

Florida Keys National Marine Sanctuary and Keys Update



Staff Report
October 8, 2020



Florida Fish and Wildlife Conservation Commission

Version 3

This is a staff report providing an update on the Florida Keys National Marine Sanctuary (FKNMS) Restoration Blueprint and additional topics that are relevant to Florida Keys stakeholders.

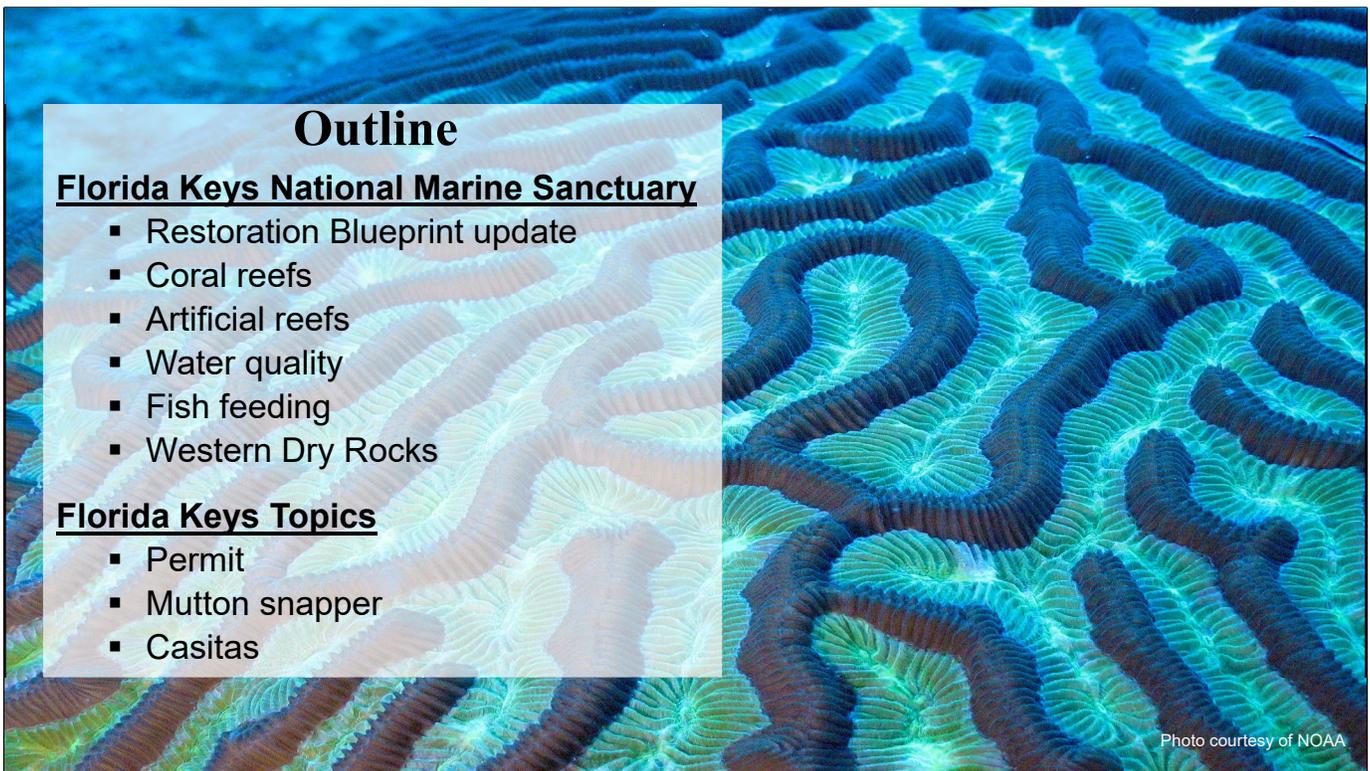
Division: Marine Fisheries Management

Authors: CJ Sweetman, Jessica McCawley, and Martha Guyas

Contact Phone Number: 850-487-0554

Report date: Aug. 28, 2020

Unless otherwise noted, images throughout the presentation are by FWC or Florida Keys National Marine Sanctuary.



Outline

Florida Keys National Marine Sanctuary

- Restoration Blueprint update
- Coral reefs
- Artificial reefs
- Water quality
- Fish feeding
- Western Dry Rocks

Florida Keys Topics

- Permit
- Mutton snapper
- Casitas

This presentation will focus on topics that are related to the FKNMS's Restoration Blueprint and several topics that are of interest to Florida Keys stakeholders as well as those in other regions beyond the Keys.

Relevant to FKNMS topics, staff will present a Restoration Blueprint update highlighting FWC's comment letter and next steps in the rulemaking process, provide an update on the Stony Coral Tissue Loss Disease, including the current location of the disease and status of Florida's Coral Rescue Team. Several topics within FWC's comment letter to the FKNMS, including a brief overview and FWC's next steps for coral reef restoration and the role of artificial reefs to enhance coral reef recovery will be reviewed and a brief update on the status of the Water Quality Protection Program and its role in addressing water quality issues within the FKNMS is provided. The presentation will then cover two topics proposed within the Restoration Blueprint, including fish feeding and Western Dry Rocks, and potential next steps the Commission may consider.

The presentation will then cover several marine management topics that are of interest to stakeholders in the Florida Keys and beyond, including permit, mutton snapper, and casitas.

Restoration Blueprint Update

- FWC comments to FKNMS in April 2020
- Letters of community support for FWC comments
- FKNMS currently evaluating public comments



Photo courtesy of NOAA

After months of gathering stakeholder input and evaluating the science related to the FKNMS's Restoration Blueprint, FWC formally submitted comprehensive comments to the FKNMS on April 29, 2020. Letters of support for FWC's comments were provided by the Monroe County Board of County Commissioners, the City of Key West, the City of Marathon, the City of Islamorada, and from other Florida Keys community leaders. The FKNMS is currently evaluating public comment on the Restoration Blueprint and is incorporating public comment into their forthcoming draft rule.

Restoration Blueprint – FWC Comment Topics

- Ecosystem management
- Fisheries management
 - **Western Dry Rocks**
- Law enforcement
- **Water quality**
- **Coral restoration and recovery**
- Update management agreements
- FKNMS boundary expansion
- Marine zoning

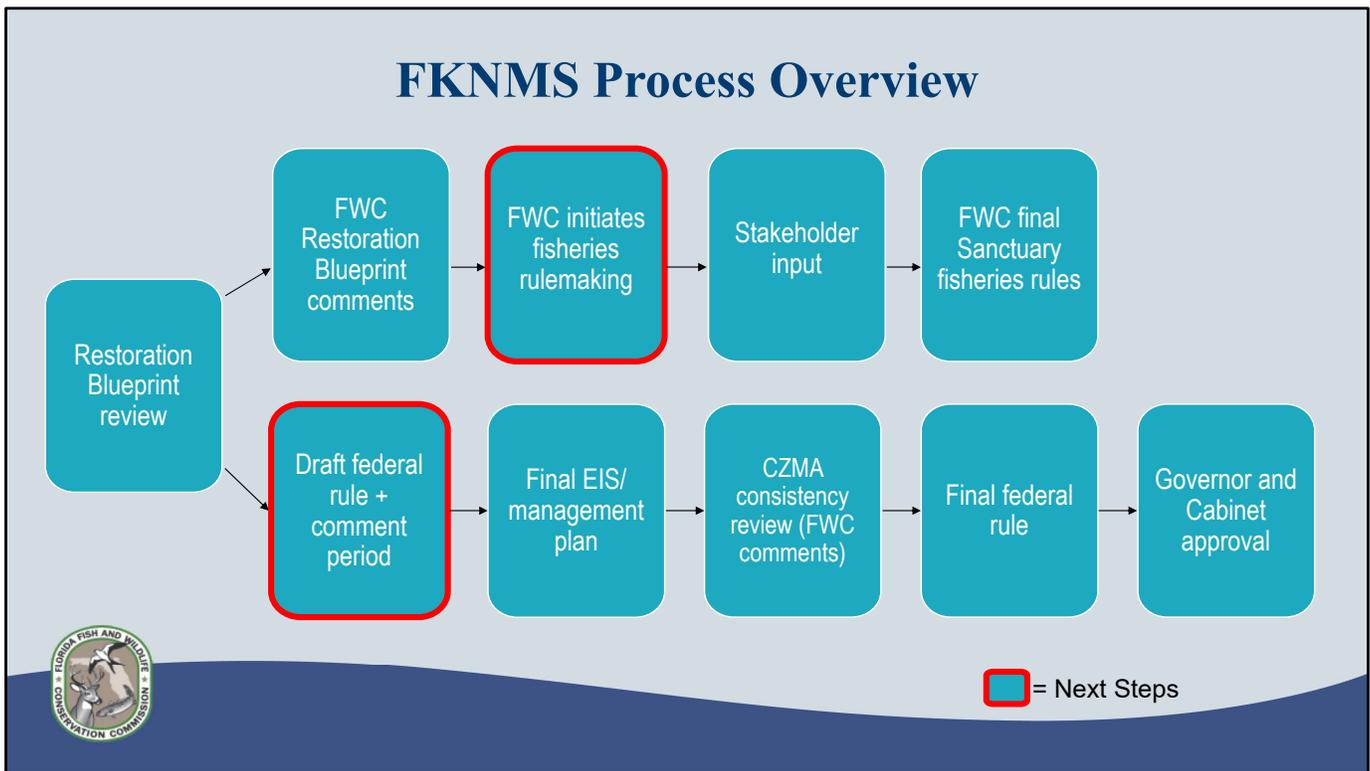


Photo courtesy of NOAA

FWC staff used several guiding principles to evaluate actions proposed within the Restoration Blueprint, including: 1) addressing ecosystem-level changes as a high priority, 2) fisheries management is reserved to FWC in state waters, 3) closures and access restrictions should be considered on a case-by-case basis, 4) the rationale for the proposed actions is clearly defined, and 5) proposed actions must be as fair as possible to all stakeholders while protecting the resources.

Following these principles, FWC provided detailed comments to the FKNMS on their Restoration Blueprint proposal. FWC's comments focused on the roles of ecosystem and fisheries management within the FKNMS, the need for more law enforcement, how water quality is essential to a healthy Florida Keys ecosystem, FWC's recommended strategy for coral restoration and recovery, the need to update several management agreements with Sanctuary co-managers, and recommendations regarding FKNMS boundary expansion and specific marine zoning. Several of these topics have been discussed in detail at previous meetings and will not be included in this presentation. The items in bold on the slide will be discussed further today.

FKNMS Process Overview



This flow chart describes the FKNMS management revision process at both the FWC and federal levels. The top row relates to the FWC process for fisheries rulemaking items within the Sanctuary. The bottom row is the federal process, with final approval required by the Florida Governor and Cabinet. The red boxes indicate next steps in both the FWC and the FKNMS processes.

Pertaining to the FWC process, the Commission could initiate fisheries rulemaking for several items related to the FKNMS that will be discussed later in this presentation. Following Commission direction, staff would obtain public input that would allow for Commission discussion at a later meeting.

Currently, the FKNMS is reviewing the public comments they have received on the Restoration Blueprint and will release a draft rule in the future, which will have a separate public comment period. Once the draft rule public comments are evaluated, the FKNMS will develop a Final Environmental Impact Statement (EIS) and management plan that will go through Coastal Zone Management Act consistency review. The FWC will provide comments at this time through the state Clearinghouse. Following this review, the FKNMS will issue a federal rule that will go to the Governor and Cabinet for approval.

Coral Reef Disease Update

Coral reef restoration is a high priority for FWC

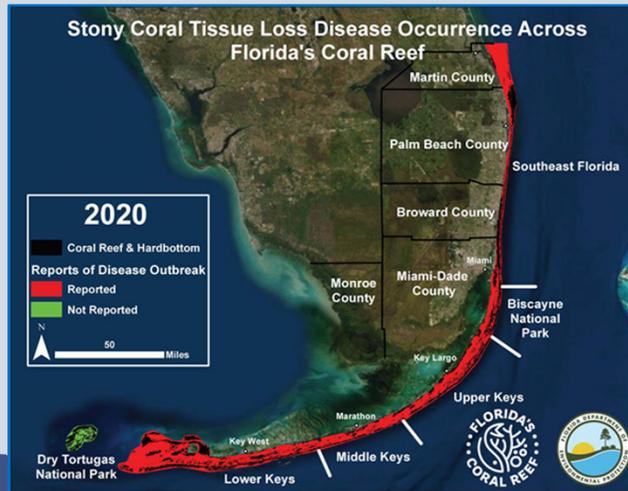
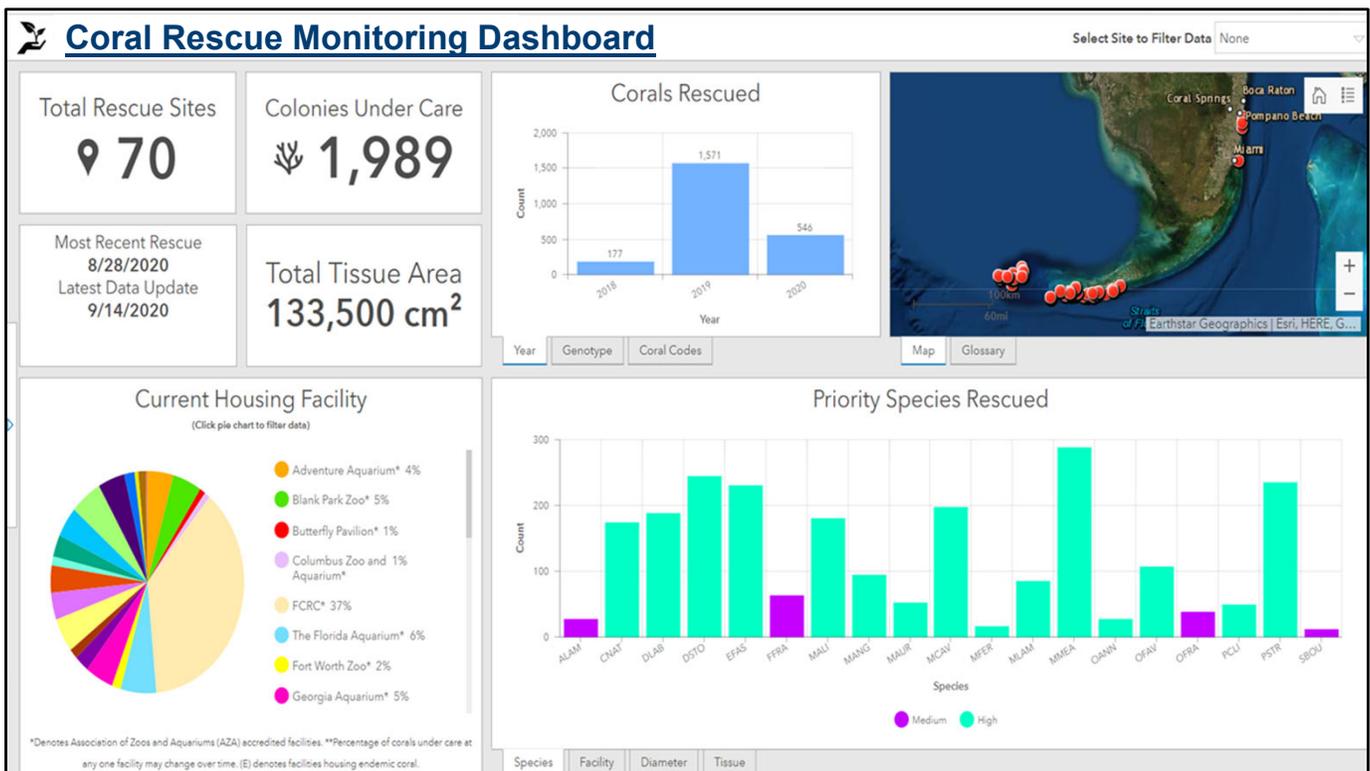


Image courtesy of DEP

Coral reef restoration and recovery was a focal point of FWC's comment letter on the FKNMS's Restoration Blueprint. The degradation of coral reef habitat is one of the most important ecosystem management challenges for the FKNMS. More frequent coral bleaching events; Stony Coral Tissue Loss Disease (SCTLD); degraded water quality; and direct human impacts, such as anchoring, trapping, fishing, and diver contact with reefs; have all negatively impacted the health of coral reef communities in the Florida Keys. Recently, the Coral Reef Evaluation and Monitoring Project, which has monitored the condition of coral reefs in the Florida Keys since 1996, determined that only 2% coral cover remains at their monitoring sites. To put this in a historical context, healthy Florida Keys reefs typically averaged approximately 30% coral cover.

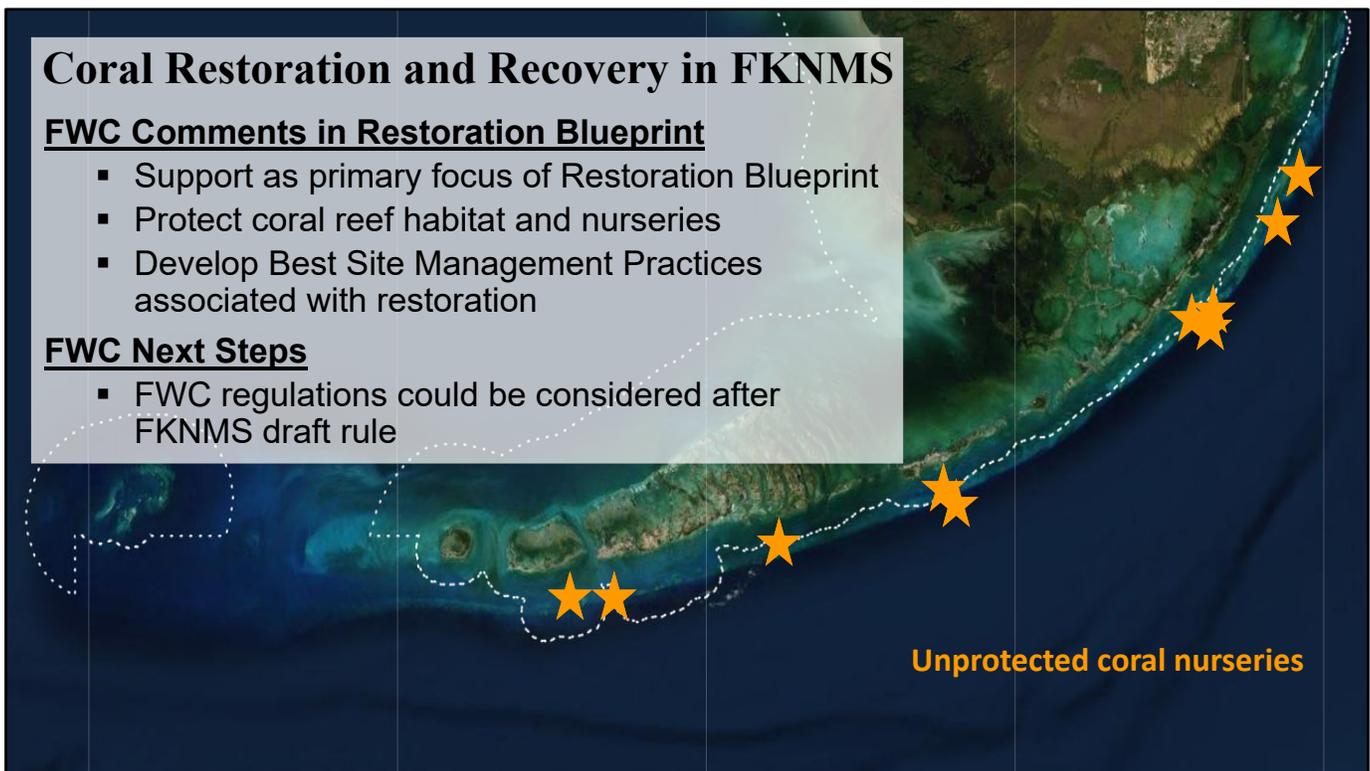
SCTLD was first reported in 2014 off the coast of Miami-Dade County and has since spread to a majority of the Florida Reef Tract. More than 20 of the approximately 45 species of Florida's reef-building corals have been affected, including 5 species listed under the Endangered Species Act. SCLTD has a high prevalence within certain species and has high rates of disease transmission and mortality. Recent FWC surveys have indicated that the disease front is currently near Rebecca Shoal, which is a deepwater passage that separates the Dry Tortugas from the Quicksands and Marquesas Keys in the western extent of the Keys.



Due to the magnitude of impact that SCTLD has had on the Florida Reef Tract, the Florida Coral Rescue Team led by FWC was established. The goals of Coral Rescue are to collect and rescue both healthy and survivor corals and place them in land-based holding facilities to prevent them from being infected; to preserve genetic diversity; and to propagate them for restoration. Coral rescue efforts began in late 2018 by developing a collection plan based on preserving genetic diversity, conducting pilot collections, and developing a public-private partnership with the Association of Zoos and Aquariums (AZA) to gene bank and provide longer-term care for rescue corals. Two years later, the Coral Rescue Team has rescued nearly 2,000 corals of 19 different species from 70 reef sites ahead of the disease boundary and is now collecting survivor corals from the disease endemic zone. These rescued corals are all currently in holding at 18 different AZA facilities in 12 different states, staged to play their part in captive breeding programs, and contribute to restoration of the Florida Reef Tract. Florida's Coral Rescue Team has developed a publicly available coral monitoring dashboard, shown on the slide, to keep the public up to date with progress.

The dashboard can be viewed at:

<https://myfwc.maps.arcgis.com/apps/opsdashboard/index.html#/eba7dc2cab64f60819e6d4b084d94cd>



As noted, FWC is an active participant in the ever-growing effort to restore reefs. FWC has significantly elevated our effort and attention toward coral reefs and has established coral reef restoration and recovery as one of our highest priorities which entails, among other things, increased coral reef science and conservation actions, and outreach and education through our Coral Crew program. Robust coral nurseries are an essential component of a large, coordinated coral reef restoration strategy. At present, coral nurseries are the source for nearly all the corals used for coral reef restoration within FKNMS. FWC's comments to the Restoration Blueprint highlighted several coral nursery locations that are not currently protected. Our recommendations emphasized the importance of protecting both coral nurseries and coral restoration sites through effective and standardized marking and establishing protective management actions to help ensure that coral restoration will be successful. Further, FWC recommended that FKNMS develop a suite of best management practices for coral restoration site management to increase the likelihood of enhancing restoration outcomes while minimizing impacts to stakeholders.

Once the upcoming FKNMS draft rule is released, the Commission could consider no-anchor and no-fishing regulations at Sanctuary Preservation Areas within state waters and no-fishing, no-anchoring, and transit-only regulations to protect coral reef nursery and restoration sites to complement the protections proposed by FKNMS.

Artificial Reefs

- Important role in reducing impacts from fishing and diving activities
 - Can help offset lost fishing and diving opportunities due to area closures
- Requests from stakeholders to deploy various types of artificial reefs throughout the Florida Keys

FWC Next Steps

- Work with FKNMS and stakeholders



Artificial reefs could play an important role in coral reef restoration and recovery in the FKNMS. A well-designed suite of artificial reefs placed within the FKNMS and nearby areas, ranging from large ships where appropriate to more directed fish habitat development, will help natural resource management in the FKNMS. These artificial reefs would offer new diving and fishing opportunities and would likely draw a portion of that activity now centered at natural reef habitat. Further, artificial reefs could help offset fishing and diving opportunities lost due to the area closures proposed in the Restoration Blueprint. FWC staff have met with groups who would like to see one or more large ships deployed as artificial reefs in the waters of the FKNMS. We are supportive of exploring this idea and think it can offer many benefits to the coral reefs as well as to the economy of the Florida Keys. FWC staff will continue to work with the FKNMS and stakeholders to discuss these ideas and to develop and implement a robust strategy for artificial reef deployments and management within the FKNMS to support coral reef restoration and recovery.

Water Quality

- Good water quality is essential to a healthy Florida Keys ecosystem
- Water Quality Protection Program (WQPP) adopted priority recommendations
 - Two broad themes: upstream and local water quality influences
 - Commission discussion aided WQPP
- Established joint committee on Everglades restoration

Timeline

- Steering Committee meets three times per year



Photo courtesy of NOAA

Good water quality is a key element that connects all sanctuary resources and is essential in maintaining the richness and diversity of the Florida Keys ecosystem. The health and quality of these diverse habitats influences the productivity of numerous marine resources, including our fishery resources. Water quality was a central topic in FWC's comment letter to the FKNMS which, in part, highlighted local issues, regional South Florida influences, upstream influences, and large-scale issues that should be addressed by the Water Quality Protection Program (WQPP).

The WQPP is administered by the U.S. Environmental Protection Agency and the Florida's Department of Environmental Protection. Membership includes other state, federal, and local governments, including the FWC, and numerous Keys-based organizations and citizens. Its goal is to identify and implement corrective actions, coordinate research and science activities, and direct scientific monitoring programs. At the most recent WQPP meeting, the Steering Committee participated with the FKNMS Sanctuary Advisory Council to discuss and adopt priority recommendations from the WQPP working group. The priority recommendations focused on two broad themes: upstream water quality influences, such as Everglades restoration and mainland wastewater infrastructure, and local water quality issues, such as stormwater, wastewater, and canal restoration. Further, a joint committee was established between the WQPP and the SAC to raise the focus of water quality issues in the Florida Keys relative to ongoing Everglades restoration efforts. The WQPP Steering Committee meets three times per year.

Fish Feeding

- FKNMS proposal: prohibit the feeding of fish, sharks, or other marine species while diving **and/or** from a vessel
- Addresses public safety and fish behavior concerns

FWC Next Steps

- Statewide workshops following FKNMS draft rule
- FWC could update regulations to be aligned with those proposed by FKNMS



Photo courtesy of Albert Kok

FWC provided support for the FKNMS Restoration Blueprint proposal that would prohibit the feeding of fish, sharks, or other marine species while diving and/or from a vessel, because the act of fish feeding has caused human safety issues and has been shown to change animal behavior. FWC currently has rules in state waters regarding this issue. However, FWC rules prohibiting fish feeding are only applicable to divers in the water and defines fish feeding as “the introduction of any food or other substance into the water by a diver for the purpose of feeding or attracting marine species, except for the purpose of harvesting such marine species as otherwise allowed by rules of the Florida Fish and Wildlife Conservation Commission.” In the past, FWC has supported and advocated for federal legislation that would prohibit fish feeding in federal waters. If the Commission intends to consider updating statewide fish feeding regulations to be aligned with those proposed by the FKNMS following release of their federal draft rule, FWC staff could hold workshops across the state to gather stakeholder feedback and report back to the Commission if directed.

Western Dry Rocks (WDR)

- Popular fishing location
- Multi-species spawning aggregations
- Fisheries management should be handled through FWC process

FWC Next Steps

- December draft rule
- Workshops: early 2021 with seasonal/area closure as options
- Commission could consider WDR regulations in 2021



Western Dry Rocks (WDR) is a popular fishing location in state waters and represents an important multi-species spawning aggregation site for species such as mutton snapper, mangrove snapper, black grouper, and permit. The FKNMS has proposed to further regulate WDR through area closures to protect multi-species spawning aggregations at WDR. In FWC's comments to the FKNMS, FWC noted that this proposal is a fishery management action for state waters; thus falls under the authority of FWC. FWC is responsible for fisheries management in Florida state waters and, over the years, FWC has extended state management authority into adjacent federal waters for many species that reside within the FKNMS. FWC is committed to continuing its lead role in promulgating fisheries management actions within the FKNMS.

In general, fish spawning aggregations serve as productivity hotspots because these small areas attract large numbers of fish to reproduce, apex predators to feed on spawning fish, and planktonic feeders to consume protein-rich fish eggs. As a result of this productivity, these areas are also popular among fishers due to the concentration of large, spawning-sized individuals. Research has indicated that the fishing of spawning aggregations can decrease spawner abundance, decrease spawner size, create changes in population sex ratios, and creates the potential for the disappearance of aggregations.

In FWC's comments on the FKNMS' Restoration Blueprint, FWC noted its intent to consider if management actions are warranted for this popular location through the FWC rulemaking process. FWC staff aim to present a Western Dry Rocks draft rule at the December 2020 Commission meeting with the goal of conducting workshops in early 2021 to gather stakeholder input.



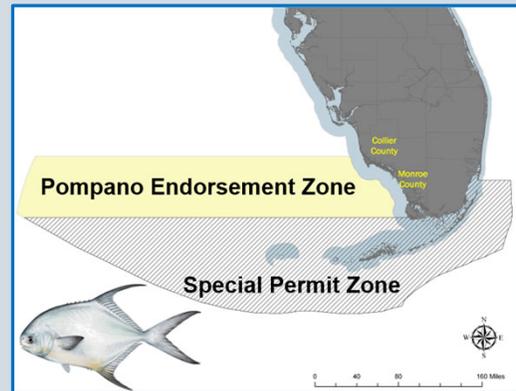
The next few slides will focus on topics that are of interest to Keys stakeholders but will also be of interest to stakeholders outside of the Florida Keys.

Permit

- Statewide fishery
- Recreational and commercial stakeholder requests for management changes
 - Including requests for pompano and African pompano

FWC Next Steps

- Commission could consider permit regulations on a parallel timeline as WDR regulations
- Statewide workshops: 2021



Permit fishing is concentrated throughout the Florida Keys but is also a popular in other parts of the state. Numerous requests have been received by FWC to modify current recreational and commercial regulations. Stakeholders have advocated for making permit a catch-and-release fishery, and numerous requests have been received in support of a seasonal closure at Western Dry Rocks during the permit spawning season due to high depredation rates at that spawning aggregation site. Relative to the commercial sector, requests have been received to eliminate the 100-fish bycatch exemption in the pompano gillnet fishery and conversely, commercial fishers have requested an ability to land product from the pompano gillnet fishery, including permit bycatch, at any port throughout the state. Further, FWC has received stakeholder requests to modify the bag and vessel limits of African pompano, which is managed by FWC in federal waters. At the Commission's direction, staff could hold statewide workshops to gather public feedback on the permit, pompano, and African pompano fisheries in 2021 and the Commission could then consider additional regulations on a parallel, but separate timeline as potential Western Dry Rocks regulations.

Mutton Snapper

- FWC and Councils took management actions in response to 2015 assessment
 - Not overfished or undergoing overfishing
 - Population smaller than expected
- Continued stakeholder concerns about fishing spawning aggregations

FWC Next Steps

- Commission could consider regulations for WDR spawning aggregation or after 2022 stock assessment



Photo courtesy of Chris Parsons

FWC, the Gulf Council, and the South Atlantic Council took management actions in response to the 2015 stock assessment, which indicated the mutton snapper stock is not overfished or undergoing overfishing, but the population is smaller than originally thought. Regulations included increasing the minimum size limit from 16 inches to 18 inches; reducing the recreational bag limit to five fish per person within the 10-fish snapper aggregate bag limit; restricting commercial trip limits to 5 fish per person per day during the spawning season from April – June in Atlantic state waters; and establishing a 500-pound commercial vessel limit for the remainder of the year in Atlantic state waters.

Despite these increased protections, there is continued stakeholder concern about fishers targeting spawning aggregations in areas such as Western Dry Rocks. To address these concerns, the Commission could consider additional area-specific regulations at Western Dry Rocks, where mutton snapper aggregate to spawn, or could consider promulgating regulations following the next stock assessment that is scheduled to be completed in 2022.

Casitas

- Artificial structures that aggregate lobsters
- Discussed in FWC comments to FKNMS as a strategy to reduce impacts to habitat caused by traps
- Commissioner interest
- High priority topic in Workplan

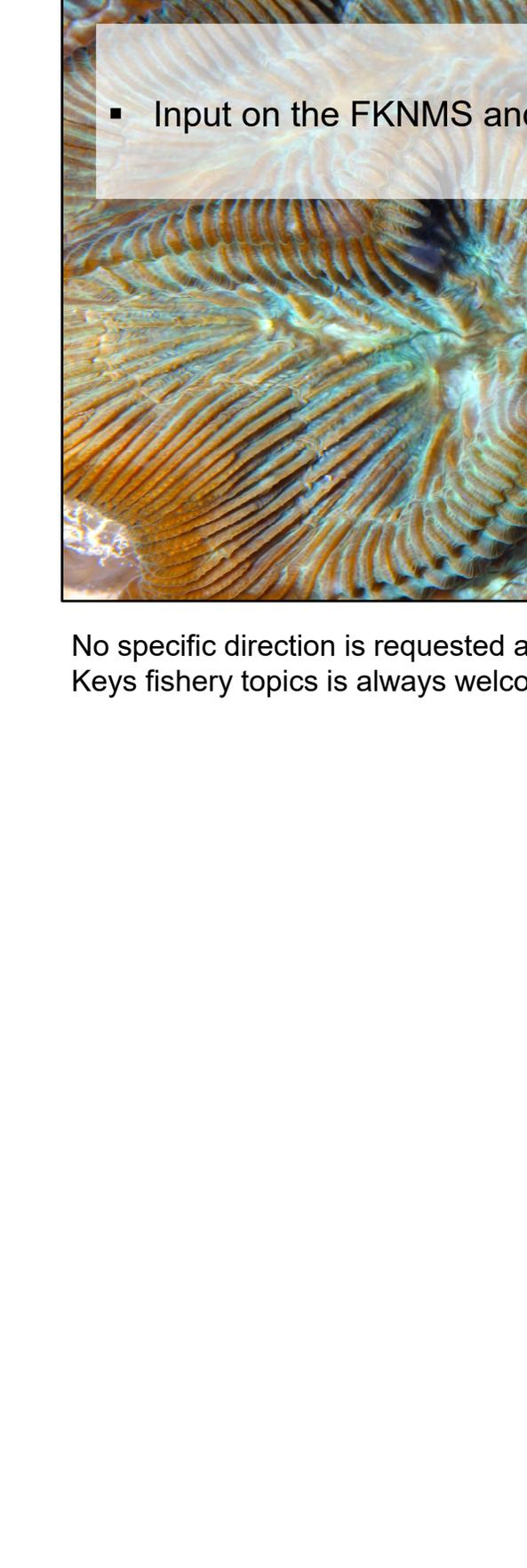
FWC Next Steps

- Lobster review and discussion with Commission in Dec. 2020



Casitas are artificial structures that serve as aggregating devices to aid harvest by divers. Lobsters are highly social and tend to congregate in crevices and under coral heads. Casitas are used as fishing gear in the Caribbean, but are presently illegal in Florida.

Commissioners have asked staff to evaluate the potential to incorporate commercial use of casitas into the spiny lobster fishery with consideration of their possible role in ameliorating the environmental imprint of this fishery and in providing an expansion for access to this fishery. If directed, staff propose to develop a report that will summarize the management and research history, plus outline the suite of management topics to be addressed in order to incorporate casitas. Staff will provide this report at a future Commission meeting.



Questions

- Input on the FKNMS and Florida Keys fishery items welcome

Photo courtesy of NOAA

No specific direction is requested at this time; however, input on the FKNMS and Florida Keys fishery topics is always welcome.

**The following slides are considered backup material
and are not anticipated to be part of the actual
presentation**



Western Dry Rocks Spawning Season Chart

- Winter spawning groupers
 - Black grouper, scamp, Nassau grouper, gag grouper, red hind

- Summer spawning fishes
 - Yellowtail, mutton, gray, schoolmaster, Atlantic spadefish, permit



Species	J	F	M	A	M	J	J	A	S	O	N	D
Black grouper	█	█	█	█								█
Scamp	█	█										
Nassau grouper	█	█									█	█
Gag grouper	█	█	█	█								█
Red hind	█	█	█	█								
Yellowtail snapper			█	█	█	█	█	█	█	█		
Mutton snapper				█	█	█	█	█				
Gray snapper						█	█	█	█			
Schoolmaster						█						
Atlantic spadefish				█	█	█	█	█				
Permit				█	█	█	█					

Many recreationally and commercially important fishes are known aggregate to specific locations at predictable times of the year for the purpose of spawning. Western Dry Rocks (WDR) is somewhat unique in that multiple-species aggregate at this location during the same time of the year. The figure on the slide depicts the spawning season for various species observed to aggregate near WDR based on data from multiple sources. In the spring and summer, permit, various species of snapper, including yellowtail, mutton, gray, and schoolmaster, and Atlantic spadefish aggregate during the spawning season at WDR. Grouper spawning tends to occur during colder months of the year in winter and early spring. Recent FWRI tagging research lends further support for the importance of WDR as a potential spawning aggregation location for multiple grouper species, including black grouper, Nassau grouper, and gag grouper.