Florida Keys and South Florida Ecosystem Connectivity Team: Recommendations to the SAC on the Restoration Blueprint

Connectivity Overview

The primary objective of the Florida Keys and South Florida Ecosystem Connectivity Team (CT) is to facilitate collaboration between agencies and stakeholders related to Everglades restoration and the myriad regional issues impacting Sanctuary waters. While the establishment of this working team of the Sanctuary Advisory Council marks a significant achievement toward greater Sanctuary engagement in concurrent restoration efforts in the greater Everglades and South Florida ecosystems, the Sanctuary has a timely and urgent opportunity to strengthen its relationship with the agencies, stakeholders, and processes dictating the course of Everglades restoration through the proposed rule and draft Management Plan. The CT appreciates the opportunity to provide comments and suggestions on the proposed rule and draft Management Plan through a connectivity lens.

Considering the incredible opportunity for further engagement provided by this rulemaking process, the CT has identified several recommendations with respect to both the draft Management Plan and the proposed rule that fall within the purview of this sub-team. These have been outlined below.

Specific, Time-Bound, and Measurable Goals should be included in the Management Plan

The CT agrees that the draft Management Plan is comprehensive in its stated goals and strategies, however, many of the management activities as written could be more specific and refined. A clear example is Activity 2.1.2, "Strengthen engagement with the South Florida Ecosystem Restoration Task Force…" The CT supports this management activity; however, the activity could benefit from additional specificity as to how engagement will be strengthened, and a timeline or metric for achievement. This CT recommendation for increased specificity, timeliness, and measurability extends across all areas of the Management Plan, including in Objective 5.2 related to the annual operating plan.

The Sanctuary must assume an active role in Everglades Restoration

The Florida Keys are hydrologically linked and influenced by waters from Florida Bay and the greater Everglades ecosystem. The Sanctuary has gone to great lengths to include within their proposed rule an additional 23 Wildlife Management Areas (WMA) which encompass habitats and species beyond the reef tract. We support the addition of the 23 WMAs as reflective of the connectivity of coral communities to critical nearshore habitats such as mangroves and seagrass. In particular, we support the Barnes-Card Sound WMA because it is a key laboratory to test the efficacy of ongoing federal and state efforts to restore America's Everglades. The proposed no motor zone will ensure that decision makers have the best available data to support management decisions for the health of south Florida's myriad and interconnected ecosystems.

Everglades restoration activities should be more strongly considered in the Management Plan Objective 2.2 (Develop habitat restoration or mitigation plans/activities where needed) has defined 9 activities, all of which are for actions taken within Sanctuary boundaries. Activity 2.1.2 (strengthen engagement with South Florida Ecosystem Restoration Task Force) appears to be the only place in the Management Plan

that mentions Everglades restoration activities. Given the degree of ecological connectivity between the Sanctuary and the greater Everglades, we encourage the Sanctuary to focus on these elements throughout the Management Plan and the proposed rule.

The Connectivity team also recommends increasing Sanctuary involvement in decision-making forums such as the South Florida Ecosystem Restoration Task Force. In particular, we recommend that the FKNMS be represented more closely on the Task Force. Currently, Assistant Administrator Nicole LeBoeuf is the Task Force representative, and we have great respect and appreciation for her service. However, we feel that a FKNMS representative more directly connected to the resource would be better situated to represent the interests of the Sanctuary in this forum. We feel this would improve and strengthen the Sanctuary's role in achieving proper conditions in both Sanctuary waters and waters that border the Sanctuary.

In addition, the Task Force Working Group adopted a charter on September 1, 2022 to establish a Coral Reef Coordination Team to provide a mechanism for effective coordination amongst federal, state and local entities engaged in the restoration of Florida's Reef Tract. This is a critical interagency forum for connectivity across the reef tract and also provides another avenue for the Sanctuary to engage with Greater Everglades and South Florida restoration activities. The CT recommends including a management plan goal/activity that identifies the Sanctuary's participation in the Coral Reef Coordination Team and specific metrics for engagement consistent with the prior comment on Activity 2.1.1.

We also recommend that the Sanctuary become more active partners in Comprehensive Everglades Restoration Plan (CERP) activities. Currently, the Corps of Engineers is leading the planning, development, evaluation, and implementation of the Biscayne Bay and Southeastern Everglades Ecosystem Restoration (BBSEER) project. A major focus of this project is to restore historic freshwater flow directly into Sanctuary waters in Card Sound and Barnes Sound. The Sanctuary has not actively participated as a member of the Project Delivery Team (PDT) that is currently evaluating possible alternative plans for the project and proposing performance measures to evaluate success of the project. We feel strongly that the Sanctuary should be an active partner in these management decisions and that such involvement is critical to achieving Everglades and Sanctuary restoration goals. Equally important is the Sanctuary's active participation in the upcoming Southern Everglades Study which will aid in restoring historic freshwater flows to Florida Bay and areas of the marine Sanctuary. This involvement should be captured as a goal in the Management Plan

Interagency collaboration and consistency are key to user safety and resource protection
Residents and visitors alike are understandably confused by which rules and regulations apply when, for example, leaving a national park (Everglades, Biscayne and Dry Tortugas all have common boundaries with the Sanctuary) and entering the Sanctuary. Eliminating inconsistencies in multi-jurisdictional regulations will reduce user pressures and inadvertent violations of rules and regulations. To that end we urge the Sanctuary to work with other state (state parks and aquatic preserves), federal (national parks and wildlife refuges), and municipal agencies to reach consistent rules and regulations to the maximum extent practicable. Of critical concern to the CT is the removal of the boater education requirement in the proposed rule as it was written in the 2019 DEIS. This provision should not only be

reinstated to match the regulations of Everglades National Park, but the Sanctuary should work with the National Park Service to develop a single, mandatory boater education course that would satisfy the regulations of the Sanctuary, neighboring national parks and wildlife refuges, the numerous state parks within the Sanctuary footprint, and other protected areas. Furthermore, we urge the Sanctuary to include in Management Plan activities direction to install a system of signage, channel marking and recommended boating thoroughfares between channels for boat use similar to Everglades National Park in their Management Plan for Florida Bay. This could be developed in tandem with the plan for mooring balls in Objective 3 and within the purview of the SAC's recently established Mooring Ball Working Group.

The Sanctuary has made great strides to expand its community education and outreach in Monroe County, however, many Sanctuary users do not reside within the County and as such may not receive the benefits of current outreach efforts. In the spirit of interagency collaboration, Everglades National Park is an excellent example of the Management Plan's Objective 4.1 and 4.2 in practice. The park experiences high visitation levels from users throughout South Florida and continues to expand its community based partnerships and outreach efforts throughout the state to ensure the protection and restoration of park resources. We urge the Sanctuary to account for non-resident Sanctuary users from neighboring counties (particularly Miami-Dade, Broward, Palm Beach, Lee, and Collier) in its outreach and community partnership activities in the Management Plan, and to collaborate where possible with Everglades National Park and other federal and state agencies to achieve these objectives.

Internal Connectivity

The proposed rule includes a number of changes that could impact internal ecosystem connectivity within Sanctuary boundaries. Protecting large, contiguous habitat areas and species populations within marine reserves is the most effective way to preserve biodiversity and build climate change resilience within the Sanctuary. The existing Western Sambo Ecological Reserve (WSER) exemplifies this approach by encompassing shoreline mangroves, nearshore seagrass, sandbar, and hard bottom habitat, inshore patch reefs, mid-channel patch reefs, and the spur and groove reef out to 60 feet of depth, along with associated fish and shellfish populations that are demonstrably enhanced by the reserve's protections. The draft rule's proposal to add the 60-90' depth contour to the existing protected area would further enhance coral population resilience and fished species populations leading to benefits both within and beyond the reserve. Benefits to populations beyond the reserve are magnified by the location of WSER on the northern edge of the Pourtales Gyre which spreads marine larvae spawned in the proposed larger zone throughout the Lower Keys and beyond. For this reason the CT supports the expansion of Western Sambo and establishment of similar shore-to-reef protected areas from Key Largo to 90' off Carysfort Reef.

We are also encouraged to see additional protections in the proposed rule which would protect deeper, healthier corals at Western Sambo (see above), Alligator Reef, Tennessee Reef, and Carysfort Reef. Corals on these deeper reefs are more resistant to coral bleaching and diseases, making them critical reservoirs of resilient biodiversity that protect the future viability of a variety of coral species within the Sanctuary. The very same thing may be said of the proposed mid-channel patch reef SPAs at Turtle Rocks and Turtle Shoal, but in their case, it is not depth, but other environmental conditions that lead to

resistance, resilience, and therefore outsized importance in population connectivity considerations. The CT believes this type of internal connectivity is vital to support coral population recovery.

The proposed rule also contemplates additional changes that would protect vulnerable ecosystems from large vessel anchoring. The Connectivity Team feels that this provision would support connectivity goals of minimizing benthic damage and encouraging contiguous bottom cover for the numerous species that require it for feeding, breeding, and sheltering. Activity 3.2.4 of the Management Plan specifically focuses on fishing gear used inside the Sanctuary but ignores fishing activities that occur outside the Sanctuary that, if lost or abandoned can float into the Sanctuary and cause extreme damage (trawling, seines, long lines etc.). The Connectivity recommends that Sanctuary staff should engage with fishery management councils, particularly Gulf of Mexico Fishery Management Council, with the goal to minimize these impacts.

The team is encouraged to see the additions of designated Restoration Area Zones within the proposed plan. The integration of protection for both areas with high levels of active coral reef restoration, Habitat Restoration Areas, and established in-water coral nurseries, Nursery Restoration Areas, will reduce the impacts of unintentional damage to outplanted coral, restored reef habitat, and underwater coral-rearing structures such as floating trees, frames, and lines within nursery areas. As noted in the Public Release, Habitat Restoration Areas could be applied in the future in any area to support and facilitate restoration of other degraded habitats or species (e.g., seagrass, hardbottom, etc.). This implies the ability to add additional Habitat Restoration Areas as further rehabilitation of habitats occurs. However, it is unclear whether the same applies for Nursery Restoration Areas. There are currently nine Nursery Restoration Areas identified within the Blueprint, which covers all of the existing coral nurseries present until 2021. An additional two nurseries were just recently established in 2022 and, given the exponential growth, as well as the need and resources available for coral restoration, particularly within the context of Mission: Iconic Reefs, more of these nurseries will be established within the coming years. The Connectivity Team requests that the Sanctuary staff consider the ability and process required to add more Nursery Restoration Areas with comparable protection as more of these in-water infrastructure resources become established.

Enhancing existing connectivity through Sanctuary boundary expansion

The CT also endorses the proposed boundary expansion proposals under the rule because they will add protection to habitats and species populations that are clearly connected to existing Sanctuary resources. By adding Pulley Ridge and further protecting it from anchor damage, oil drilling, and other threats, FKNMS can protect upstream coral populations with demonstrated resilience to climate extremes as well as fish populations that seed the Dry Tortugas, the Florida Keys, and beyond via the Loop Current. Closing the boundary "gap" between Dry Tortugas National Park, Tortugas Ecological Reserve North and Tortugas Ecological Reserve South and extending Tortugas Ecological Reserve South one mile west will help preserve the benefits of connectivity between the protected nursery and adult fish habitat on Tortugas Bank and the multi-species fish spawning aggregation site in and near the existing Tortugas Ecological Reserve – South. Therefore the CT supports both the Tortugas area boundary expansion and full protection for the "Tortugas Corridor" as contemplated in the DEIS.