This is a review and discussion of the Biscayne National Park (BNP) fisheries management and science plans, the FWC’s role in managing the fisheries resources within the park, proposed regulatory actions, and stakeholder input timeline.

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Unless otherwise noted, images throughout the presentation are by FWC.
BNP, a national park comprised almost entirely of marine waters, is located in highly urbanized Miami-Dade County. 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, and includes a series of islands as well as a stretch of natural areas along the mainland border of the bay where park headquarters are located, near Homestead.

Ninety-five percent of the park’s 173,900 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 waters of BNP can be easily accessed from both public and private facilities, with four nearby public boat ramps.

BNP hosts at least 500,000 visitors per year, though this number is most likely an underestimate, given that many visitors access the park by water from outside the park facilities. 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.
The smaller map in the upper left portion of this slides shows the approximate location of BNP within the greater context of the state of Florida. The larger map shows where BNP is located along the coral reef tract. Conservation of Florida’s reef tract, and the associated marine ecosystem, involves a variety of state and federal partners, including BNP. The Florida Keys National Marine Sanctuary (FKNMS) includes all of the reef track that occurs in the Monroe County portion of the Keys, including that portion within John Pennekamp Coral Reef State park. BNP houses the portion of the reef tract immediately north of FKNMS, with a small sliver of FKNMS waters bordering the outer edge of BNP, east of the reef tract. The remainder of the reef tract extends to the north of BNP, all the way to Martin County.
BNP was originally established by 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 National Park Service (NPS) recognized the importance of the park’s 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 was 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, although FWC fishing regulations do apply within the waters of the original monument, those regulations can be modified by the U.S. Secretary of Interior.

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 include 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 (orange cross-hatch on the map) are under the full authority of the FWC.

Although most of the park is within state waters, roughly 9% is in federal waters. To streamline management, the South Atlantic Fishery Management Council (SAFMC) has chosen not to assert any authority over the federal waters within the Park and has agreed to defer development of future park-specific fishing regulations to FWC and NPS.
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. 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.

BNP waters also support a variety of commercial fishing activities, which include the food shrimp industry that uses roller-frame trawls within the bay, 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 nets can legally operate.
There are two separate management plans developed to 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.

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 long-term MOUs with FWC.
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.

As FMP development was occurring at the same time, BNP and FWC entered into an MOU related to the FMP in 2002, stating in part that FWC and the park agreed to seek the least restrictive fisheries management actions necessary and that no-take zones should only be developed under the FMP as a last resort option. However 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 the MRZ, and was followed by substantial opposition from the local fishing community. Following the additional feedback received and further coordination with FWC, the NPS released a Supplemental Draft GMP in 2013 which replaced the MRZ with a Special Recreation Zone (SRZ) and additional public meetings were held. The SRZ would have allowed fishing access but in a limited manner. However, the SRZ also received considerable negative feedback from portions of the public and in 2015, the final GMP was released and instead included the MRZ. Because of the controversy surrounding the MRZ, a Congressional field hearing was held in Homestead that same year.
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 finalized 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, and that no-take zones should only be considered as a last resort. An advisory working group was convened from 2002-2004, which held a series of meetings to suggest recommendations for the FMP. FWC staff briefed the Commission on the status of the FMP periodically throughout this process. The MOU was renewed for another five years in September 2007, and again for an additional two years in October 2012.

The Park released the draft FMP that included a series of alternatives for public consideration and comment in 2008, and held public workshops in July of 2009. In November 2013, the Commission expressed their approval for the preferred alternative in the draft FMP and it’s stated goal. They expressed their intent to initiate public rulemaking following the release of the final FMP. The final FMP was released the following year in 2014.

The remainder of this presentation will focus on the FMP and its implementation.
FMP Purpose and Goals

**Purpose**
- Fulfill NPS mandate to balance fishing access with resource protection
- Maintain resources for high usage
- Evidence of local depletion – average size and abundance of fish

**Stated Goal:** Increase size and abundance of targeted fish and invertebrate species within BNP by at least 20%

BNP is responsible for managing its fishery resources in accordance with its enabling legislation (as provided earlier in this presentation) and NPS mandates to balance fishing access with resource protection. The FMP identified the need to maintain fishery resources in an area with such high usage, as increases in population and recreational vessels have occurred over the past several decades. There is also evidence to suggest there has been localized depletion of fishery resources within BNP with declines in the average size and abundance of several targeted species occurring over time. To address these and other challenges, the stated goal of the FMP is to increase the average size and abundance of targeted fish and invertebrate species within the park by at least 20% over the current conditions. Doing so is expected to provide an improved fisheries experience within the national park for the current and future generations.
The initial MOU between BNP and FWC was developed to facilitate the management, protection and scientific study of fish and aquatic resources within the park by improving communication, cooperation, and coordination with FWC. In the original and subsequent MOUs, the two agencies acknowledged 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, FWC and BNP also agreed that properly regulated recreational and commercial fishing will continue in BNP.

As previously stated, the MOU emphasized that FWC believes no-fishing zones (referred to by the NPS as marine reserves) are overly restrictive and specify 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 last MOU renewal expired in October 2014. Staff is seeking direction on establishing a new MOU with the Park.
The FMP endorsed by FWC includes a series of potential management actions that could be considered by BNP and FWC as means to meet the goal of increasing the abundance and average size of targeted species by 20%. Staff is recommending FWC move forward with gathering further public input on a subset of those actions. Staff is asking for Commission direction on whether to move forward with FWC’s public workshop and rulemaking process as it relates to the specific management actions summarized on this slide. These potential regulatory measures include modifications to the size limits and bag and possession limits for targeted species. The specific size and bag limit changes that staff are proposing for consideration are listed on the next slide.

Other changes identified include prohibitions on spearfishing using triggered mechanisms or SCUBA. If implemented, these spearfishing regulations would be more strict than the basic, statewide regulations, but less restrictive than those for state parks, which prohibit spearfishing altogether.

In addition, potential trap-free zones have been identified in various coral reef protection areas offshore and nearshore north and east of park headquarters at Convoy point.

Finally, implementation of a no-trawl zone within a portion of the bay could be considered as a means to conserve park seagrass and nursery habitat, along with potentially eliminating the two-day recreational lobster sport season (mini season) in the park to protect coral reef habitat from diver-related damage.
The potential size and bag limit changes on this slide were developed in collaboration with BNP for Commission and public consideration. New, park-specific size limits would apply to both recreational and commercial fisheries operating within the park. For species with existing minimum size limits, a 20% increase to the current minimum size limit was calculated in order to shift the size structure of these species within the park toward the FMP goal. Two exceptions (indicated by asterisk on the slide) include hogfish and mutton snapper, which have recently undergone significant size limit increases in recent years. Mutton snapper was recently changed from 16 to 18 inches total length, needing only an additional inch to 19 inches to reach a 20% increase from the previous (long-standing) limit. Hogfish recently changed from 12 to 16 inches fork length, a 33% increase over the previous minimum size. Staff suggests not increasing the minimum size for hogfish any further at this time. For targeted species without current size regulations (grunts), a new potential size limit that is approximately 20% larger than the size-at-maturity is provided as a potential measure to increase the average size of those species. Staff does suggest allowing direct and continuous transit of fish below the park-specific size limits through the park and allowing them to be landed at park boat ramps that service the entire region, if those fish were legally harvested outside the park.

Existing species-specific bag limits will still apply. In addition, several aggregate recreational bag and possession limit options are provided that could reduce overall harvest within the park without further limiting any particular species on a given recreational fishing trip. A total 20-fish recreational aggregate possession limit per person for targeted food and sport finfish species would provide consistency with nearby Everglades National Park. A new recreational baitfish possession limit of 100 fish per person could improve baitfish abundance within the park. Finally, 50% reductions in the recreational stone crab and blue crab possession limits are also provided for consideration. In order to improve compliance and maximize the benefits of these proposed aggregate limits, staff suggests applying them to all persons/vessels fishing within, transiting through, and landing within park boundaries, including at boat ramps within the park.
FWC and BNP collaborated on developing a science plan in order to guide FMP-related research and monitoring within BNP. The science plan defines how the pre-FMP implementation baselines for targeted fishery species will be measured, as well as the corresponding benchmarks against which we will measure achievement of the goal to increase abundance and average size by 20%. The plan also provides for other monitoring activities that will evaluate changes in recreational and commercial fishing activity within BNP.

The science plan describes the monitoring that will guide data collection used to evaluate changes in fishery resources. The reef fish visual census (RVC) is essential to carrying out the science plan and evaluating the effectiveness of any fishery management measures taken within BNP, but the plan also describes other research and monitoring activities that could be conducted within the park to further evaluate the efficacy of regulatory changes.

In addition, the science plan establishes a timeline for a series of progress reports over the coming years that will communicate progress toward meeting the benchmarks of the FMP goals.

Finally, the science plan provides for research that will inform interpretation of why any particular benchmark has not been met. By providing for an evaluation of why any particular benchmark may not have been met, the science plan advocates for attempting to understand what factors may have prevented achievement of the benchmark before any management changes are recommended.
The science plan also defined “targeted species” for the purpose of the FMP. These targeted species will be the ones that FWC will focus species-specific management efforts on, and FWC and the park will prioritize from a monitoring perspective under the science plan. The species identified as “targeted species” have been divided into tiers. The Tier 1 species were considered a top priority because they were routinely fished in the park, could be monitored using existing methods, and their life history makes them amendable to respond to management actions.

The tier 2 species are still a priority, but to a lesser extent. Tier 2 species were considered a secondary priority because either their life history characteristics make it less likely that they will respond to management measures that are applied at the scale of BNP only or they currently lack the adequate monitoring data to measure their responses. In the latter case (such as spiny lobster) these tier 2 species may be added into ongoing monitoring efforts as new methods, staffing, and funding allow.
The Science Plan defines the variables to be used for evaluating progress toward the stated goal of the FMP: to increase the size and abundance of the targeted species by 20%. In order to evaluate abundance, the science plan proposes monitoring the density (number/unit area) and frequency of occurrence for each targeted species. This data is collected during Reef Fish Visual Census (RVC) surveys conducted every other year within Biscayne National Park. In order to evaluate increases in the size of targeted species, the science plan proposed to monitor the average length of the portion of targeted fish observed in the RVC within Biscayne National Park that can be legally harvested. For those targeted species that do not currently have size regulations (e.g. grunts), the science plan proposes to monitor the average length of the portion of those species that are at or above the size at maturity. Baseline values have been calculated using RVC data from 2008-2018. The Benchmark values were calculated simply by taking the baseline value and increasing it by 20%. The numeric estimates for the baselines and benchmarks are provided in the Science Plan.

Changes in size and abundance using these variables will be calculated from future RVC surveys. These surveys will continue to occur every other year. Because some of the targeted species are slow-growing longer-lived fish, it may take many years for the benchmarks to be achieved. Consequently, the first full progress report is scheduled for seven years following the onset of any regulations. This report will communicate changes in the size and abundance of the targeted species relative to their benchmarks and include a discussion of factors that may be preventing the benchmarks from being attained, should that be the case. The report may recommend research activities to better understand the factors influencing the targeted species’ recovery and provide recommendations for adaptive management given the results at that point in time.
There are several considerations moving forward. As previously mentioned, the FMP is the result of a long-term partnership between BNP and FWC on the planning and monitoring of the Park’s fisheries resources. Acknowledging philosophical differences and expectations, BNP and FWC share the common interest of maintaining sustaining fisheries for the long-term benefit of the resource and stakeholders of the park. FWC and BNP also have a shared belief that national parks represent this country’s special places when it comes to natural resource conservation, and therefore should provide citizens and visitors with an experience above and beyond other places.

While not requiring FWC action, there are some actions identified in the FMP that are intended to be or have already been implemented by BNP, including requiring annual permits for for-hire guides operating within the park. This permit requirement has been in place since April 2019 and is similar to the requirements of for-hire guides operating charters in Everglades National Park. The FMP also provides for a potential slow phase out of commercial fishing in the park via a Special Use Permit issued by BNP. If implemented, this permit would be created by the NPS and be a use-or-lose permit issued to current fishers with a history of landings in the park. The permit would create a mechanism to phase out commercial fishing when the fishermen currently fishing park waters leave the fishery.

There were also several actions identified in the FMP that were potential options for implementation, but which staff are not recommending at this time. These non-recommended measures include seasonal and area closures, restricting traps from all hardbottom habitat, and adding additional restrictions to commercial harvest. These actions were not considered because FWC staff believe the current regulations or those otherwise presented today were sufficient to accomplish the intent of these actions.

Finally, while the goal of the FMP has been agreed upon by all parties and is finalized, FWC maintains the ability to adaptive the fishery regulations used to achieve this goal over time based on the status of the fisheries over time as described in periodic progress reports associated with the Science Plan.
Moving forward, staff recommend holding a series of public workshops in early August in the areas surrounding BNP and conducting stakeholder meetings throughout the summer. Three public workshops are planned: Miami (Coral Gables), Florida City, and Key Largo during the week of August 5th.

Staff requests Commission direction on whether the previously discussed management measures, summarized again on this slide, are the correct measures to be considered as part of the workshops and public-feedback-gathering process. Staff would prefer to take all of these topics to public workshops.

Staff will also begin development of a new MOU to guide management and monitoring efforts associated with the FMP.

If directed, staff will develop draft rules based on the public input received and return with those at the October Commission meeting for Commission consideration. A Final Public Hearing would then followed at the December Commission meeting, if so directed by the Commission. The Final Public Hearing will also include an opportunity to approve the Science Plan and finalize the new MOU.
Staff recommends hosting public workshops and meeting with stakeholders to gather input on the potential rule changes identified in this presentation as a means to accomplish the goals of the FMP and returning at the October 2019 Commission meeting with a draft rule proposal.

Staff also recommends returning at the December 2019 Commission meeting presenting a Final Public Hearing on the fisheries rules, finalizing a new MOU, and approving the Science Plan.