

FKNMS Restoration Blueprint

Lower Keys Guides Association and Florida Keys Fishing Guides Association

Recommendations

I. Sanctuary wide regulations

A. Boundary Expansion

1. **ATBA:** We support the overall boundary expansion to align regulations within the area to be avoided, provide clarity to mariners, provide additional ecosystem protections, and to prohibit operating any tank vessel or vessel over 50m in length. We do, however, have concerns about law enforcement capabilities to properly cover this regulation without negatively impacting capabilities elsewhere and, therefore, request additional funds be appropriated accordingly.

2. **Tortugas Region:** We support the boundary expansion to make Tortugas south ecological reserve contiguous with FKNMS. Again, we echo the concerns regarding enforcement.

3. **Pulley Ridge:** We Support the boundary expansion to make Pulley Ridge a non-contiguous zone to FKNMS. We recognize the sensitivity and importance of this unique mesophotic reef. We support creating a new anchoring designation that would be prohibitive of vessels larger than 100'. We recognize the interests of commercial fishermen, charter fishermen, and recreational users of the zone. We also question the ability of law enforcement to adequately cover this zone and, therefore, request that a cooperative protocol be established between NOAA and USCG as well as additional budget allocated for law enforcement resources.

B. Discharge regulation

We support the addition of a no discharge zone to specifically address the threats post by cruise ships. We are always skeptical of an industry that has routinely and willfully sought to skirt regulations and criminally acted to cover up environmental damages. Although the additional regulations are overdue and well intentioned, we would remind the agency of the repeated violations of the cruise industry and the mounting evidence suggesting ballast water may have been a key factor in spreading SCTL (*Spatial and Temporal Patterns of SCTL Outbreaks in the Bahamas*, Dahlgren, Pizarro, Sherman, Greene, Oliver. 2021). We believe this regulation lacks the appropriate enforcement mechanism and mandatory penalty consequences. We ask the agency to articulate precisely how they intend to enforce this regulation and prescribe penalties to future violations. We strongly believe that there should be a reciprocity provision that would apply to all National Marine Sanctuary systems

given the historical abuses of the cruise ship industry.

We believe the cruise industry cannot be trusted in compliance and the Sanctuary must not put forth a regulation where the monitoring and enforcement is left to the cruise industry. We sincerely maintain that the fox must not be allowed to guard the henhouse. We specifically wish to call attention to the carbon dioxide scrubbers and the likelihood that the highly acidic water will be added to cooling water and illegally discharged.

- C. **Temporary Regulation and Adaptive Management:** Our view is that temporary regulations for emergency management and adaptive management are two separate things. We recognize the need to be responsive to emergencies and unforeseen threats and to react accordingly to time sensitive issues and to create a framework that appropriately incorporates the input from co-trustees and from the public. We support the update to existing regulations as described in the proposed rule including the change to a maximum six-month temporary regulation with the option for an additional six-month extension. Given the broad range of threats and uncertain causes and responses we feel that the proposed regulation is appropriate and warranted.

As the proposed rule intends to qualify and address adaptive management, we do not believe that the regulation, as described, is sufficient to encompass the totality of what we understand adaptive management to be. Certainly, this proposal is aimed at the regulatory authority to address negative or emergency type issues that may arise but does not provide sufficient detail about other actions. Adaptive management, as we understand it to be, is akin to us adapting our business strategy and gear to evolve our fishing product to remain competitive and successful amid the changing fishery and sports fishing industry. So, our comment on the nature of adaptive management and how it is realized in the restoration blueprint is to ask FKNMS to consider how it intends to utilize resources regulations and partnerships to evolve the management of the resource. Adaptive management must not be compartmentalized as overly reactionary but must also be proactive. Examples of this would be the management of WMAs. Where the basis for a particular WMA is the protection of a nesting bird colony and the bird colony has relocated for some reason to an island that is not protected, the FKNMS should adapt the management and shift the zone. Another example would be to temporarily open an area that has been closed to fishing and scientifically evaluate such a management action. Such an approach could yield the basis to support a revolving open and closed zone scheme that would provide restoration results while establishing community trust. Additionally, we see adaptive management as a mechanism that will guide restoration and artificial reefing activities.

The goal of adaptive management should be to make the necessary as well as the experimental adjustments to regulations zones, permitting, signage, buoys, and programs such that the protection and conservation of the resource is best adapted to yield results and solutions on an ongoing basis. The length scope and cumbersome mechanics of an EIS process are not well-suited for a rapid flexible and responsive regulatory regime structure that is needed to appropriately support this ecosystem and the socio-economic and

environmental complexities that accompany it. Neither is the proposed emergency regulation as drafted. Adaptive management must be separate, at least in part, from the emergency management regulation.

We propose the creation of a working group that would have agency staff, council members, and members of the public that would evaluate and recommend issues of adaptive management. Those issues would then be publicly noticed as agenda items at Sanctuary Advisory Council meetings public input would be taken, discussion would inform the council, and if desired council action could be taken for agency consideration. We also suggest that one member of this working group also serve on the Research Advisory Group Section 1.1.5

- D. **Fish Feeding:** We support this proposed regulation with the understanding that there will be a permit program for existing operations. Additionally, we would like to understand more about the impacts of fish feeding at shoreline locations in the future.
- E. **Derelict Vessels:** We support the proposed rule but ask that appropriate monitoring and funding support occur to protect vessels from becoming derelict in the first place. The recent impacts from hurricane Ian demonstrate the enormous problem this issue has become.
- F. **Bait Permits:** We do not support this proposed regulation. Bait fish permits were part of an original deal with the fisherman that must be honored. If there are conflicts amongst users or between fishermen based on gear type, we would like for FKNMS to consider the following: The charter and recreational fishermen utilize two types of gear (1) hair hook rigs (small hooks baited with shrimp on a bobber) and (2) cast nets. Both are highly selective for ballyhoo, surface deployed, and the catch is used immediately and locally. The protein is put back into the ecosystem as opposed to frozen and shipped to another ecosystem.
- G. **No anchoring provision:** We ask for FKNMS to provide additional clarity on the specifics of what exactly constitutes an anchor. We specifically ask for relief of this provision with regards to traditional use of push poles and power poles for “staking out.” We recognize the intent of the “no anchoring” provision to be the prevention of habitat destruction caused by the deployment of a traditional anchor and chain that can swing laterally and cause harm to habitat especially sea grasses. We believe that push poles and power poles, which have a singular point of contact with the bottom, are deployed much more precisely and do not cause the same level of destruction and therefore should be allowed.
- H. **Boaters license and mandatory education:** We support the creation of a mandatory boaters’ education class or license requirement for all recreational users similar to Everglades National Park. Given the complexity of navigating FKNMS and the observable decline in habitat, particularly prop scars on seagrass beds (see attached photo), that has exploded with the increase in boat traffic over the last several years that such a requirement is essential. Capacity, education, experience, impacts, and decline are inextricably linked,

and much more must be done to address this consequential issue. At minimum, a mandatory boaters' license should be required within FKNMS, if not statewide. We strongly urge FKNMS to coordinate with FWC to establish a new zone along the boundary of FKNMS that recognizes the unique nature of this sensitive habitat and the high volume of inexperienced boaters using the resource as appropriate justification for a mandatory boaters' license.

- I. **Traditional Fishing:** We understand that the protocol for cooperative fisheries management between FKNMS, Florida Fish and Wildlife Conservation Commission (FWC), Gulf of Mexico Fishery Management Council, South Atlantic Fishery Management Council, and NOAA fisheries is being revised in parallel to the blueprint to modernize this agreement, define activities that are considered "traditional fishing", and set the process for managing marine fisheries in the FKNMS moving forward. Recognizing the missions of FWC, the councils, and NOAA fisheries, and managing fisheries, we encourage FKNMS to defer to these fisheries management experts in developing fisheries regulations for the FKNMS and encourage cooperation among all the above parties. We also ask that recreational fishing community and the public have the opportunity to review and provide input on the proposed revisions to the protocol for cooperative fisheries and management. If there are gear types or techniques that are developed in the future that may be more sustainable, selective, or otherwise favorable we would want the agencies best suited to evaluate such gear types to be responsive to public input and not held back by the definition of "traditional fishing."
- J. **UAVs (Drones):** UAVs are prohibited in the refuge complex which is located within FKNMS. There are well documented wildlife disturbances caused by inappropriate UAV operation. As the use and prevalence of UAVs increases and their adaptation for fishing or other means of harvesting are developed, so too does the need for regulation. We propose the FKNMS create a permit category for UAV use to monitor the variety of uses and users within FKNMS. Such a permit category should provide for the use of UAVs deemed compatible with the FKNMS mission and responsible use of its resources. We are concerned that the use of UAVs can be used to target fish in such a manner that it poses a unique threat to the resource and should be considered incompatible with the use of the resource. The LKGA and the International Game Fish Association (IGFA) have banned the use of UAVs two weeks prior to and during the performance of their respective Permit fishing tournaments because the use of UAVs is contrary to the long-held observance of good sportsmanship and etiquette.
- K. **Catch and Release:** We do not support the elimination of catch and release sport fishing in the SPAs where it has historically been allowed. We ask that the regulation be adjusted such that a vessel may enter the SPA with previously caught fish onboard and still be allowed to practice catch and release in the SPA. Catch and release is highly sustainable and offers charter vessels the opportunity to dedicate catch effort without the need to keep any fish. Zones that are catch and release offer this incentive and will lead to increase adoption of this practice in the future.

L. Thrill Craft (Jet Skis, Air Boats, Parasails):

We ask the FKNMS to enforce the prohibition of thrill craft within the USFWS wildlife refuges. The cooperative agreement between FKNMS and FWC see must provide for enforcement of all regulations including the prohibition of thrill craft from refuge waters. Additionally, we asked the FKNMS to evaluate the impacts of noise pollution of jet skis near shore areas; especially the chronic disturbance created by hundreds of jet skis relentlessly running over shallow water habitats. We also ask FKNMS to consider parasail boats as thrill craft. In recent years we have seen the increase of parasail activities in FKNMS waters with lethal consequences. Similar to the deaths incurred on Jet Ski tours, parasail operations have resulted in numerous fatalities as a result of negligent operation. More analysis of these activities, their impacts, regulations, and compatibility with the use of FKNMS resources must occur. At minimum a requirement for Jet Ski tour guides to be USCG licensed captains should happen immediately. The daily occurrence of lines of Jet Skis, sometimes 20 or more in a row, stretching over a half mile, causes massive confusion for other boaters, is a serious navigational safety concern and has been conducted for profit by unlicensed individuals. This issue must be addressed within the final role of the restoration blueprint.

M. Noise Pollution:

Throughout our conversations with our members and among the wider community, we have heard many concerns about the loud and often vulgar music that is played at excessive volume at many of the sand bars. We feel that the peace and tranquility of these special places is being subjected to significant amounts of noise pollution. This noise pollution disturbs wildlife, ruins the tranquility that many seek, and corrupts the beauty of these wild areas. We recognize the freedom to enjoy a day at the beach and freedom to enjoy music at appropriate volumes that respect others and, more importantly, the wildlife. We ask FKNMS to work jointly with USFWS to develop regulations in regard to noise pollution that will uphold the purpose of the wildlife refuges as well as create standards that can be observed throughout FKNMS. We ask FKNMS to engage on this issue in such a way that the freedom to enjoy these beautiful places is maintained while still being compatible with resource protection.

II. Zone specific regulations

Included are charts reflecting our thoughts on modified zones that were proposed as well as additional zones that we are proposing. See attached PDF. We support the Agency's zone type reorganization.

- A. **WMAs:** We support the proposed WMAs with the following modification: all WMAs (unless specifically indicated) be changed from "no entry" to "no motor" 300' from shore. After careful conversations with our ENGO partners we propose to include a 50' "no entry" buffer zone surrounding the WMAs that have documented and current nesting colonies of state listed Species of Greatest Conservation Need. The zones would be evaluated annually, or as needed, and be included in the adaptive management updates. The 50' "no entry" zone would still be able to be "cast into" and "fished". We propose that the inclusion of a "casting into" or "fishing" these buffers be evaluated for realized impacts of fishing line and

lure entanglements and not categorically excluded without specific material and scientific findings that support such a regulation. Additionally, our organizations will visually monitor bird activity and behavior and, when appropriate, will communicate our observations with our science colleagues to evaluate potential zone modifications.

Note* we have already indicated in good faith that there are observable colonies of frigates at Coconut Key, Bill Finds Key, and Crawfish Key which currently do not have proposed WMAs.

- B. **Tortugas South:** We are willing to support the western expansion of this zone with the following reciprocal adjustments:

(Option 1) modify Tortugas south zone on the eastern edge to be 1/2 of the total area extended to the west and allow for commercial and recreational fishing with the exclusion of long line gear.

(Option 2) Open at minimum one square mile of Tortugas North reserve to commercial and recreational fishing for at least one year and conduct scientific analysis that would inform future zone openings through adaptive management.

We are inclined to support science-based zone modification especially for potential spawning sites. We are also inclined to analyze the results of zone reopening and revolving open/closed zone schemes. We maintain that this management strategy should be evaluated, and this area is ripe for such an evaluation.

- C. **Turtle Zone:** We believe that turtle populations are rebounding in the waters of FKNMS. We believe that the impact threat posed to turtles is minimal in this area and much more likely to occur as the result of giant cruise ship propellers or high-speed ferry wave cutting hulls. Our observations of dead turtles as a result of impact have been primarily in the vicinity of Northwest Channel, with the exception of every year after mini-season there are dead turtles found in the back country. We do however recognize the importance of this zone for turtles, and we do not have a conflict with this zone. Indeed, the LKGA and FKFGA are proposing similar large "idle speed" zones. We would like FKNMS to similarly consider our proposed "idle speed" zones and marked running lanes for the protections they may afford turtles and other marine life.

We would also like to acknowledge Jessica Bibza for her contributions to conservation and honor her legacy with our support for this zone.

- D. **Boca Grande Woman Key WMA:** This zone is a very high priority for our organizations. We propose the following modifications to this zone: "no entry" on the shore of Boca Grande Key and the interior lake. Extend an "idle speed" zone outwards from the shore 300 feet and across the flats to women key to protect shallow water habitat. (See attached chart)

We would ask FKNMS to recognize the historical use of these locations for cast netting bait

by our light tackle fishing professionals and accommodate this use with appropriate and indeed greater protections than are currently in place by adopting our recommendations. If there are concerns from law-enforcement about the bird disturbances caused by pedestrian traffic down the beach, we ask that any change to this zone provide for the “idle speed” access of boats and the cast netting of bait.

- E. **Red Bay Bank-** We support this zone yet would like to call attention to a minor detail. There is a marked navigable channel transecting this zone. We would suggest relieving this zone throughout the marked channel. Additionally, we would like to note that all these banks suffer tremendous scarring from vessels and our members have regularly witnessed propeller dredging and vessel groundings on these banks. A possible consideration would be to make a “no motor” zone and evaluate the difference or make one side of the proposed zone “no motor” and the other side “idle speed”.
- F. **Channel Key:** We support the creation of a 100’ “no entry” buffer zone around channel key to protect bird colonies. We would also support an additional “idle speed” buffer if warranted.
- G. **Sambo, Sombrero, Tennessee, Alligator SPAs, and Spur and Groove Reefs:** We recognize the value of this habitat and support additional protections but not to the exclusion of fishing. We support a no anchoring provision and recommend extending the Tennessee Reef SPA an additional 100 yards to the northeast and not offshore towards the reef line. We support the placement of mooring balls on Alligator (deep water) Reef. Also, we would suggest the creation of a recreation zone on the sandy area on the northwest side where users could anchor in.

We strongly urge FKNMS to recognize the iconic importance of these locations, particularly Alligator Reef, within the traditions of sport fishing. To draw an analogy, Alligator Reef is to sail fishing as Augusta National is to golf or Fenway Park is to baseball. Closing these reefs to sports fishing would be an immensely sad outcome for the history of the Florida Keys. There is no simplification or consistent logic that warrants closing some of the most iconic spots in sports fishing. Areas like these are why we are considered the “sports fishing capital of the world.” We would like to acknowledge the Islamorada Charter Boat Association charts submitted here as well as in their comment letter. We fully support their proposal.

- H. **Horseshoe Key:** We oppose the creation of a “no entry” zone. We support and recommend the adoption of a “no motor” zone.
- I. **Pigeon Key:** We support a “no entry” zone.
- J. **Pelican Key:** We support a “no entry” zone and maintain that the viewing of wildlife and birds will not be dramatically adversely affected.
- K. **Tavernier Key WMA:** We support this zone however we refer to our sanctuary wide comment on no anchoring to provide relief for the deployment of push poles and power poles.

- L. **Cheeca Rocks SPA:** We support the 3 Cheeca Rocks SPAs. We would support the inclusion of all 3 SPAs within a no anchoring zone, but not an all-inclusive SPA that would prohibit Fishing.
- M. **NW Channel:** We recommend requiring all vessels over 50' to run at idle speed in NW channel to limit further destruction of sea grass and for safety of small vessels operating in the channel.
- N. **Marquesas:** After much discussion with our membership, we are submitting a bold proposal to protect one of the most iconic and sensitive habitats found within FKNMS, the Marquesas. There is no other place like it in the world and it is a truly special place worthy of our respect and care. We propose a behavior modification (idle speed) across all flats and Mooney Harbor Basin. Flats guides are the primary users of this area and will be the most impacted by this regulation. We are asking for this regulation to guarantee protections for this incredible habitat.

We also wish to call attention to a possibly overlooked disturbance. Every day there are numerous over flights, at low altitude, by sea planes enroute to Dry Tortugas National Park. Some days there are as many as 20 over flights directly over the center of the Marquesas atoll including over the islands on the west side which are being proposed as WMAs to protect birds. We maintain that an occasional flats guide pulling quietly and slowly nearby an island does not constitute the same level of disruption as a very loud sea plane flying at very low altitude dozens of times a day.

The Marquesas area is ripe for consideration of overflight and altitude restrictions. We would acknowledge the difference between a commercial civilian aircraft and a military aircraft. We support the exemption for national security and defense training by DOD agencies.

III. **General Management Plan**

- A. **Priority Management Themes:** We fully support the management themes and feel that the descriptions are accurate. With little adjustments they correctly reflect our beliefs concerns and approach.
- B. **Goals:** We concur with our environmental colleagues that the goals of the FKNMS as outlined in the draft management plan be re-organized to emphasize the current priorities facing this ecosystem as follows: 3,2,5,1,4

We have structured our comments to reflect this goal sequence.

Goal (3): Reduce Threats

3.1.1 Spatial Patterns and Types of Human Use

We strongly encourage FKNMS to implement the creation of marked running lanes similar in style and placement to the gate style markers utilized by Everglades National Park. This will

greatly assist boaters with safe operation and will provide a uniform navigational standard across both ENP and FKNMS.

With the large increase in boat traffic to FKNMS, we propose running lanes throughout the back country that would demarcate historical routes (see attached charts). This would greatly reduce threats to benthic habitat, which is a core mission of FKNMS, as well as consolidate boat traffic to avoid running over rest areas of fish and wildlife. If there is a legal reason that such running lanes cannot be established or is reluctance on the part of other agencies, we would like NOAA to seek all appropriate legislative remedies to enact this proposal.

3.1.2 Large Vessel Mooring Buoys

We would like to bring attention to the increase in the mothership activities throughout FKNMS. Over the last decade there has been an increase in the commercial operations of motherships (large vessels, usually a yacht, that are owned and run as de facto hotels on the water). The prevalence of these motherships in the Marquesas has resulted in numerous conflicts among fishing guides and a breakdown of traditional etiquette surrounding this fishery. This conflict has led to a diminished user experience and increased pressure on the fishery. Additionally, we would like to point to serious issues about discharge, business licenses, and inspected vessel status that might be going on in violation of current laws.

We ask the FKNMS to evaluate the use of mooring buoys and the use of historical anchorages including those found on the west side of the Marquesas, Pearl Basin, and Jewfish Basin for the compatibility with resource protection and, if appropriate, establish large vessel mooring balls in these areas and enforce all applicable regulations. Furthermore, any such buoys should have maximum usage limits concurrent with the Dry Tortugas National Park and ENP that stipulate there may be no more than seven overnights per month by any singular user.

3.2.1 / 3.2.2 (see comment on adaptive management subsection C temporary regulation)

3.3.1 We support this approach and believe more modern resources can be utilized by NOAA DLE to increase overall effectiveness of law enforcement.

3.3.2 We strongly encourage this approach specifically coordinating virtual markers with electronic manufactures and electronic chart products to be cost-effective and user-friendly solutions to the additional signage necessary to properly mark established zones, closures, and notices.

3.3.3 (see comment on derelict vessels subsection F, derelict vessels)

3.3.6 We will continue to advocate for Bluestar programs and will help to facilitate changes as necessary. We suggest revisiting the program with a public input session to seek appropriate adjustments and support.

3.3.7 Artificial Habitats

We strongly encourage FKNMS' commitment to the evaluation and implementation of artificial habitats and programmatic deployment of these habitats. We believe that artificial structures can and should be utilized as a viable restoration strategy. Advances in reefing techniques, architecture, and associated scientific analysis present a realistic alternative in the restoration toolbox. Beyond the proven effectiveness of pressure mediation for both diving and fishing, we maintain that yet to be realized findings exist within a careful, well thought out, and well monitored comprehensive artificial habitat program. Such a program should be tailored to maximize and replicate favorable habitat. Similarly, it may also be tailored to maximize effectiveness of spawning site closures. Closures such as Western Dry Rocks and Riley's Hump have come after contentious public debate and have ongoing evaluative science. These closures may be further enhanced with the hydrological and larval settlement models directing the placement and style of larval, post larval, and juvenile fish habitats (some of which may include artificial structures) alongside naturally occurring organisms and or features. Engineering and deployment of structure with the explicit intention of maximizing larval recruitment and juvenile fish retention would be the type of proactive measures needed to yield abundance diversity and resiliency.

FKNMS is faced with anticipated and unanticipated changes and threats, indeed it is a major focus of the general management plan. Forward thinking solutions and understandings of how to address these changes and threats can be built into such a comprehensive plan. FKNMS cannot afford to only take a defensive position regarding management strategy. As it's laid out in goal 1 of the management plan, the understanding of the underlying ecosystem mechanisms at work is of vital importance. We maintain that creative solutions and findings exist and are yet to be discovered. The establishment of a comprehensive artificial reef habitat restoration plan will greatly assist in unlocking these breakthroughs and provide clarity to future management.

The last artificial reef project was the Vandenberg. What a success it has been. In nearly 30 years of sanctuary management this project stands out as a true success. Why would we not welcome other successful efforts? Is the principle of self-sustaining colonization so dogmatic as to prevent the success of other projects that have measurable environmental and socio-economic benefits? We sincerely believe not!

The coastal economy of the Florida Keys is measured in the billions. At present it is in real danger. With a highly interconnected economy dependent on the health of the ecosystem and the fishery. Entrepreneurial and enterprising leadership is needed. FKNMS has a role in oversight and that oversight must not be burdensome to the point of preventing economic adaptation or realized innovation.

It is time for NOAA to reconsider its position on artificial habitat and welcome innovative solutions to the challenges ahead. We demand the necessary regulatory adjustments be

made such that a well-considered program be established to manage for abundance, climate resiliency, and economic sustainability.

We believe in science. Science has an extraordinary power to reveal the truth. We seek a collaboration with fishermen, scientists, and regulators to develop and implement an artificial reefs/habitat restoration plan. Alongside projects such as Mission Ionic Reefs, proper zoning, and adaptive management, artificial reefs/habitat restoration remain our top priority. We stand ready to realize the public trust with an investment in such a program.

Goal 2: Improve the Condition of Sanctuary Resources

We support this goal in concept. Our interpretation of this goal is it's well-intentioned but held back with the majority emphasis on analysis and communication. We are encouraged by the proactive approach of sections 2.2.6 to 2.2.8. This series of goals is precisely what we envision as a crucial part of our artificial reefs/habitat restoration plan. Our comments for this goal will be laid out along the major themes described in the introduction: water quality, habitat, and living marine resources.

A. Water Quality

1. Regional Issues and Everglades Connectivity

We are aware of the connectivity around the waters of FKNMS and ENP. We recognize that the function of the ecosystem, the migration of fish, and continuity of habitats do not adhere to the human constructs that delineate these management areas. More must be done to foster cooperative and constructive management and agency coordination. Section 2.1.2 recognizes the relationship between FKNMS and Everglades restoration activities as it calls to strengthen engagement but offers no specific plans, timelines, or deliverables to such engagement. We feel more needs to be done throughout the general management plan to create tangible goals for this engagement. Given the degree of connectivity between FKNMS and the greater Everglades watershed, we suggest that Everglades restoration and specifically restoration activities that will benefit Florida Bay be included throughout the general management plan. Original plans for Everglades National Park included portions of the upper Keys and the coral reef tract. The current boundary of ENP was the result of a political deal that was not based on science or recognition of ecosystem connectivity limits. This failure and logic must be corrected and the FKNMS must do more to fight for its own interests that are invariably linked to Everglades watershed policy.

2. Sewage Problems - Regional and Local

Sewage problems in south Florida are a major problem. An overburdened 1970s era infrastructure cannot accommodate the rapid growth and development witnessed in South Florida over the last 30 years. Our environment has paid the cost that should have been

built into the development proposals. Today there are monumental problems with sewage throughout South Florida. A landmark study by Bonefish Tarpon Trust scientist, Jennifer Rehege, confirming the presence of pharmaceuticals in the tissue of Bonefish demonstrates, unequivocally, that there are significant problems with the sewage system in south Florida including the Florida Keys. FKNMS must prioritize sewage related issues that exist regionally and locally within its general management plan. At present there is insufficient attention to the sewage problem throughout the general management plan. Specific evaluation, timelines, and remedies must be established. Action must be taken that insure costly public investments such as coral restoration, seagrass restoration, and artificial habitat deployment is not jeopardized.

The taxpayers in certain districts of the Florida Keys have paid for public sewage projects that pump effluent below a confining geological layer. This ensures that the sewage does not re-emanate through the porous limestone and become problematic to the surrounding ecosystem. Elsewhere in the Florida Keys, there are shallow water injection wells that are possibly problematic. Key West has a state-of-the-art treatment facility and deep injection well. The constant and seemingly increasing presence of pharmaceuticals bacteria and other toxins associated with sewage effluent are still present in the water surrounding Key West. It begs the question why? We ask the FKNMS to investigate this issue. We would like to point out the private utility company on stock island that still pumps into a shallow water well. Similarly, there is ongoing litigation involving the shallow water injection wells in Marathon and the possibility of harmful effects resulting from the effluent emerging from these wells into the surrounding waters. We ask the sanctuary to take an active and leading role in the necessary water quality analysis and monitoring such that quality data may point to future solutions to the wastewater issues. There is insufficient language in sections 2.1 about these concerns and this must be addressed substantively in the final rule.

3. Turbidity

“Sediment is a likely culprit in spread of deadly disease on Florida coral reefs, study finds.” This is the title of a NOAA Atlantic Oceanographic and Meteorological Laboratory News release dated January 24, 2022. Referring to a study originally published by the University of Miami’s Cooperative Institute of Marine and Atmospheric Studies where it concludes “findings indicate that disease associated microbes may reside in sediments...this will provide managers with critical information needed to respond to the stony coral tissue lost disease outbreak especially in the context of mediating further disease spread with coastal construction activities like dredging.

Noticeably absent from section 2.1.3 is turbidity. We ask that turbidity, specifically cruise ship generated turbidity, be investigated, monitored, and evaluated. It is accepted scientific fact that turbidity is harmful to marine life including critically endangered coral species. The documented water quality violations occurring in Key West Harbor as a result of cruise ship activities must be included in the water quality parameters. There is substantial evidence in satellite photos and citizen videos of the areas around in Key West being subject to turbidity violations. This evidence must warrant further monitoring and mapping such that cruise ship

generated turbidity be considered a hotspot as described in section 2.1.5 which states “evaluate and map recent and long-term water quality data sets to identify water quality improvements hotspots and spatial and temporal gaps in coverage.”

We ask FKNMS to appropriate the necessary funding to properly monitor and establish data sets for cruise ship generated turbidity. Additionally, we ask that all standards and legal limits be enforced. FKNMS exists as a cooperative entity between ONMS and the state of Florida DEP. We ask that the FKNMS demand compliance with state water quality standards for outstanding Florida waters and, where necessary, reevaluate all relevant permits or exemptions that are causative of water quality violations.

4. Storm Water Run Off

We ask FKNMS to consider the impacts of stormwater runoff especially from bridges. It is the case that pollutants from motor vehicle traffic on US1 are washed off the road and into the adjacent waters. Emerging projects such as road upgrades and bridge upgrades offer an opportunity for FKNMS to engage on these issues. We ask FKNMS to engage on this often overlooked yet impactful issue.

C. Habitat

Our objective is to develop habitat restoration or mitigation plans / activities where needed.

We believe that objective 2.2 offers the potential to deliver real restoration progress. Many of these activities are themes in our comments especially our comments reflecting the need for an artificial reef and habitat restoration plan (see comment 3.3.7).

Additionally, we would ask that our comments on sewage and cruise ship generated turbidity be incorporated into activities 2.2.2- 2.2.5

2.2.6 This activity is a home run! We fully support this activity but would recommend including the use of artificial structure.

2.2.7 This is a welcome revision to the permitting requirements necessary for restoration. We again ask that it be inclusive of artificial reefing.

2.2.8 This activity is a serious proposal that has our full support. We believe this activity must receive the highest priority possible alongside mission iconic reefs. The vision articulated in this activity, along with activity 2.2.6, is exactly what we need. Not only do we support this activity, but we would like for it to be champion and given a headliner status. Something like mission RESTORE (Resilient Ecosystem Science and Technology Operation for Restoration Efforts). This activity is something the community will get behind and support 100%. We highly encourage FKNMS to further develop this activity and include project timelines and deliverables. Additionally, we suggest this activity is prime for artificial reefing technologies and should be included in the thinking. Mission RESTORE has our full support and highest hopes!

2.2.9 Mission Iconic Reefs is a welcome project with enormous potential. We support this activity as described but we respectfully request it include status updates, funding updates, project timelines, and deliverables reported to the Sanctuary Advisory Council on an annual basis.

D. Living Marine Resources

2.3.1 We fully support this activity especially the key term “ecosystem-based management approaches”. The strategic thinking along with adaptive management and habitat restoration/mitigation including artificial reefs is the best approach to yield success.

2.3.2 We recognize the importance of aggregation sites or corridors and would like regulators to manage for abundance in the future. However, without public support we are skeptical of closures without a mechanism to re-open or mitigate. Again, we feel compelled to articulate our support for artificial reefs in habitat restoration and proactive adaptive management as crucial elements to build trust for future management actions.

Goal 5 Advance and support collaborative and coordinated management.

Collaborative management is a cornerstone to any well-functioning sanctuary system and especially important here in the Florida Keys which have an enormously complex network of agencies and municipalities and economic and cultural sensitivities throughout. We support this goal and would only emphasize that it reflects two important issues: (1) Coordinate activity with Everglades watershed and (2) Prioritize law enforcement and the increase burdens on it given the increase in users and increase in responsibility/scope as additional areas and regulations come online. Activity 5.3.2

Goal 1 Improve our understanding of sanctuary resources and ecosystem services, and their value to the Florida Keys economy.

We support this goal and the activities outlined in it. We wish to enumerate the following issues and suggestions:

1.1.1 Hosting a Florida Keys ecosystem science symposium is a great idea! We suggest including scientific partners and stakeholders throughout the Caribbean. We know that the FKNMS is inherently part of a wider Caribbean ecosystem, and we encourage FKNMS to include that scale in the symposium. We would also like to have sports fishing and recreational fishing interests participate where appropriate. The Bonefish Tarpon Trust hosts a science symposium similar to this and our experience has been very positive when scientists, fishermen, and like-minded organizations get together. We eagerly await this event!

1.1.2 We again point to a gap in monitoring around Key West and with regards to cruise ship generated turbidity.

Sharks: We believe that there is a predator-prey imbalance occurring in FKNMS with respect

to sharks and we would like scientists to investigate this. We have heard from many of our members that there are increasing problems with sharks, and we have noted an uptick in shark attacks on the waters of FKNMS. We feel that a comprehensive analysis should be performed and that any findings be presented to the SAC. Our members stand ready to assist with any projects investigating this issue.

Goal 4 Although this goal is our lowest priority it is still important, nonetheless.

4.1.3 Best practices for fish cleaning is important and we would like analysis of the disposal fish carcasses to be considered such that they can inform best practices. Possible issues may exist with the use of fish carcasses as fish attractants around bridges as well as fish feeding at shore side venues.

Additional comments for FKNMS consideration are simply the Guides association seeks increased partnership with FKNMS in its annual marine debris cleanup. We welcome agency participation and resources to maximize our debris cleanup efforts.

Finally, we would like to extend an invitation to FKNMS superintendent and select staff, including NOAA law enforcement, to meet annually with our combined leadership to foster good communication and collaboration.

We thank FKNMS staff for their dedication and hard work in preparing the proposed rule of the Restoration Blueprint.