, and to begin to develop a new MOU with BNP. Draft and final rules of proposed regulatory changes are scheduled to be brought to the FWC Commission Meetings in October and December later this year.