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TO: Sarah Fangman, Superintendent  
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FROM: Bonefish & Tarpon Trust  
Jim McDuffie, President & CEO  
William Horn, Chair, Science and Conservation Committee  
Dr. Aaron Adams, Director of Science and Conservation  
Dr. Ross Boucek, Florida Keys Initiative Manager

DATE: November 26, 2019

RE: Comments on Draft Environmental Impact Statement (DEIS) for the Proposed  
Florida Keys National Marine Sanctuary Plan

We write on behalf of Bonefish & Tarpon Trust (BTT) to provide the following comments, which are addressed to the Draft Environmental Impact Statement (DEIS) for the Florida Keys National Marine Sanctuary Management Plan released in August 2019. BTT strongly recommends significant modifications to Preferred Alternative 3. Changes are needed to: (1) assure better conservation of important shallow water habitats for bonefish, permit, and tarpon, and (2) eliminate unnecessary, unwarranted prohibitions on traditional flats angling in the Keys.

## **Introduction**

The Florida Keys represent the epicenter for the shallow water, trophy fishery for permit, tarpon, and bonefish, better known as the flats fishery. Despite the fishery's historical significance, the general trend for the fishery over the last 30 years is negative. The Florida Keys National Marine Sanctuary's (FKNMS) proposed new management plan, as outlined in the "**Restoration Blueprint**", is a good start to providing the needed conservation for areas of ecological and cultural importance for bonefish, tarpon, permit and their habitats. However, we are persuaded by our research that in numerous instances the **Restoration Blueprint** falls short and imposes needless angling-related restrictions that provide no additional benefits to the flats fishery. In these comments, we provide an overview of our position on proposed Sanctuary-wide zoning regulations and marine zone proposals. We also describe the science and rationale behind our comments and recommendations.

## **Sanctuary-wide Zoning Regulations**

BTT supports three Sanctuary-wide regulation proposals including:

- 1) The discharge regulation exemption to prohibit discharge of any material or other matter from a cruise ship except clean vessel engine cooling water.
- 2) Prohibiting operating a vessel on plane or in a manner that creates an extensive wake within 100 yards of all shorelines (alternative #4).
- 3) The proposal to create a “notch” in Key West National Wildlife Refuge to allow passage of personal watercraft around marker “G13” but on the inside of marker “GWR5.”

In contrast, we do not support the fish feeding regulation proposal. We urge FKNMS to address shoreline-based fish feeding that attracts tarpon. Research on this issue regarding other marine life suggests that these attractions pose potential threats to our tarpon fishery. Given the ongoing and rapid growth in tourism across the Keys, these attractors will continue to become more common and should be proactively addressed.

## **Marine Zone Proposals**

BTT strongly opposes nearly all no entry Wildlife Management Areas (WMAs) proposed in the preferred alternative for shallow waters. First, no peer-reviewed, publicly available study exists demonstrating that flats fishing (push poling or the use of a trolling motor) has adverse impacts on wildlife and habitats that these WMAs are meant to protect. Therefore, restricting access to flats fishing is in direct conflict with the 1997 Refuge Act, particularly within the National Wildlife Refuges (NWR) where many of these zones occur. The 1997 Refuge Act specifies angling as a “priority public use” and mandates action to “facilitate” angling within the NWRs once angling is found to be “compatible” with resource conservation (the U.S. Fish and Wildlife Service made such a compatibility determination in its most recent Comprehensive Conservation Plan for the Keys Refuge units). Consequently, we recommend that no entry WMA designations be changed to less restrictive no motor WMAs, which would allow for flats fishing while, at the same time, achieving WMA conservation goals. Second, the small size of these zones provides no protection for flats species that use much larger areas as home ranges.

We also strongly object, and urge the Sanctuary to reconsider poorly conceived and imprecise idle speed and transit only zones on Moser Channel and Channel Key banks. We agree that these banks are important and fragile ecosystems in need of conservation. But existing adverse impacts arise mostly from larger boats trying, often unsuccessfully, to traverse these not well marked banks. Proposed transit only zones do not address the impacts while foreclosing unnecessarily important flats angling opportunities. We advocate that FKNMS re-zone these banks with a combination of more precisely drawn idle zones or no combustion engine zones and, in turn, restrict use of combustion engines, the main source of stress on those habitats, while still allowing traditional flats fishing to continue.

The Long Key and Tennessee Reef Sanctuary Preservation Area proposes needless access limitations to a critical and historic area for bonefish and tarpon fly fishing near the shoreline of Long Key. The goal of this Sanctuary Preservation Area is to protect large and contiguous interconnected habitats of seagrass, shallow hardbottom, aggregate patch reef, and deep, drowned spur-and-groove reef, as well as to provide a corridor for migration of fishes of different life stages from Florida Bay into the Middle Keys. Fishing for bonefish and tarpon does not damage benthic habitats, nor does such angling target or stress reef fishes or spiny lobsters transitioning to adult reef habitat. Prohibiting traditional flats fishing in this area severely impinges upon an important seasonal tarpon fishery without providing further gains to conservation goals. Flats fishing here occurs only proximate to shore. With this in mind, we urge FKNMS to include a shoreline to nearshore buffer zone regulated as no motor, idle speed, and or catch and release only to allow for traditional bonefish and tarpon fishing to continue in this historic area where fishing for these species began in the Keys.

We are in support of all other proposed no motor zones within the preferred alternative. These zones will alleviate stress from propeller scarring on important shallow water habitats throughout FKNMS, allowing for the habitats to recover and better support our flats fishery. We are also in support of Loggerhead basin idle speed zones and the additional idle speed zones proposed in alternative #4. These zones will provide needed protection for habitats and reduce stress on fish from fast approaching boats in productive areas to fish for bonefish, permit, and tarpon.

Even with the proposed no motor zones, and additional idle speed zones, the blueprint is insufficient for protecting flats habitats that support the fishery within FKNMS. We encourage FKNMS to include marine zoning recommendations proposed by the [Lower Keys Guides Association](#) (LKGA) and Florida Keys Fishing Guides Association (FKFGA). LKGA and FKFGA zones were designed based on the expertise of over 180 fishing guides identifying areas that are critical to sustaining the flats fishery. In addition, these proposed zones are expansive, which provides conservation at a scale appropriate to flats fish movements. For example, BTT tracking research shows that the LKGA zones protect high use areas for permit. In addition, BTT interviews with guides and knowledgeable anglers show that FKFGA and LKGA zones overlap with productive habitats for both permit and bonefish. Affording these areas additional protection is essential to the flats fishing industry and the conservation of the species. We sincerely hope that the Sanctuary includes these zones in their next revision. To augment LKGA and FKFGA recommendations, we propose an additional four no motor zones east of Annette Key. In a similar fashion with LKGA and FKFGA recommendations, these zones occur in productive bonefish, permit and tarpon areas, and provide conservation at a scale that matches the ecology of the fish.

We are in support of interventions to reduce fishing effort at Western Dry Rocks, but we are concerned that the trolling only designation will not effectively meet management goals. Therefore, we propose that the Sanctuary consider a seasonal spring - summer no entry closure at Western Dry Rocks. Our research demonstrates that Western Dry Rocks is likely the most important spawning site for permit in the Lower Keys. Unfortunately, angler reports and research suggest that an unsustainable number of hooked permit are eaten by sharks before they are landed. Given the potential for this ostensible catch and release fishery (which in reality is largely catch and kill) to become more popular, and that predation rates are likely already

unsustainable at current levels of fishing effort, we support actions to reduce fishing effort at this critical fish aggregation site. Of the seven fish species that spawn there, all of them spawn between April and August, and four of these species, including permit, only spawn within that window. This seasonal closure would allow winter fishing activities within the Western Dry Rocks WMA, which due to its geographic position provides fishing opportunities during strong northern winds common in the winter. This location also aggregates seasonal pelagic species such as kingfish and sailfish. Targeting these species in the winter does not interfere with spawning fish nor damage benthic habitats.

We add that the purpose and need of this kind of angling restriction/fish conservation measure is supported by empirical evidence. These kinds of science-based restrictions can overcome any other legal presumptions or agency duties to otherwise allow or facilitate angling (e.g.; Executive Order 12962, 16 USC 7912, Secretary of the Interior Orders 3347, 3356).

### **Full Position Statement**

Bonefish & Tarpon Trust is a science-based, non-profit organization dedicated to the conservation of bonefish, tarpon and permit—the species, their habitats, and the larger fisheries they comprise. In pursuing its mission, BTT conducts research to better understand the biology and ecology of these species. The findings are used to inform conservation action, including habitat protection, strategic fishery regulations and improved management.

The Florida Keys represents the epicenter for the shallow water, trophy fishery for permit tarpon, and bonefish, better known as the flats fishery. More world records have been recorded for these species in the Keys than anywhere else in the world combined (IGFA.org). In addition, the flats fishery generates \$465 million per year in economic impact. In Florida, bonefish and tarpon are regulated as catch and release only, and anglers practice catch and release for permit on the flats. Further, research from BTT collaborators shows that if catch and release best practices are used, and sharks and other apex predators are not in abundance at the fishing location, post release mortality is minimal, demonstrating that the catch and release fishery is sustainable.

Flats fishing is compatible with FKNMS goals to facilitate sustainable marine use. Unlike other fishing activities that leave behind considerable amounts of marine debris from abandoned hooks, fishing line, and lead that degrade habitats, almost no marine debris is left behind with flats fishing. Second, flats fishing is predicated on silence, therefore acoustic disturbances that stress birds and other marine life are minimized. And third, fishing vessels used in flats fishing are designed to weigh as little as possible and to have shallow displacement. These traits reduce the likelihood of boats impacting the bottom. Even when they do, because of their weight and horsepower, habitat forming species are relatively resilient to those impacts. To this end, not only is flats fishing compatible with the long-term sustainability of the Sanctuary, the industry can be used as a conservation tool to protect a suite of other species that overlap in habitat use.

In order to maintain this lucrative and sustainable asset to our Florida Keys economy, existing and future threats to the fish and their habitats must be minimized. Over the past 20 years, the number of tourists visiting the keys has increased four-fold, to 5.2 million visitors per year, 4.5

million of which are boaters. Symptoms of this four-fold increase in marine use include a more than doubling in the number of seagrass flats classified as severely degraded by propeller scarring (>25% of area impacted), dying shallow water coral reefs, and declines in the abundances of sponges. All of these factors will continue to impact our flats fishery. Further, we are encountering stresses currently not managed, or even monitored, such as the increased exposures to human born contaminants like pharmaceuticals that are absorbed directly by fish and wildlife, sourced from both local and regional water management policy and practices.

The FKNMS provides a framework in their *Restoration Blueprint* to protect essential places that support the flats fishery, and to halt further declines and allow for recovery. Through marine zoning, FKNMS can provide protections for areas of ecological and cultural importance through access or gear restrictions, allowing ecological systems or fish and wildlife populations to recover from ongoing stresses. The FKNMS approach aims to reduce local stresses, with the understanding that less-stressed Florida Keys ecosystems will be more resilient to global stressors that we cannot prevent, such as hurricanes, droughts, and sea-level rise.

For marine zoning within the *Restoration Blueprint* to have meaningful benefits to the flats fishery, and to increase the fishery's resilience to more global stressors, habitats that support these species throughout their lifecycle must be protected. These protection schemes must include juvenile habitats, adult habitats, and spawning sites. Just as importantly, marine zones must be appropriately-sized to encompass the daily movements or home ranges of individuals occurring in the protected areas. This concept of full-life-cycle habitat protection can both guide marine zoning within the FKNMS and prioritize future research and conservation needs for shallow waters. BTT has invested in scientific research to describe habitats that flats species use at each stage of their life and movement studies to understand how much area individuals use each day. We conducted this research to inform marine zoning networks that protect important habitats while allowing the flats fishery to thrive. Compared to blanket marine reserves (i.e. Long Key Tennessee Reef Sanctuary Preservation Area), marine reserve networks allow for greater marine use, while offering the same protection as blanket reserves. Our recommendations are focused on building marine zone networks that provide the flats fishery and the habitats that support them the opportunity to recover with minimal impact to the economically and culturally important fishery.

Many other important fish and wildlife live in the shallow waters where bonefish, permit and tarpon occur. Therefore, affording protection to the habitats that support the flats fishery will also protect dozens of other species, such as juvenile snappers, juvenile pink shrimp, stone crabs, lobsters, wading birds, juvenile sharks and rays. The use of charismatic and economically important flats fish to drive multi-species habitat protection has been used successfully in the past. For example, the Bahamas National Trust designated six national parks to protect the habitats that support the \$169 million per year catch and release bonefish fishery. By doing so, the Bahamas National Trust was able to protect many other species that used the same coastal habitat mosaic. If the Sanctuary protects the habitats that support the flats fishery, numerous other benefits are achieved. Further, the Sanctuary can use management tools such as no motor zones and idle speed zones instead of no entry zones to allow access to these areas from low

impact user groups, improving the economic potential of our marine environment while achieving conservation goals. In a sense, bonefish, tarpon, and permit are used as umbrella species, whereby protection of their habitats also protects habitats of many other species.

Within the Sanctuary, there is extensive scientific and local ecological knowledge available on the habitat requirements of bonefish, permit and tarpon to inform strategic and effective habitat protection and marine zoning. These include:

- 1) Juvenile fish habitat descriptions in the Florida Keys and other locations.
- 2) Science-based, semi-structured interviews in which anglers and guides identified where they fished, showing important habitats that support the fishery.
- 3) Studies of permit and bonefish movement patterns that tell us important areas that fish use, identify spawning sites, and describe how much adults move on a daily basis. The latter information is applicable to defining the spatial scale of marine zones to fully encompass the home ranges of flats species. Based on our research in the Bahamas, for example, adult bonefish need approximately 2,224 to 8,104 acres of healthy habitat to sustain an area important to fishing.
- 4) Studies on various stressors that are affecting our flats fishes, including boater impacts on benthic habitats, and impacts of boat noise on fish, available through the peer reviewed scientific and grey literature. This information can be used to prioritize areas in need of more restrictive zoning.

In our position statement, we provide science-based recommendations to marine zoning proposed in the *Restoration Blueprint*. Our recommendations are focused on protecting the flats fishery and the habitats those fish use from existing and future stresses. We begin with reviewing the Sanctuary-wide recommendations, then comment on specific zoning occurring within each management zone. Our recommendations are grounded in the concept of marine reserve network design, that the habitats used throughout the lifecycle must be conserved, and those conserved areas must be appropriately scaled.

### **Sanctuary-wide Zoning**

We support three Sanctuary-wide changes proposed in the *Restoration Blueprint* that will benefit the flats fishery. The first, (proposed update to shoreline slow speed), calls for expanding existing idle speed/no wake zones along residential shorelines to include 100 yards of all shorelines, Sanctuary-wide (alternative #4). This Sanctuary-wide regulation would provide numerous benefits to the flats fishery. First, this zoning would protect virtually all of the juvenile permit habitat (sandy windward facing beaches) within FKNMS from further habitat degradation from boater impacts and allow the degraded areas to recover. This proposal would also reduce stress on adult bonefish and permit habitats, and most sub-adult tarpon habitats. Further, a 100-yard boundary along all shorelines would provide large contiguous areas of protected habitat, essential to provide measurable benefits from marine protected areas in general.

We also support the motorized personal watercraft proposed update. This update creates a “notch” in Key West National Wildlife Refuge to allow passage of personal watercraft around marker “G13” but on the inside of marker “G WR5”. The notch reduces overlap in use between

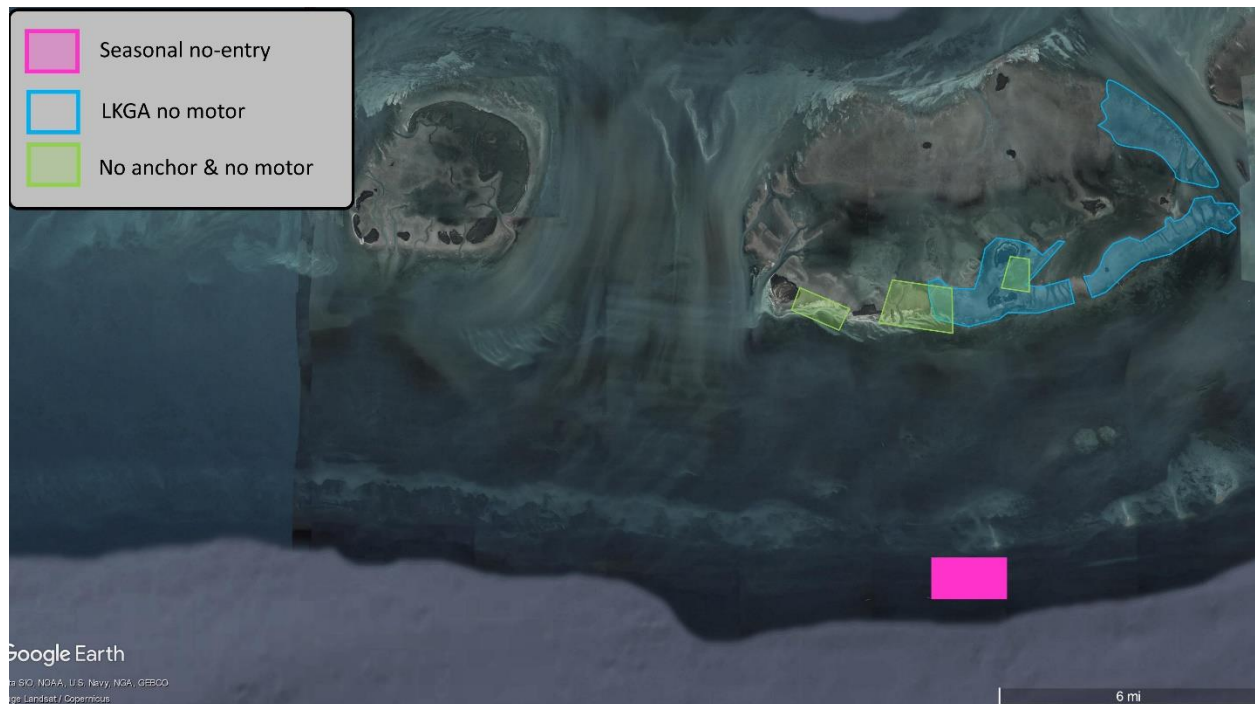
PWC operators and tarpon anglers by allowing PWCs to travel within the Key West Wildlife Refuge while avoiding areas used by tarpon. Not only does this regulation improve the tarpon fishing experience, but it also decreases the number of times tarpon must endure abrupt changes in the acoustic environment, which can cause behavioral changes.

We agree with the Sanctuary's proposal to prohibit discharge of any material or other matter from a vessel for hire with 250 or more passenger berths, except clean vessel engine cooling water, clean vessel generator cooling water, vessel engine or generator exhaust gas, clean bilge water, or clean anchor wash water. Maintaining healthy water quality continues to be a concern within the naturally oligotrophic Florida Keys. We support all regulations that minimize waterborne pollution entering the environment.

Finally, although we appreciate the consideration of regulating fish feeding practices (fish feeding regulation proposal), we are disappointed that the preferred alternative does not address land-based tarpon feeding used to attract tarpon. These activities may change tarpon migratory behaviors, growth, reproduction, and their contribution to the fishery. From peer-reviewed science on other marine life, unnaturally high densities of fish also increase risk of disease transmission. Disease outbreaks have been an insidious problem for many fish and wildlife species in the Florida Keys. Despite these real concerns, the *Restoration Blueprint* (pg. 177) states that prohibiting land-based fish and wildlife feeding outright will both be difficult to enforce and incur economic losses for local businesses reliant on those opportunities. As tourism continues to grow in the Florida Keys, the numbers of these commercial operations will certainly increase, as will associated environmental impacts and impacts on the fishery. Proactive regulations to limit the growth of this industry are essential. Despite that regulating fish feeding activities may impact the operators, the resulting changes to fish behavior likely has negative impacts to the long-established, economically important fishery. In addition to regulations, research to evaluate the indirect cost of these operations to other industries (i.e. flats fishery), and research to determine if a sustainable number of fish feeding operations is feasible should be considered.

## Marine Zone Management Plan

### Marquesas Management Area



### Bonefish & Tarpon Trust's zoning recommendations for the Lower Keys Management Area

We oppose all proposed no entry WMAs throughout the Marquesas Management Area shallow waters for two reasons. First, WMAs do not protect enough habitats to encompass the home ranges of the flats species. For instance, within the shallow waters of this zone, 2,330 acres across nine zones are designated as no entry WMAs, 2049 acres are within a single zone in the Marquesas. Excluding the Marquesas Key WMA, the average size of the remaining no entry zones are less than 100 acres, far short of the roughly 2,000 acres that need to be protected for flats fish. Second, the proposed no entry WMAs reduce the economic potential of the management area by taking away low environmental impact flats fishing opportunities. Indeed, no peer-reviewed, publicly available study exists demonstrating that flats fishing (push poling or the use of a trolling motor) has adverse impacts on wildlife and habitats that these WMAs are meant protect. Therefore, restricting access to flats fishing is in direct conflict with the 1997 Refuge Act, particularly within the two National Wildlife Refuges (NWR) where many of these zones occur. The 1997 Refuge Act specifies angling as a “priority public use” and mandates management agencies to “facilitate” angling within the NWRs once angling is found to be “compatible” with resource conservation. We acknowledge that these proposed zones aim to reduce stress on nesting and roosting birds, to offer protection of imperiled wildlife, and to protect vulnerable shallow water habitat forming species like corals and sponges. With this, we recommend that their designations be changed to less restrictive no motor zones.



We recommend that FKNMS increase restrictions within the three WMAs proposed as no anchor zones (Boca Grande Woman Key Flat WMA, West Barracouta Key Flats WMA, East Barracouta Key Flats) to make them both no anchor and no motor zones. Based on our permit tracking research, these proposed zones occur in high use areas for adult permit, encompass juvenile permit habitat (white sandy beaches), and are expansive (1,738 acres), approaching the acreage needed for flats fishes to move within the regulated area without encountering unregulated stresses. Under the less restrictive zoning of no anchor, these zones would not reduce impacts to benthic habitats from on-plane boat collisions or associated acoustic stress to fish. No motor zone designations, along with no anchor, will certainly be more effective at meeting the intended conservation goals of decreasing disturbance to ESA listed turtles, protecting sensitive hard bottom habitat, and address threats to the flats fishery.

Overall, the *Restoration Blueprint* is insufficient for protecting flats habitats that support the fishery within the Marquesas Management Zone. We recommend that FKNMS incorporate the zoning scheme submitted by LKGA. LKGA recommends that a nearly continuous zone, encompassing over 5,400 acres of shallow water be designated as pole/troll/or idle speed. We advocate for these zones to be designated as no motor. In agreement with their zoning, three lines of scientific evidence show that these recommendations will benefit our flats fisheries while also achieving habitat conservation goals set forth by the Sanctuary. First, our acoustic tracking study demonstrated that permit use this area more than any other area in the Lower Keys. Second, angler interviews show that fishing effort is highest there compared to other areas within this zone. The 5,400 acres that LKGA recommends for more restrictive zoning within the Marquesas Key Management Area are well within the needed acreage (2,224 to 8,104 acres) to ensure bonefish and other shallow water species have enough healthy habitat to sustain their populations and the fishery. The expansive zoning will also reduce acoustic stress the fish currently experience from on-plane boats. And, most importantly, over 70% of seagrass in this zone is classified as moderate or severely degraded from propeller scarring. We support the recommendations of LKGA, and we urge the Sanctuary to adopt these recommendations into the revised plan. These zones will provide immediate and long-term benefits to the flats fishery.

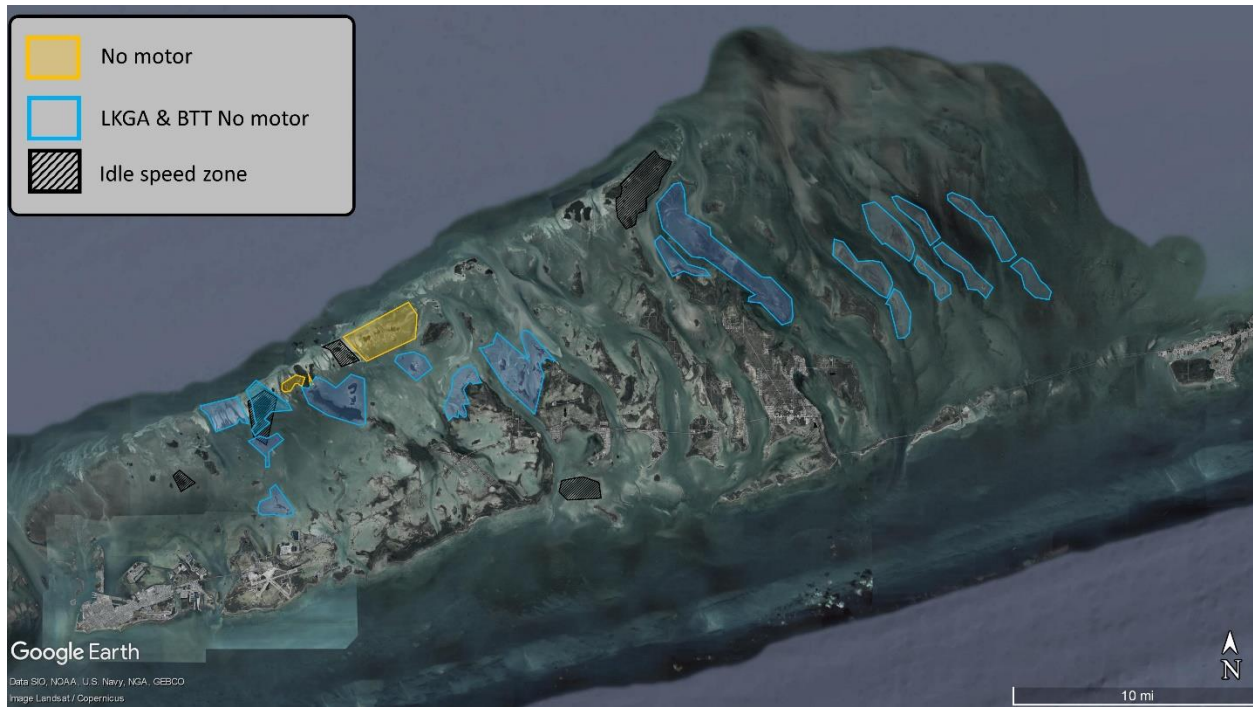
In the offshore environment within the Marquesas Management Area, FKNMS proposes a trolling only restriction within the Western Dry Rocks WMA. The zoning is meant to reduce fishing effort on spawning aggregations and reduce stress on important corals that occur on the benthos. The proposed Western Dry Rocks WMA is approximately 1.5 square miles, occurring across a depth gradient of 30 to 100 feet. BTT conducted a multiple year tracking study to identify important spawning sites for permit within the Lower Keys. Our research showed that Western Dry Rocks is likely the most important spawning site for the species in the Lower Keys. This aggregation site not only attracts fish from the Marquesas Management Area but also the Lower Keys Management Area. To reduce harvest on spawning permit, FWC enacted a closed harvest season from April through June within Monroe County waters (the Special Permit Zone). But because of permit's sportfish qualities, catch and release fishing for permit at their spawning aggregations has become popular. Unfortunately, angler reports suggest that a high percentage of hooked permit are eaten by sharks before they are landed. To evaluate those reports, BTT sponsored research to study the impact of shark predation on permit fishing at Western Dry Rocks. In this study, researchers fished the permit aggregation and recorded the fate of those fish

that were hooked using sonars and other underwater observation equipment. In agreement with angler reports their research suggested that on average 39% of hooked permit are consumed by sharks prior to being landed. This is not a sustainable level of mortality, especially since it is occurring at a spawning site. Given the potential for this offshore catch and release fishery to become even more popular, and the likely impacts of current fishing effort, we support actions to reduce fishing effort at this aggregation.

We are in support of interventions to reduce fishing effort at Western Dry Rocks, but we are concerned that the trolling only designation will not effectively meet management goals. First, knowing that enforcement capabilities are limited, trolling only is much harder to regulate than no entry. Second, a trolling only designation, depending upon how it is defined, could allow for the development of novel fishing methods to target spawning fish. Third, given that the Florida Keys is experiencing exponential tourism growth that is continually opening up new and often unanticipated marine use markets, allowing any access to Western Dry Rocks will create a scenario in which user groups will find a use within the confines of the zone regulations that will affect spawning fish. For instance, if fish biomass begins to recover, these aggregations may provide an attractive opportunity for dive operators to exploit, which can stress spawning fish.

With the understanding that FKNMS must balance marine use with sustainability, we suggest that the Sanctuary consider a seasonal spring - summer no entry closure at Western Dry Rocks. Of the 7 fish species that spawn there, all spawn between April and August, and four of those species (including permit) only spawn within that window. This seasonal closure would allow winter fishing activities within the Western Dry Rocks WMA which, due to its geographic position, provides fishing opportunities during strong northern winds common in the winter. This location also aggregates seasonal pelagic species such as kingfish and sailfish. Targeting these species in the winter does not interfere with spawning fish nor damage benthic habitats.

## Lower Keys Management Area



### Bonefish & Tarpon Trust's zoning recommendations for the Lower Keys Management area

We support the proposed Key Lois Loggerhead Basin WMA, Content and Upper Harbor Keys Flats WMA (Alternative #4), Barracuda Keys WMA, Marvin Key WMA (Alternative #4), Snipes Key WMA, the Mud Keys WMA (alternative #4), and Cayo Agua Keys WMA (Alternative #4). These WMAs are generally zoned as idle speed, or no motor, and offer protection for 6741 acres of shallow water habitat.

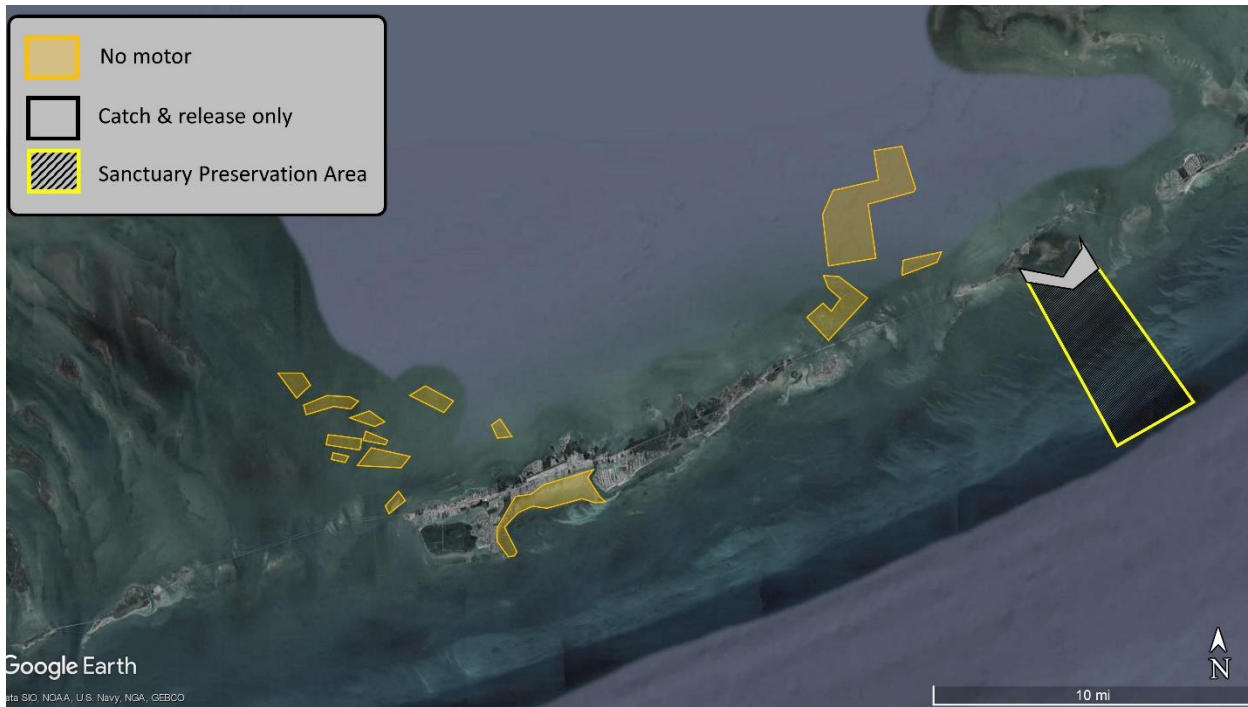
We are particularly in favor of Lois Loggerhead Basin WMA idle speed zone. Lois Loggerhead Basin WMA conservation goals are to decrease impacts to shallow water habitat adjacent to Bow Channel, to decrease disturbance to migrating tarpon that use the basin, and decrease user conflicts between flats fishers and transiting boaters. We agree that this zoning will decrease disturbance of tarpon by reducing acoustic noise from on-plane vessels, improve angler satisfaction, and reduce high speed boat impacts to seagrass. We are also strongly in favor of the idle speed designation in the Content and Upper Harbor Key Wildlife Management Area (Alternative #4). Content and Upper Harbor Key Wildlife management area encompasses very important habitat for bonefish and permit, as demonstrated in our fishing effort maps. This WMA designates 2,436 acres as idle speed, encompassing the home ranges of adult bonefish. As such, we believe that this zone will meet conservation goals set forth by the Sanctuary of reducing habitat damage to seagrasses, and also reduce user conflicts between boaters and flats

fishers. We urge the Sanctuary to solicit input from LKGA or middle Keys guides on the boundaries of this zone. In a supplemental illustration at the end of the document (supplemental illustration #1), we provide modifications to this zone boundary to allow for on-plane use of adjacent deep-water channels as well as angling in traditional spots such as the 26 Foot Hole. Based on our tracking work, the remaining zones we are in support of occur in high use areas for permit, and areas in high fishing activity. The idle speed or no motor designations will protect habitats and reduce stress on those fish that use those areas.

In addition to the zones listed above, more zones are needed to properly protect shallow water habitats and the flats fishery. Therefore, we urge FKNMS to incorporate the zones recommended by LKGA and additional zones we propose east of Annette Key. Similar to LKGA zoning scheme in The Marquesas Key Management Area, LKGA zones are expansive, contiguous, zones, and centered on areas of high fishing activity. LKGA recommends that 2,580 acres be designated for protection in the Lower Harbor area, 3,561 acres surrounding Waltz Key and within Turkey Basin, 2,558 acres encompassing the Little Swash Keys, and 3,570 acres surrounding Annette Key and Howe Key. This zone is delineated to allow travel from near Big Pine Key via a marked channel to the north side of Howe Key. These zones encompass enough area that would provide adequate habitat protection for flats fish to use throughout their daily movements. BTT tracking research shows that high use permit areas occur in the Lower Harbor area, which LKGA recommends 2,580 acres be designated for more restrictive management. East of Annett Key, we propose three additional zones. These zones occur over productive bonefish and permit habitat and are expansive enough to ensure that bonefish and permit can move freely within an area of healthy habitat. Taken together, these additional proposed zones east of Annette Key protect over 5000 acres. We advocate for LKGA zones and our proposed additional zones to be designated as no motor.

We are in opposition to the 12 no entry WMAs proposed in the Lower Keys Management Area for the same reasons we are opposed to the proposed no entry zones in the Marquesas Management Area. These zones are too small to offer any measurable protection for flats species and take away fishing opportunities in important areas. No peer-reviewed, publicly available study exists demonstrating that flats fishing (push poling or the use of a trolling motor) has adverse impacts on wildlife and habitats that these WMAs are meant to protect. Therefore, restricting access to flats fishing is in direct conflict with the 1997 Refuge Act. We advocate that if those zones are to be implemented, that they are regulated as no motor instead of no entry (Alternative #2).

## Middle Keys Management Area



Bonefish & Tarpon Trust's zoning recommendations for the Middle Keys Management area

In the Middle Keys Management Area, we are in support of the no motor zone designation of Marathon Oceanside Shorelines WMA. This area historically supported a robust bonefish population and is moderately impacted by propeller scarring. A no motor designation would reduce acoustic stress on fish and hopefully reverse habitat loss, providing an opportunity for bonefish to re-establish in this shallow water area. We support two modifications to this WMA. First, recognizing the existing cut-through between East Sister Rock and Tingler Island would accommodate long standing operational practice in the area. Forcing small boats to run outside of East Sister Rock may create dangerous boating conditions for flats fishers in East to South winds. Also, we acknowledge the importance of these flats to offshore fleets that rely on them to catch bait. We suggest broadening the cut-throughs along the 98<sup>th</sup>/99<sup>th</sup> St and 75<sup>th</sup> St channels to allow offshore fishers opportunities to catch bait while still protecting most of the flat.

We appreciate the attention the Sanctuary is giving to Channel Key Banks, Moser Channel Banks, and the Gulfside Banks. However, we urge the Sanctuary to consider regulating these areas as no motor to limit combustion engine impacts but allow for low impact flats fishing to continue. Based on NOAA science, these banks are important shallow water habitats for fish and wildlife. They support relatively high biomass of juvenile reef fishes, suggesting that these areas are potentially important nursery grounds and may be corridors for juvenile fishes to reach the reefs. These banks also support productive permit and tarpon fishing. The habitats are built on a foundation of *Porites* rubble that took thousands of years to accumulate, and is neither resistant or resilient to boater impacts. Unfortunately, due to propeller scarring and boater interactions, all

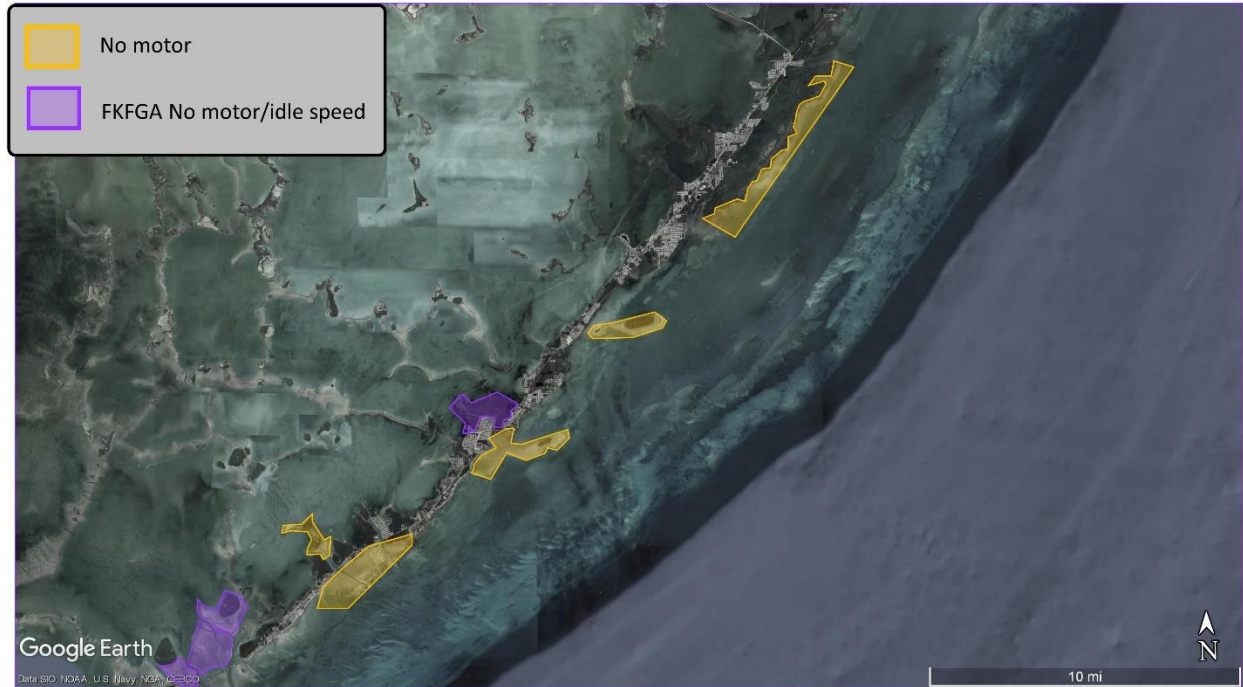
Moser Channel Banks benthic habitats are classified as severely degraded, and over 70% of Channel Key Banks are also classified as severely degraded. The value to numerous fisheries, the sensitivity of those habitats to boater impacts, and the existing damage certainly merits thoughtful zoning.

We urge the Sanctuary to consider further restrictions to the area, and recommend these banks be designated as an appropriate combination of no motor and idle speed zones. No motor zones would further reduce boater impacts from combustion engines and reduce fishing pressure on juvenile reef fishes where larger boats idle, anchor, and chum near the habitats. A no motor designation would allow the flats fishery to continue using this culturally important area to the fishery, while reducing these other stresses. We also suggest that the Sanctuary reconsider zone boundaries on Channel Key Banks WMA. We provide guidance on boundary revisions in the supplemental figures at the end of the document (Supplemental Illustration #2).

The proposed transit only zone on Redbay Bank and Channel Key Bank conservation areas would still allow combustion engines, the dominant source of stress on the habitats, while reducing fishing opportunities. Instead, these areas should be no motor to reduce habitat damage from combustion engines while allowing low impact and sustainable flats fishing to continue.

We oppose the Tennessee Reef Long Key Sanctuary Preservation Area, because it needlessly takes away low impact tarpon fishing opportunities. We acknowledge the Sanctuary's proposal to develop another blanket marine zone that offers protection for reef fishes and lobsters throughout their lifecycle. Western Sambos Ecological Reserve has shown some benefits to reef species, namely red grouper, and spiny lobster, with no measurable change in the size or abundance of other species over time. Long Key Tennessee Reef Sanctuary Preservation Area aims to protect large, contiguous, interconnected habitats of seagrass, shallow hardbottom, aggregate patch reef, and deep, drowned spur-and-groove reef. It also provides a corridor for migration of fish in different life stages, from Florida Bay into the Middle Keys. This area supports unique deep water, slow-growing corals and sponges, and remnant populations of ESA-listed staghorn corals. However, this proposed zone prohibits fishing from the shoreline beyond the deep reef, which eliminates one of the most important tarpon fishing areas to the Florida Keys fishery. Tarpon fishing has almost no impact on the benthic habitats and is catch and release, therefore will not compete with the goals of protecting both habitats and reducing harvest on fish transiting to the reef tract. We urge the Sanctuary to consider creating a buffer between the shoreline and the beginning of this zone to allow for the tarpon fishery to continue. This buffer could be regulated as a no motor zone or even as catch and release only to achieve management goals. We also encourage the FKNMS to do the necessary research to develop marine protected area networks, instead of the less efficient blanket MPA design.

## Upper Keys Management Area



### Bonefish & Tarpon Trust's zoning recommendations for the Upper Keys Management Area

Within the preferred alternative, we are excited to see the additions of idle speed and no motor zone WMAs throughout the Upper Keys Management Area. We are in full support of the expansion of the Snake Creek WMA, Cotton Key WMA, Tavernier Key WMA, and Dove and Rodriguez Key WMA. These areas support productive bonefish, permit and tarpon fisheries. Nearly all of the shallow water habitats within the Snake Creek and Cotton Key WMAs are classified as severely degraded due to propeller scarring, necessitating additional protection. We are also in support of the new proposed Whitmore Bite WMA. This zone is expansive and will provide meaningful protection for fish that support the flats fishery. We are in opposition to the additional no-anchor restrictions within Dove/Rodriguez Key, and Tavernier Key WMAs. These areas are important to our tarpon fishery, which requires boats to remain stationary while waiting for migrating tarpon to pass by. We understand that to prevent damaging corals, seagrasses, and fragile bank habitats, the sanctuary aims to reduce harmful anchoring practices through zoning in these areas. However, given that: 1) many flats fishers use poling mechanisms (staking off or use of a mechanical pole anchor) or very light claw anchors that are less damaging than anchors associated with larger pleasure or reef fishing boats, and 2) no motor designations will eliminate access for those larger and more damaging boats, we recommend the no anchor restriction be removed. It will not result in additional improvements to ecosystems but limit access to flats anglers.

We urge the Sanctuary to consider the Florida Keys Fishing Guides Association (FKFGA) recommendations for shallow water habitats in the Upper Keys management area. Rooted in conservation since the 1950s, the Florida Keys Fishing Guides Association has been involved in guiding sustainable and conservation-minded management for Everglades, Dry Tortugas, and Biscayne Bay National Parks. Drawing on the expertise of their membership, FKFGA proposes additional revisions that will improve the long-term sustainability of their business, the health of the flats, and ultimately the fishery.

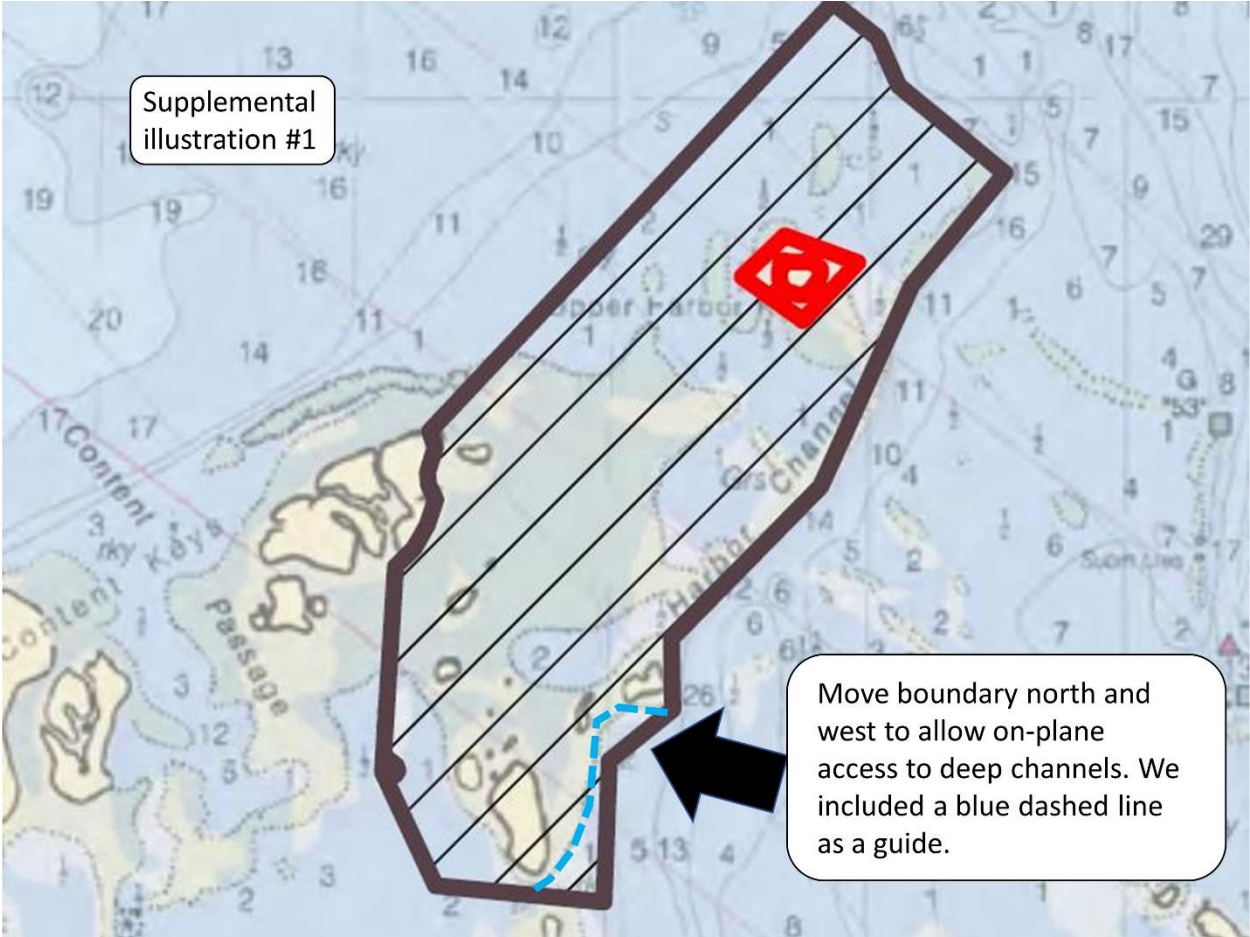
We are strongly in support of three FKFGA proposed no motor/idle speed zones. These zones occur on the bayside Tavernier Creek flat, and the shallow waters surrounding Shell Key, Lignum Vitae, and Indian Key fills. Together, these areas are historic bonefish flats and helped Islamorada build the reputation of being the fishing capital of the world. Science also identifies these habitats as important. We funded a study to characterize the long-term decline in the Upper Keys bonefish fishery. Through this study, we identified both areas where bonefish declined first, and areas that supported a bonefish population during the peak of the decline from 2008-2012. When species are in decline, generally speaking, populations are reduced first in less optimal habitats and last in highest quality habitats. Shell Key, Lignum Vitae, and Tavernier Bay side, were some of the only areas to support a fishable bonefish population when bonefish populations were at their lowest. Further, on these flats, bonefish seemed to be resistant to the extreme cold spell in 2010. Given that these flats provide optimal conditions for bonefish, and may serve as refuge and a source for repopulation and recolonization to other areas following disturbance, certainly merits additional protection to these flats. Shockingly, despite how important these areas are to the flats fishery, nearly all of the flats are moderately to severely degraded by propeller scarring. To this end, we are in strong support of affording additional protection to Shell Key, Lignum Vitae, and Tavernier Bay side to reduce boater related damage to the flats.

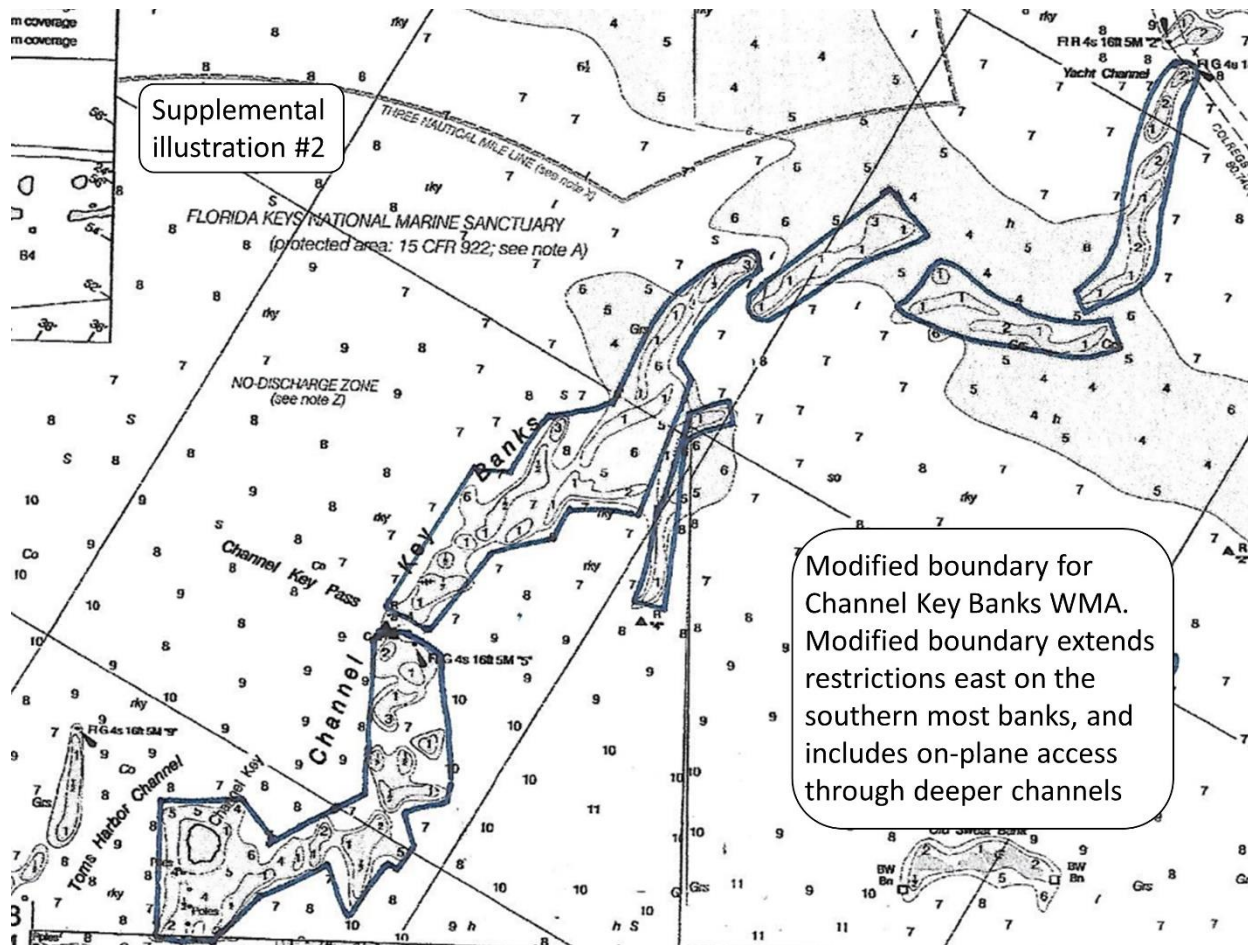
### **Closing remarks**

The Florida Keys Ecosystem has gone through considerable environmental changes over the last 20 years. Many of these changes are negative, impacting the livelihoods of most Florida Keys residents in one way or another. We commend FKNMS's efforts in the *Restoration Blueprint* to reverse these negative trends while paying close attention to allowing sustainable marine use. And, we appreciate the opportunity to provide thoughtful science-based recommendations through public comment. In the upcoming months, we look forward to reviewing the second draft of the *Restoration Blueprint* and continuing our collaboration to restore the Florida Keys marine environment.



Supplemental illustrations





Supplemental illustration #2

Modified boundary for Channel Key Banks WMA. Modified boundary extends restrictions east on the southern most banks, and includes on-plane access through deeper channels