



444 Brickell Avenue
Suite 850
Miami, FL 33131
Tel: 305-371-6399
Fax: 305-371-6398
www.audubonofflorida.org

May 15, 2009

National Park Service
Denver Service Center
Everglades Planning Team
PO Box 25287
Denver, CO 80225-0287

Dear Everglades Planning Team:

Audubon of Florida submits the following comments in response to the revised preliminary management alternatives for the marine waters of Everglades National Park (herein after "the Park"). We appreciate the opportunity to engage in the process as the Park updates their management plan for its unique marine waters. The Park is an American treasure, and in the spirit of all National Parks, requires preservation of the resources for generations to come. For the reasons described herein, we recommend the following steps to better protect the Park's marine waters and assert that the Park has not only the ability, but also the obligation, to implement management strategies that proactively prevent further damage to its resources.

The mission of Audubon of Florida is to conserve and restore natural ecosystems, focusing on birds and other wildlife for the benefit of humanity and the earth's biological diversity. As a state affiliate of the National Audubon Society, we carry out our mission through a family of members, local chapters, centers, sanctuaries, scientists, advocates and diverse volunteer leadership. With its 35,000 members and 44 chapters statewide, Audubon of Florida combines strong science with powerful advocacy, connects people with nature in its sanctuaries and inspires future generations of conservationists through education.

Audubon of Florida has a long history in Florida Bay. National Audubon's first Director of Research, Robert Porter Allen, established our Tavernier Science Center (TSC) in 1938. His research changed how scientists studied birds and began 70 years of investigating the roseate spoonbill and its habitat. During the 1950s and beyond, Audubon expanded the TSC's focus to encompass all natural aspects of Florida Bay and the Florida Keys, including corals, seagrasses, mangroves, game fishes, crocodiles, wading birds, white-crowned pigeons and numerous ecosystem-level studies focused on the Everglades. As the Park is of great significance to our organization and its members, as well as the ecological integrity of the Everglades ecosystem, we recommend the following points for incorporation within the next phase of the General Management Plan (GMP):

Audubon GMP Recommendations

1. Create mandatory 300 foot buffer zones around all shorelines (except in designated marked channels) including the bay keys in order to better protect wading birds
2. Manage boating activities within Florida Bay by water depth to better protect submerged habitats and Park wildlife
3. Limit boat motor size and restrict multi-engine boats to U.S. Coast Guard maintained channels to reduce boat use that is inappropriate for wilderness area
4. Establish a mandatory boater education course and concurrent boat licenses to promote greater protection of resource by Park users
5. Manage current Wildlife Protection Area as a Research Natural Area for the evaluation of Everglades restoration efforts
6. Evaluate channel marking for managing boat transit through an open stakeholder process
7. Create an Everglades National Park Advisory Council, comprised of diverse stakeholders, as soon as possible to help evaluate issues facing the Park, such as channel marking
8. Require Park admission fees for all boats within Everglades National Park in order to generate needed revenue and regulate access to Park waters
9. Increase number of Park rangers to provide greater law enforcement
10. Create a bigger deterrent to violations by imposing stiffer fines
11. Cap the number of Incidental Business Permits issued to ensure the guide fishery business in Park waters is conducted by experienced professionals
12. Develop an Alternative Wilderness Waterway and manage this waterway as proposed in alternative 4 to increase wilderness experience opportunities for paddlers

Our temporally and spatially extensive experience in addressing the problems within Everglades National Park through research, policy, and community outreach initiatives put Audubon of Florida in a unique position to identify numerous problems within the marine environs of the Park that may be addressed through the GMP process. Section I of our comments provides extensive details regarding issues identified by our experiences within the Park's marine waters and recommendations for the GMP to help resolve these issues. Section II outlines additional recommendations for consideration, while Section III provides the basis for our determination that the Park must encompass improved resource protection in the preferred alternative. Lastly, a short Appendix follows.

I. Description of Current Issues and GMP Recommendations

Issue: Wading Bird Population Decline and Re-distribution

Late last year the South Florida Water Management District released its annual South Florida Wading Bird report. The report clearly outlines an overall trend of drastic declines of several key species in the southern part of the system. The main wading bird indicator species selected to measure Everglades restoration performance are the great egret, snowy egret, tricolored heron, white ibis, and wood stork. While more than 90% of nesting effort for these five species occurred in the southern Everglades marshes and mangrove estuaries

during the 1930s and early 1940s, less than 7% of the combined total of these indicator species nested in this region in 2008. This startling statistic reveals the quality of habitat in the southern Everglades, which is entirely encompassed within Park boundaries, can only support a tiny fraction of the nesting wading birds it once did. Perhaps the National Research Council's report, "Progress Toward Restoring the Everglades: The Second Biennial Review, 2008", stated it best: "Wading birds have redistributed themselves to new locations outside their former ranges that included Everglades National Park, one of the jewels of the national park system."

For an indication of the specific health of Florida Bay and nearby wetlands, Audubon of Florida has documented that the roseate spoonbill is an excellent ecological indicator of the very southern end of the Everglades ecosystem. Last nesting season (2007-2008), Audubon scientists recorded the lowest nesting numbers of roseate spoonbills in Florida Bay since the 1960s. This year's nest count increased by only two nests. While the productivity, or amount of fledged chicks per nest, was high this year thanks in part to a defined wet and dry season, the low nest counts indicate Florida Bay and nearby wetlands critical for wading bird foraging are not currently of sufficient quality to support sustainable levels of spoonbill nesting. While this decrease in spoonbill, and in other wading bird, nesting success is mostly a result of upstream development, water diversion and management practices, the conditions within Park boundaries are also not entirely conducive to successful wading bird nesting and should be improved.

The shallow seagrass banks throughout the bay offer essential habitat for wading birds to forage, including newly fledged birds not yet old enough to venture away from the colony. However, birds flushed from feeding areas by speeding boats expend precious energy by seeking more suitable areas in which to successfully feed. The issue of wasted energy is especially devastating during the nesting season, when there are energy-demanding young to feed and few wetlands and flats of sufficient quality to forage. In addition, motorized boats venturing too closely to mangrove keys scare adult birds off their nests, thus leaving the chicks vulnerable to predation. In recent years, Audubon researchers have documented this impact at the Frank Key roseate spoonbill colony. Several years ago, we observed that boats on plane in the channel adjacent to the spoonbill colony caused the adults to flush from their nests. Crows (who are predatory on both spoonbill eggs and chicks) had become conditioned to enter the spoonbill colony at the sound of an approaching boat. When the adults flushed from the nests, the crows quickly took advantage of the situation by pillaging the nests. Five years ago, this colony was the second largest in Florida bay with 111 nests. This nesting season, the colony had only one confirmed nest but there may have been as many as six (we couldn't confirm all nests until after the chicks fledged due to the crow predation problem). The Park made a concerted effort to curtail this problem at Frank Key by posting the channel as a no wake zone, however, we still observed unscrupulous boaters ignoring those postings and entering the channel on full plane. Events like this could be occurring bay-wide and disturbing other nesting birds to the extent that their nesting success is jeopardized.

GMP Recommendation: Mandatory 300-foot Buffer Zones Surrounding Shorelines

Based on dozens of years of work in the Park, we conclude that the increasing boat traffic across shallow seagrass habitat has contributed to a decline in wading bird nesting in Florida Bay. However, shallow seagrass habitat enclosed within 300-foot buffer (pole/troll) zones will provide important foraging areas for nesting and juvenile wading birds. Thus, Audubon strongly encourages the Park to establish 300-foot buffer pole/troll zones around the shorelines of all keys in Florida Bay, excluding those keys open to public use and with designated boating channels as depicted on the accompanying maps. The protection of wading birds was one of the founding principals upon which both the Park and the National Audubon Society were initially established. Enhanced protection of wading birds must be a priority in drafting the Park's GMP preferred alternative.

Issue: Game Fish Population Decline within Park Boundaries

Through Audubon scientists' observations, as well as anecdotal reports from numerous long time users of Florida Bay, the decline in numbers of popular shallow water game fish species in Florida Bay can partially be attributed to the increase in boats traversing across shallow banks. Audubon of Florida is currently documenting anecdotal observations from long time users of the Park's marine waters in order to quantify whether historical evidence indicates declining trends in the number of game fish utilizing Florida Bay. Although difficult to quantify, approximately a dozen long time fishing guides and fishermen interviewed thus far are adamant about this correlation. Our preliminary work indicates that shallow water game fish populations (mainly tarpon, bonefish, and redfish) have declined and are continuing to decline over the users' lifetimes. The baseline of what is 'good' or 'acceptable' fishing in Florida Bay has shifted and is continuing to shift. Our interviews indicate that what is now considered 'good' fishing is a mere fraction of what was considered 'good' 30, 40, and 50 years ago.

Tourism in the Florida Keys was founded in large part due to the astounding shallow water sport fishery that once existed in Florida Bay. The commercial guide business in Florida Bay is transitioning away from one dominated by a sight fishery, using poling skiffs to locate fish visually, to one dominated by larger boats fishing in deeper water while staked off, anchored, or drifting. This trend is not merely a sign of changing times, but rather is driven by increased pressure on the banks where the sight fishery once existed. In other words, the fish are no longer utilizing the shallow habitats they once did because the habitat has become unfavorable. For example, the banks and basins of Florida Bay are no longer a safe haven for the thousands of tarpon that previously utilized these critical refuge areas for pre-spawning aggregations in the winter and spring. Similarly, while bonefish are still somewhat common in other parts of the Keys, their numbers in Florida Bay have declined drastically in the past few decades.

There are confounding factors to explain declining game fish population trends, but our evidence suggests that game fish such as tarpon and bonefish appear to be even more sensitive to shallow water boat traffic than wading birds. This traffic is contributing to the extreme decline in shallow bank use by these species, which has serious implications for the entire ecosystem. Decisions made during this GMP process can help alleviate this situation.

As the “Patterns of Propeller Scarring of Seagrass in Florida Bay” report notes, “prop scarring is directly related to water depth”. Therefore, incorporating use restrictions according to water depth is an integral component of the selected management plan.

GMP Recommendation: Manage Park Waters by Depth

The only management option that adequately protects the Park’s wildlife, as indicated in alternative 4, is the establishment of all waters in Florida Bay with a depth of 2 feet or less at mean low water as pole/troll zones. The map included with alternative 4 designates all waters with a depth of 3 feet or less at mean low water as pole/troll zones, causing those areas to appear larger than they would actually be. The attached maps more accurately reflect pole/troll boundaries throughout Florida Bay at a depth of 2 feet (see Appendix, p. 17 & 18). The pole/troll zones delineated on these maps would thoroughly protect the shallow banks of the bay while not limiting access to the extent denoted in the alternative 4 map, and thus we recommend their use. We anticipate that some type of marine zoning will be incorporated into the draft preferred alternative, and therefore recommend that detailed charting accurately defining pole/troll zones accompany the GMP preferred alternative.

The Florida State Park System, Florida Keys National Marine Sanctuary, Monroe County, and Village of Islamorada all manage portions of their waters adjacent to the Park by water depth, proving that this strategy is a practical approach to protecting the submerged bottom habitat. In fact, the Park is the only entity in this region not utilizing water depth as a management concept, and the GMP presents the perfect opportunity to make necessary changes. While some members of the public show extreme resistance to such changes, it is important to note that changes will be embraced over time, just as the management of Florida Keys marine waters by the National Marine Sanctuary System, and the management of State, Village, and Sanctuary ‘non-combustion motor use’ zones throughout the state are now widely accepted, and even appreciated.

Fish can and will come back into the bay if changes are made. Audubon scientists observed this a number of times following post-hurricane closures of the Flamingo area. For example, the closure of the Flamingo boat ramp following Hurricane Wilma changed the bank utilization by game fish and wading birds drastically. In the absence of inappropriate boat traffic, the wildlife selected their preferred habitats. Bathymetric and geomorphic features and hydrologic factors come together to make the areas within 2.5 miles of Flamingo some of the most productive banks in the bay, and thus critical foraging grounds. Unfortunately, these areas, including the bank directly in front of Flamingo and adjacent to the main channel, Dave Foy Bank, and the banks adjacent to Snake Bight Channel, are also some of the most heavily user-impacted parts of the bay.

While we have only mentioned game fish and wading bird return to the Flamingo area here, the whole gamut of upper trophic level species benefited from that short post-hurricane closure. The utilization of this area changed completely within one week after the boat ramp reopened, indicating user impacts do have a significant effect on the wildlife in Florida Bay. Park users initially opposed to management of bay waters by depth will eventually benefit by the return of wildlife to their preferred productive shallow water

foraging grounds. Game fish and wading birds are an important component of not only the bay's ecology but also the region's economy. In addition to management by water depth, the following actions will also alleviate user impacts specifically in these extremely sensitive areas near Flamingo:

- Manage main Flamingo channel as currently designated (idle speed zone)
- Actively enforce the idle speed zone in this channel

In addition to these sensitive areas in the Flamingo region, two other areas in Florida Bay warrant immediate pole/troll zone inception under the GMP. Buchanan Bank and Nine Mile Bank are two highly productive and important banks that are experiencing increased user abuse.

Additionally, prior to the finalization and implementation of the approved GMP in 2011, Audubon recommends a piloting of the pole/troll concept as soon as possible in the following two areas of the Park: Garfield Bight and Bowlegs Cut to the northernmost Peterson Key. Because of their geographic location and bathymetry, these two areas offer excellent locales to initiate resource protection and public understanding of the pole/troll zone concept in Park waters.

The establishment of pole/troll zones raises the question as to how boaters will enter those zones. Motorized access into pole/troll zones should not be allowed, but rather, boat operators should cease combustion motor operation and tilt their motor up at the boundary of the pole/troll zone. If motorized access is deemed essential to instilling these zones into the GMP, then this access must occur at idle speed. While a boat at idle speed can still cause damage, it is far less destructive than a boat on plane.

Finally, Audubon does not support the idea of a seasonal closure to some of the bights near Flamingo, as has been suggested in public comment. Resource damage can occur at *any* time of year and at *any* water stage in Snake, Garfield, Rankin, and Santini Bights, and in Terrapin Bay. Seasonal closures would still allow continued damage to the resource by permitting boaters to run over tarpon habitat in the summer, or redfish habitat in the spring, etc., depending on the timing of the closures. Providing a suitable year-round refuge for wildlife so that they may return to the Park in previous numbers should be a main priority for the GMP. Managing Park waters by water depth is critical to attaining this goal.

Issue: Boat Use Inconsistent with a Designated Wilderness Area

We commend Park staff for their "Patterns" report which documented the extent of seagrass prop scarring in Florida Bay. This prop scarring is a symptom of an underlying problem: boat use that is inappropriate for a shallow estuary divided by even shallower banks that provide excellent wildlife habitat. It is the seagrass that makes Florida Bay so productive in terms of prey availability for wading birds and other higher trophic-level species, and cumulative damage will impact the bay's ecology.

While visually the most obvious damage resulting from prop scars is the direct loss of life from the physical impact, an often overlooked and even more imperative issue is the fragmentation of habitat that the scars create. Just as roads or fences create boundaries within populations of animals such as bears and panthers, a prop scar represents the geographic boundary of transit for an abundant assemblage of less mobile invertebrate life. Prop scars cut through seagrass beds are likely a major limiting factor for some species' ability to find mates, and thus reproduce. In addition, prop scars effectively divide the original habitat and likely limit certain species' ability to disperse and colonize new areas. These diminutive invertebrates form the base of the food web that supports upper trophic level species such as wading birds and game fish. The ecological damage caused by habitat fragmentation is well documented and is an issue the Park should investigate more closely in regards to seagrass prop scarring.

The "Patterns" report states that restoration of damaged seagrass is expensive and time consuming, and heavily used areas are unlikely to recover under current boating pressure. Although the establishment of a seagrass restoration program is common to all four alternatives, prevention of the continuation of this problem is essential if the Park's underwater resources are to remain intact for generations to come. It is the Park's obligation to protect the wilderness value of the marine waters and submerged bottom habitat. The state of Florida illustrated its dedication to protecting seagrass habitat as a state-wide priority this legislative session by passing HB 1423, which will better protect seagrasses in state aquatic preserves. We expect the Park, through the GMP process, to better protect seagrass habitat in waters falling under its jurisdiction.

According to current trends, the prototypical center console vessel and accompanying outboard motor is getting larger. The increase in size of new center console boats being sold in southern Florida over the past five to six years is indicative of these changes. These large, oftentimes multi-outboard motor vessels are becoming more and more common in Florida Bay, as evidenced by the increasing number of double and triple prop scars throughout all segments of the bay (see photos 1 & 2 in Appendix, p. 17). The mean water depth of Florida Bay, roughly 3 feet, is shallower than the draft of many of these vessels. These boats were developed to operate in deepwater, large wave environments, as indicated by their transom deadrise, and they are absolutely inappropriate for operating in the Park.

GMP Recommendation: Limit Boat Motor Size and Number of Engines

In addition to managing Park waters by depth, limiting outboard horsepower size on vessels operating in Florida Bay would significantly reduce damage to benthic habitat caused by outboard propellers. Banning stainless steel propellers in Park waters would also help to alleviate damage. Additionally, vessels operating in Florida Bay using more than one outboard motor should be prohibited, excluding the primary marked channel leading from the Intracoastal Waterway (ICW) near East Cape to Flamingo, as indicated in alternative 4, and the main Flamingo channel. While technological advancements could potentially change the dynamics of boat/motor usage in the future, the adaptive management framework outlined in newsletter five allows for such changes to become incorporated into

the GMP if the technology becomes available. Resource protection according to current boat and outboard motor use is needed now.

Water less than two feet deep is no place for combustion motorboats to operate in a National Park or designated Wilderness Area. As the Wilderness Act states, a wilderness area should “generally appear to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable”. Florida Bay is essentially unregulated in terms of boat usage, i.e., where boats can be operated, how fast they can be operated, and what size vessel can be operated. Thus the public perceives that running on plane anywhere and everywhere in the bay is appropriate behavior within wilderness areas.

This perception requires a culture change in order to preserve the wilderness nature of marine waters, and the wildlife that reside there, for current and future users. The primary avenue to achieve these necessary changes is the GMP, and education is a very important component of any selected management plan.

II. Further GMP Recommendations:

Mandatory Boater Education Program

Audubon supports a mandatory boater education course for all users of Park marine waters. The Eco-Mariner course developed by the National Parks Conservation Association was a collaborative effort that involved many users of the Park's marine resources, from those conducting research, such as Audubon, to those who make their living guiding fishing trips through the Park's waters. This easily-accessible course, or something very similar, should form the basis of a mandatory education requirement for Park users. Any adopted education program must incorporate the following essential components:

- Effect of disturbance to wildlife, including the potential predation on wading bird nests and relocation of game fish to more sheltered areas
- Ecological importance of the Park's seagrass community
- Fines/citations for violations
- Management components as dictated in the new GMP

Furthermore, a mandatory boat license should be required for all boats within Park waters. The Park could issue these licenses and charge boaters the same admission fee as for visitors who enter the Park at the mainland entrances. Boaters using the Park could purchase a weekly or annual boat license just as cars entering the Park currently do. Boaters using the Park without a valid license would be subject to fines if encountered by law enforcement officers. This would provide an excellent source of revenue that could be applied to increased enforcement, and we do not anticipate substantial opposition as most of the boaters we have spoken with are in favor of this concept.

Manage Current Wildlife Protection Area as a Research Natural Area

The current Wildlife Protection Area (WPA) of northeastern Florida Bay should maintain its current status as closed to the public and be managed as a 'research natural area', as

indicated in alternative 4 of the revised preliminary alternatives. Included within this research natural area are all of the waters currently closed to public access, including all of Little Madeira Bay and Joe Bay, and all adjacent inland water areas. The terminus of the Taylor Slough/Panhandle region is located within the current WPA, and there is no other area within the Park that has been more impacted by upstream water management activities. Taylor Slough is an ideal location for monitoring restoration efforts because it is a narrow, concentrated area, as compared to Shark Slough which is much larger and more difficult to monitor. Thus, millions of dollars in research initiatives have been invested in the Taylor Slough/Panhandle region over the past 20 years while this area has been closed to public usage. An invaluable baseline of information has been established, and opening the area for public usage could potentially disrupt this baseline by adding a new, unforeseen variable to the research currently being conducted. Since the closure of these wetlands in 1980, this area has become invaluable to evaluating the effects of Comprehensive Everglades Restoration Plan (CERP) projects including Phase I of the C-111 Spreader Canal project, which is scheduled to break ground in the fall of 2009. The importance of maintaining the opportunity for continued Everglades restoration project evaluation, without changing the management of the area, is the primary reason the WPA should remain closed to public.

As an example of the long-standing research programs operating within the WPA, Audubon of Florida has been conducting scientific research there since 1988 and our research sites span the entire geographic width of this area, from Taylor River to US Highway 1. The WPA of northeastern Florida Bay is one of our focal research zones, and we currently have eight scientists conducting studies in this region. Our research includes ecosystem level studies ranging from water quality monitoring to upper trophic level predator monitoring. In addition, there are now hundreds of other researchers from dozens of agencies and organizations conducting research in this area as well.

The WPA was found to be so significant in terms of determining the effects of ecosystem restoration that the National Science Foundation provided funding to incorporate it into the Long Term Ecological Research monitoring network. The Florida Coastal Everglades - Long Term Ecological Research program (FCE-LTER) was established in 2000 and the WPA in northeastern Florida Bay is a focal research zone for this program. The FCE-LTER network consists of 66 senior scientists from 28 institutions. Representatives from at least 16 universities, 6 federal agencies, 2 state agencies, 1 county agency, 3 independent companies, and 1 not-for-profit group are now conducting research in the WPA. A general list of research interests in this region includes nutrient dynamics and water quality, algal blooms, climate change, physical processes, submerged aquatic vegetation, mangrove ecology, fish, invertebrates, top level predators, and hydrology. The following website contains information about the FCE-LTER program and the critical research being conducted in the WPA: <http://fcelter.fiu.edu/>

In addition to the opportunity to evaluate Everglades restoration, there are also currently no other research natural areas in the Park, making the WPA unique. Approximately 24 square miles in size, this area represents less than 1% of the total area of the Park. Thus, the public is excluded from a very small portion of the Park, and we recommend continuing its closure to the public, considering the area's incredible value to evaluate Everglades

restoration. Managing the area as a research natural area will benefit the entirety of the Park as a whole in the long run, by helping insure the proper evaluation of restoration efforts. Audubon of Florida has a long history of advocating for Everglades ecosystem restoration, and just as these restoration efforts are critical to returning the abundance of wildlife to the currently degraded ecosystem, the GMP must play a major role in the revitalization of Florida Bay wildlife.

Revised preliminary alternatives 2 and 3 suggest managing all or part of the WPA as a backcountry or no motor zone. The Park currently manages four backcountry zones with the Park's southern coastal mangrove fringe. Because of our expansive research program in the area, Audubon of Florida has extensive knowledge of the ecology and functionality of all four of these backcountry zones. In recent years our scientists have witnessed a steady increase in violations within all four areas. The most common violation is the use of combustion motors within these 'hand propelled craft only' areas, which is extremely disruptive to the wildlife utilizing these areas for foraging and refuge. The use of motorized vessels has increased dramatically within all of the backcountry zones over the past couple of years, with both recreational anglers and fishing guides using engines in this area. This situation was exemplified when a high profile fishing guide filmed a nationally televised fishing show in his motorized skiff within the Cape Sable backcountry zone in late 2006/early 2007. We understand that the Park is fully aware of such violations and uses all available resources to address this problem. However, there is not enough enforcement in place to create effective deterrence. Under current law enforcement levels, the Park does not have the manpower to effectively enforce the four existing backcountry zones, which is an additional reason why we strongly suggest the WPA remain closed to the public.

One of the primary factors dictating the original closure of the WPA of northeastern Florida Bay was the inevitable difficulties associated with effectively patrolling this remote region. The extensive and vast creek and bay system comprising the WPA would make it challenging to enforce as a no motor zone. Many of the Park users advocating for public access to these areas have intentions of fishing in this system. However, the difficulty in getting to the areas where target fish inhabit would be entirely prohibitive without the use of a motor. It would take considerable paddling or push poling to reach fishable areas; they cannot be found simply by crossing the buoys that denote the beginning of the backcountry zone. As evidenced by the amount of public comment generated by the pole and troll zones proposed in alternative 4, it is obvious that many Park users do not want to go to such lengths to find fish. The geographic difficulty of navigating to fishing areas in the WPA would make it incredibly enticing to utilize motorized vessels while the isolation would make it easy for such violations to go unnoticed. Thus, opening this area to the public would open the door to motor usage violations.

Such violations have potential to ruin the area for those few who are willing to take the time and effort to use the area properly as a no motor zone, creating the scenario for user conflicts. We have witnessed such occurrences in the current backcountry zones. Furthermore, the close proximity of the WPA to southern Miami-Dade and northern Monroe County may allow for increased user visitation that may not be realized in the current backcountry zones. For all of these various reasons combined, this region is truly better suited as a research natural area than a backcountry zone.

Finally, wildlife find refuge in this tiny fraction of the Park's area closed to all activities except research. While the protection of the American crocodile is not the strongest reason to maintain the closure of the WPA to public use, this area is still very important nesting habitat for this rare species. Most nesting occurs along the buttonwood embankment area, which would be heavily impacted if the WPA is opened to public use because of its close proximity to the area's entrance. While Cape Sable has become more important habitat for crocodiles than the WPA, it is still ecologically desirable to avoid fragmentation of the population. Additionally, the WPA is a haven not only for crocodiles, but is also heavily utilized by the federally endangered West Indian manatee and smalltooth sawfish. Audubon has also documented that the region is a primary foraging area for wading birds nesting in Florida Bay. It is ecologically important for wildlife to have a place where they are not continually harassed or subjected to fishing pressure. Numerous studies, including those conducted by Audubon, have shown the benefits of 'no take zones' to the fish populations in adjacent waters. This WPA is no exception and serves the overlooked role of a marine reserve which benefits the overall game fish populations in the Park. Thus, the area's critical contribution to evaluating Everglades restoration projects, its remote attributes which would open the door to motor violations and prevent adequate enforcement, and its invaluable utility as a refuge for numerous endangered, rare, and declining species clearly indicate managing the area as a research natural area is the best strategy.

Examine Channel Marking through an Open Stakeholder Process

The "Patterns" report documented a strong correlation between scarring and proximity to navigation channels. Managing boat transit within Florida Bay based on a new system of marked channels and identified routes is a component of all action alternatives. Audubon supports the concept of a uniform channel marking system in Florida Bay, however, such a system needs to conform to the wilderness aspect of the Park.

Standard United States Coast Guard (USCG) approved markers are inconsistent with the Park's wilderness designation. Using a USCG style channel marking system in Florida Bay will not mitigate prop scar damage. On the contrary, prop scarring and user impacts to wildlife habitat would likely worsen. USCG approved markers (i.e., red and green numbered aids to navigation) would likely attract new boaters operating large vessels with multiple outboard motors into Park waters. While multi-outboard vessels are already operating within the Park, this approach to channel marking could lead to vessel sizes of another dimension utilizing Florida Bay. Therefore, the exploration of all alternate possibilities to the installation of USCG approved markers should be explored. If, however, marking new preferred routes and channels with USCG approved markers is deemed absolutely essential, then we strongly recommend the use of the smallest pilings and aids to navigation possible, thus making them less likely to attract the bigger boats inappropriate for use in the shallow bay, while still complying with USCG standards.

In addition, these aids to navigation should not be displayed on any official charts or GPS displays (i.e., the charts should remain as they are today with the location of the channels indicated but with no symbols for the new aids to navigation markers). If they are marked as such on NOAA charts and maps, they could potentially be viewed by some boaters as

an alternative to the ICW, as it is much shorter to cut through Florida Bay than to follow the ICW around to the southwest coast. Our discussions with USCG officials indicate that there are instances when aids to navigation are not charted following substantial reasoning for waiving their presence on charting materials, the most common reasoning being the presence of shoaling areas. Thus, as the entirety of Florida Bay is a complicated maze of shoal waters, this situation indicates itself as an instance where not charting the aids to navigation may be acceptable.

Above all, prior to making any decision regarding the installation of channel markers into Florida Bay, the Park must initiate an open stakeholder process to gather input from the public. This process is important to receive feedback on specific areas. For example, Audubon strongly advises against marking new channels leading into some of the suggested pole/troll zones, such as Garfield Bight or the Jimmie's Lake area, as this would likely increase motorized traffic into areas already over-stressed. As our bulleted list of suggestions states, we endorse the establishment of the Everglades National Park Advisory Council as included in alternatives 2, 3, and 4, and, ideally, channel marking would be one of the first issues such a Council addresses. As a final note, better marking of channels cannot be the sole way of dealing with inappropriate boat use causing widespread damage to shallow areas; it will not eliminate the need for other management strategies.

Gulf Coast Recommendations

We support the addition of both Wood River and Gopher Creek as backcountry (no motor) zones, as indicated in alternative 4. The Gopher Creek bay and creek system in particular is an extremely important pre-nesting foraging and roosting area for nearly every wading bird species that nests in Florida Bay. This area offers unique habitat in this part of the Park and is perfectly suited as a no motor zone due to its location, size, and shallowness of depth for much of the year. We recommend that all of the waters from the mouth of Charley Creek at the Gulf to the mouth of Gopher Key Creek at Cannon Bay, including Pelican, Rookery, Gopher Key Bays, and all smaller, unnamed bays in this system between these two points, be included in this backcountry zone.

Where beach nesting birds have established nesting locations on sandy islands and shorelines, we highly recommend seasonal closure of these beaches for the duration of nesting activity. Adequate staffing and establishment/training of community monitors for such areas is also a necessary component of successful protection of these critical beach bird nesting and resting areas in the Park. Collier County Audubon Society is one such community organization that can help with volunteer monitoring.

In addition, we suggest incorporating the recommendations of the 2006 USGS Manatee Study, "Review and Synthesis of Manatee Data in Everglades National Park" (Stith, Slone and Reid) in establishing manatee speed zones where appropriate to reduce the risk of boat collisions with manatees within Park boundaries.

Evaluation of Kite-Boarding within Park Boundaries

A new situation has arisen in Park waters in the past year: the increasing use of kite-boards. Because of the speeds these boards are capable of attaining over top of extremely shallow water and banks, we feel that kite-boarding falls into the same category of currently prohibited activity in the Park as does water skiing and personal watercraft use. Kite-boarding in the area began in Florida Keys National Marine Sanctuary waters along the mainland in Islamorada and Tavernier, but has quickly spread to Cross Bank to East Key in the Park. Heavy usage of kite-boards on the ocean side at Whale Harbor flat has had a major impact on the foraging of bonefish. The high rates of speed of the boarders in the extremely shallow water startle fish and the shadows of the boards and kites simulate a large predator, encouraging bonefish to seek out safer areas. Apparently, kite boarders find the shallow banks of Florida Bay offer an ideal location to practice their sport due to the ease of establishing the kite while standing in the shallow water. The extreme shallow water and banks these boarders ride over is the same habitat we are trying to protect with the establishment of pole/troll zones. As a result of this increased activity in Park waters, we have notified Park dispatch and Key Largo district rangers of this issue.

III. Park's Basis and Responsibility for Action

Application of the Precautionary Principle

The "Aerial Survey of Boater Use in Everglades National Park Marine Waters: Florida Bay and Ten Thousand Islands" report determined that recreational boat use in the Park has increased approximately 200% to 250% during the past 30 years. While Park boat use has increased substantially, the presence of law enforcement officers has not increased to this extent, nor will the enforcement effort ever be able to keep up with the pace of new boat registrations in Florida and likely increased usage of the Park by boaters. Although increased enforcement is important, it is also essential for the Park to recognize there will never be sufficient enforcement to patrol the 500,000 + acres of Park marine habitats, and thus implement a more conservative GMP that proactively protects the resource. In other words, the presence of law enforcement officers, even if increased, cannot be expected to completely deter the types of behavior and use that are causing damage. As our accounts listed in this letter exhibit, it is evident extreme violations already repeatedly occur. Thus, it is necessary that the management plan account for this and utilize the precautionary principle whereby measures are taken to protect the resource even if, as the "Patterns" report notes, "we did not explore relationships between scarring and scar density by boat type or by boating practices". Additional studies are needed for greater understanding of the problems, but they are not needed in order to immediately implement specific management measures. The Precautionary Principle encourages action even if cause-and-effect relationships have not been validated scientifically.

Of course, the greatest basis for action is the unique position of the Park's marine waters: they are encompassed within National Park boundaries and the submerged bottom is federally designated as submerged marine wilderness. Thus, two critical Acts come together and prescribe guidelines for protection and actions by which to achieve that protection.

The National Park Service Organic Act

The National Park Service Organic Act, 16 U.S.C. § 1, created the National Park Service (NPS) and gives it the power to regulate the national park system. The Organic Act provides that the NPS

"shall promote and regulate the use of the Federal areas known as national parks . . . by such means and measures as conform to the fundamental purpose of the said parks, . . . which purpose is to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations," 16 U.S.C. § 1.

The Organic Act, as courts have noted, falls short of mandating required specifics of park management and gives the NPS broad discretion in determining which avenues are best suited to achieve the mandates of the Act. "...Further, the Park Service is empowered with the authority to determine what uses of park resources are proper and what proportion of the park's resources are available for each use" (*Organized Fishermen of Florida v. Hodel*, 775 F.2d 1544, 1550 (11th Cir. 1985)). At the same time, the Act directs the preparation and revision of GMPs, which are described as "ideal places to discuss ecosystem sustainability and management, biodiversity, community or regional land use planning, and other larger scale issues." 40 C.F.R. § 1508.38.

Discussions of ecosystem sustainability and biodiversity are appropriate, and necessary, to include in the Park's consideration of the current draft alternatives. Clearly, we suggest incorporating protections that provide for the sustainability of the ecosystem (i.e. increased resiliency to natural disturbances such as hurricanes and algal blooms) as well as preserve the biodiversity of the marine waters, which contribute to the Park's popularity as a destination for world-class bird watching and sport fishing. The development of any alternative which does not preserve the sustainability and biodiversity encompassed in the Park's marine waters to the best of its ability, would be neglecting to leave the Park "unimpaired for the enjoyment of future generations".

As the Park's set of preliminary alternatives reflect, the Organic Act provides for the creation of zones within the Park's jurisdiction to be based on allowable uses and protection goals. Court decisions have upheld that the Park has the authority to restrict activities such as motorized boat use in particular areas, or zones (*Isle Royale Boaters Association v. Norton*, 330 F.3d 777 (6th Cir. 2003)). Because the Park's marine waters were incorporated into it before the submerged bottom was designated as wilderness, the NPS retains the ability to regulate use within or outside of congressionally approved wilderness areas. It has been held in federal court that unless zoning violates the Wilderness Act, it is permissible (*id*). While motorized boat access is allowed in Park waters because it existed prior to Park designation, the Park has the obligation to view motorized boat use as subject to restrictions, such as zoning, that the Secretary of the Interior deems desirable.

The Wilderness Act

As mentioned above, in addition to the classification of a National Park, the entirety of the Park's marine waters were federally designated as submerged marine wilderness thirty years ago. The Secretary¹ has broad discretion to preserve the character of such designees and wilderness areas are afforded a great degree of protection (*Alaska Wildlife Alliance v. Jensen*, 108 F.3d 1065, 1069 (9th Cir. 1997)). The Wilderness Act allows the use of motorized vessels in Everglades National Park as a special provision because of their utilization in the Park's boundaries before it was designated wilderness in 1978. However, this special provision does not allow for a pre-existing use to cause physical damage to the Park's resources.

The Wilderness Act (§ 2 (c)) defines wilderness as (emphasis added):

A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, *where man himself is a visitor who does not remain*. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, *which is protected and managed so as to preserve its natural conditions* and which (1) *generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable*; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

The current conditions of the Park's marine waters do not meet several aspects of this definition of "wilderness". For example, the presence of 325 miles, at a minimum, of scarred bottom habitat does not lend itself as an area where "man is a visitor who does not remain". As the "Patterns" report exposes, seagrass prop scarring is prevalent throughout the Florida Bay portion of the Park, thus man's imprint is substantially noticeable (see photos 3 & 4 in Appendix, p. 18). As noted previously, far more problematic than the mere existence of scars is the combined ecological damage caused by their prevalence and severity.

Because of the unique opportunity afforded by designation as both a National Park under The Organic Act and as submerged wilderness by The Wilderness Act, the Park's marine waters are especially suited for some form(s) of better protection, as proposed in several of the draft alternatives. 16 U.S.C. § 1133(d)(1) prescribes that when motorboat use is already established, the use "may be permitted to continue" but is also subject to restrictions. Therefore, the development of an updated GMP is the Park's opportunity to better preserve its protected resources, and it has broad authority to do so. The selected

¹ The Wilderness Act generally provides the Secretary of Agriculture this authority, however, in this instance the term "Secretary" refers to the Secretary of the Interior. 43 CFR 19.6 provides that: "Regulations respecting administration and use of areas under the jurisdiction of the Secretary [of the Interior] which may be designated as wilderness areas by statute shall be developed with a view to protecting such areas and preserving their wilderness character for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness, with inconsistent uses held to a minimum." See also *Isle Royale Boaters Association v. Norton*, 154 F.Supp.2d 1098 (W.D. Mich. 2003).

plan should aim to restore the wilderness value of the submerged marine habitat, and bring the area closer to meeting its distinguished designation as a wilderness area.

Finally, it is evident by the extent and severity of seagrass prop scarring throughout Park marine waters, as well as the disappearance of wildlife, that they are not currently "protected and managed so as to preserve its natural conditions", as the Wilderness Act prescribes. In the application of an appropriate management plan which allows the submerged bottom habitat and wildlife abundances to recover, the economic utility of the park to recreational users will also increase. In other words, more proactively protecting the resource will not create a burden on the diverse assemblage of stakeholders using Park waters. Oppositely, the return of wading birds and game fish to the shallow waters of Florida Bay will create a more positive user and visitor experience, as well as honor the protections of the Park's marine waters both as a National Park and the largest subtropical wilderness in North America.

Again, we appreciate the opportunity to submit these comments on the revised alternatives for marine areas and recognize the significant effort the Park has made to enlist all stakeholders in this process. Should you have any questions regarding the content of this letter, or wish to discuss any of the points further, please do not hesitate to contact Dr. Jerry Lorenz, Audubon of Florida, State Director of Research, at 305-852-5318. Our staff looks forward to continuing this dialogue as the Park develops a preferred alternative.

Sincerely,



David E. Anderson
Executive Director

cc: Fred Herling, Everglades National Park, via email

IV. Appendix

Map I. Eastern Florida Bay

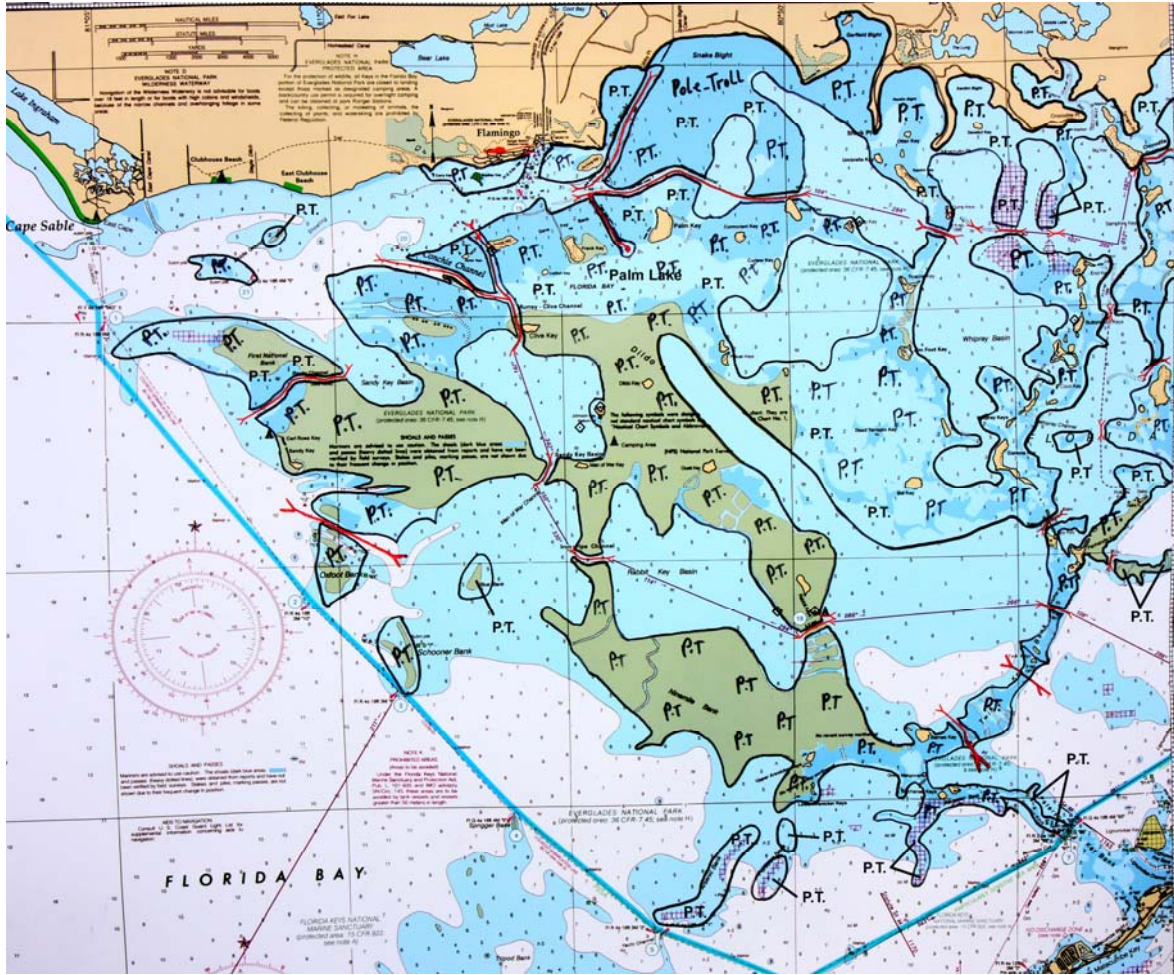


P.T. = Pole/Troll Zones. Map Courtesy of Captain John Kipp, Tavernier, Florida



Photos 1 & 2: Prop scars cut through Florida Bay seagrass beds by a double motor (left) and a triple motor (right). Courtesy of Captain John Kipp, Tavernier, Florida

Map 2. Western Florida Bay



P.T. = Pole/Troll Zones. Map Courtesy of Captain John Kipp, Tavernier, Florida



Photos 3 & 4: In contrast to the Wilderness Act, the imprint of man is substantially noticeable across the shallow seagrass banks in Florida Bay. Courtesy of Captain John Kipp, Tavernier, Florida