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Testimony of Caroline McLaughlin
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Before the House Committee on Natural Resources and
the House Committee on Small Business
"Joint Oversight Hearing"

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Chairman Bishop, Chairman Chabot, Ranking Member Grijalva, Ranking Member Velazquez, and members of the committees – thank you for the opportunity to provide written testimony for the hearing titled, "Restricted Access at Biscayne National Park and Implications for Fishermen, Small Businesses, the Local Economy and Environment."

For more than 90 years, the National Parks Conservation Association (NPCA) has been advocating for our national parks and the National Park Service (NPS), educating decision makers and the public about the importance of preserving the parks, helping convince members of Congress to uphold the laws that protect the parks and to support new legislation to address threats to the parks, fighting attempts to weaken these laws, and assessing the health of the parks and park management to better inform our advocacy work. Our more than 1 million members and supporters, including 49,000 members and supporters in the state of Florida alone, care deeply about maintaining healthy marine ecosystems, protecting biodiversity, and conserving cultural resources. NPCA has been involved in the development of Biscayne National Park's General Management Plan (GMP) since its initiation over 15 years ago. As such, we are uniquely positioned to provide testimony regarding the public consultation and decision-making process in which we have been a key participant. We strongly support the decision of the National Park Service to create a marine reserve within Biscayne National Park (BNP) in order to protect the park's incredible but severely threatened coral reef ecosystem.

Biscayne National Park is a national treasure and home to one of the largest barrier reefs in the world. It is the largest marine park in the National Park System, originally established as a national monument in 1968, and elevated to national park status in 1980, "in order to preserve and protect for the education, inspiration, recreation, and enjoyment of present and future generations a rare combination of terrestrial, marine, and amphibious life in a tropical setting of great natural beauty."[1] BNP is composed of a unique marine environment, encompassing the longest stretch of mangrove forest existing on Florida's east coast, rich and productive seagrass meadows in Biscayne Bay, over 40 of the northernmost Florida Keys, and a once-spectacular living coral reef. BNP is approximately 171,000 acres, 87,000 of which are reef tract, containing some of the only living coral reef remaining in the continental United States. From a regional

[1] 16 U.S.C. 410gg.

perspective, the park's coastal bay and coral reef habitats play a critical role in the function and dynamics of the larger Florida coral reef ecosystem, serving as a receptor of larvae and juveniles from offshore spawning adults, and as a source of production of adult fish and other marine life that undergo habitat shifts and migrations during various stages of development to habitats outside the park.[2] BNP receives over half a million visitors annually who come to boat, swim, fish, snorkel, paddle, SCUBA dive, and observe nature and wildlife. The park has also typically had concessions for snorkeling and SCUBA diving on the reef tract, in addition to glass-bottomed boat tours that allow visitors to view coral reefs.

In addition to its ecological value, the park is a significant economic driver, supporting a variety of economic and recreation activities, such as fishing, diving, snorkeling, and boating. According to a National Park Service report, over half a million visitors to Biscayne in 2014 spent more than $32 million and sustained 459 jobs in the local area, with a total economic output of nearly $45 million.[3] Importantly, the majority of visitors and resulting economic output are non-local. Non-local visitors spent approximately $31 million and generated about $44 million in economic output in 2014.[4] In addition, South Florida benefits from a multi-billion dollar fishing and boating industry, which is directly dependent on the health of its marine resources. Without healthy and sustainable fish populations and coral reefs, the economic value and productivity of fishing, boating, and water-dependent activities in South Florida will plummet.

The enabling legislation of Biscayne National Park allows for commercial and recreational fishing; however, that act states:

> The waters within the park shall continue to be open to fishing in conformity with the laws of the State of Florida *except as* the Secretary, after consultation with appropriate officials of said State, designates species for which, areas and times within which, and methods by which fishing is prohibited, limited, or otherwise regulated *in the interest of sound conservation to achieve the purposes for which the park is established*.[5]

Thus, while the National Park Service typically defers to the State to manage fisheries resources within the park, extreme circumstances, such as those currently occurring in BNP with the dramatic decline fisheries and coral resources, may necessitate the implementation of additional regulations to protect the fundamental resources of BNP, held in trust for all Americans.

Unfortunately, Biscayne's resources have severely deteriorated in health over the last several decades. By all accounts, BNP once supported abundant and robust fish populations, vibrant

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[2] Ault, J. S. Smith, S. G., Meester, G. A., Luo, J. and Bohnsack, J. A., *Site Characterization for Biscayne National Park: Assessment of Fisheries Resources and Habitats*, May 2001.

[3] Cullinane, T. C., Huber, C., & Koontz, L. *2014 National Park visitor spending effects: Economic contributions to local communities, states, and the Nation.* 2015, Natural Resource Report NPS/NRSS/EQD/NRR—2015/947, National Park Service, Fort Collins, Colorado.

[4] Cullinane, T. C., Huber, C., & Koontz, L. *2014 National Park visitor spending effects: Economic contributions to local communities, states, and the Nation.* 2015, Natural Resource Report NPS/NRSS/EQD/NRR—2015/947, National Park Service, Fort Collins, Colorado.

[5] 16 U.S.C. § 410gg-2. (emphasis added). See also, National Park Service, *Biscayne Laws and Policies* (2006), *available at* http://www.nps.gov/bisc.

coral reefs, and healthy marine ecosystems. However, a 2001 scientific study of marine resources and habitats within BNP conducted by the National Marine Fisheries Service and the University of Miami concluded that "the extremely poor status of reef fish resources (BNP is the worst situation in the entire [Florida] Keys) signals *imminent resource collapse."*[6] Also in 2001, senior NPS resource staff advised the BNP Park Supervisor that "most of the reef fish stocks [within the park] are not just overfished, but very seriously overfished and in the case of some grouper species possibly on the verge of extinction. All of the most important snapper and grouper species are at a point that they cannot sustain reproduction even at a level to replace themselves if harvest at current levels continues. *The park is not fulfilling its management obligations and by any measure one would have to conclude that the resources are impaired.*"[7]

BNP's Chief Science Research Coordinator was quoted in a 2004 *Washington Post* article about the overfishing situation at BNP: "The whole system is in jeopardy – there's no question."[8] A draft Environmental Impact Statement prepared by BNP documents that coral reefs within the park have been negatively affected by fishing activities, stating "The reef is littered with fishing tackle from recreational and commercial fishing . . . resulting in damage to coral. *Preliminary surveys . . . indicate that the density of fishing-related marine debris is greater in [BNP] than in any other area surveyed throughout the Florida Keys . . .*".[9] The approximately 6% of Biscayne's reefs that remain alive continue to be under stress from derelict fishing gear, warming seas, and the absence of a stable, healthy ecological food web resulting from overfishing. [10]

The National Park Service has a legal duty to protect against unacceptable impacts and the impairment of resources. The National Park Service Organic Act requires management of national parks to conserve natural resources " . . . by such means as will leave them *unimpaired for the enjoyment of future generations*."[11] The legislative history of the Organic Act suggests that the "overriding purpose of the Organic Act was to preserve 'nature as it exists.'"[12] While the fundamental purpose of national parks is also to provide for the use and enjoyment of park resources and values, Congress has mandated that when there is a conflict between conserving resources and values and providing for enjoyment of them, conservation must predominate, and this is how federal courts have consistently interpreted the Organic Act. [13] In the administration of authorized uses of park resources, park managers have the discretionary authority to manage that use, provided that the use will not cause impairment or unacceptable impacts.[14]

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[6] Ault, J. A., Smith, S. G., Meester, G. A., Luo, J. and Bohnsack, J. A., *Site Characterization for Biscayne National Park: Assessment of Fisheries Resources and Habitats*, iii-iv, 2001, (emphasis added).
[7] Correspondence from NPS resource staff J. Tilmont to BNP Supervisor L. Canzanelli, et al., October 5, 2001. (emphasis added).
[8] Juliet Eilperin, *Limits of Ocean Preservation*, The Washington Post, October 18, 2004, at D1 (emphasis added).
[9] Fishery Management Plan for Biscayne National Park, Draft Environmental Impact Statement, Biscayne National Park, November 2008, at p. 40.
[10]National Park Service South Florida / Caribbean Network. 2013. Annual administrative report (FY 2012) and work plan (FY 2013) for inventories and Vital Signs monitoring: South Florida / Caribbean Network. Natural Resources Report NPS/SFCN/NRR—2013/702. National Park Service, Fort Collins, Colorado.
[11] 16 U.S.C. § 1. (emphasis added).
[12] Nat'l Rifle Assoc. of Am. v. Potter, 625 F. Supp. 903 (D.C. 1986)(citing H. Rep. No. 700, 64th Cong., 1st Sess. 31 (1916).
[13] See, e.g., 2006 Management Policies, at § 1.4.3.
[14] Id., at § 1.4.3.1.

Moreover, an amendment to the NPS Organic Act adopted in 1978 prohibits the authorization of activities that derogate park values:

> The authorization of activities shall be construed and the protection, management and administration of these areas, shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these areas have been established, except as may have been or shall be directly and specifically provided by Congress.[15]

According to *National Park Service (NPS) Management Policies 2006*:

> The impairment that is prohibited by the Organic Act and the General Authorities Act is an impact that, in the professional judgment of the responsible NPS manager, would *harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values.* Whether an impact meets this definition depends on the particular resources and values that would be affected; the severity, duration and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts. [. . .] *An impact would be more likely to constitute impairment to the extent that it affects a resource that is: necessary to fulfill specific purposes identified in the establishing legislation of the park; key to natural or cultural integrity of the park or to opportunities for enjoyment of the park, or; identified in the park's general management plan as being of significance.* [16]

The "park resources and values" that are subject to the non-impairment standard include: wildlife and the processes and conditions that sustain them, as well as native plants and animals; and appropriate opportunities to experience enjoyment of these resources.[17]

In the context of the criteria establishing when an impact would be "more likely to constitute impairment," it is important to note the general limitations on harvesting of fish in national parks:

> Where harvesting is allowed and subject to NPS control, the Service will allow harvesting only when . . . the Service has determined that the harvesting *will not unacceptably impact park resources or natural processes, <u>including the natural distributions, densities, age-class distributions, and behavior of harvested species</u>,* native species that the harvested species use for any purpose, or native species that use the harvested species for any purpose. [18]

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[15] 16 U.S.C. § 1a-1.
[16] 2006 Management Policies, at § 1.4.5 (emphasis added).
[17] <u>Id.</u>, at § 1.4.6.
[18] <u>Id.</u>, at § 4.4.3 (emphasis added).

Beyond impairment, NPS Management Policies also require that park managers prohibit activities that would have "unacceptable impacts" on park resources:

> The impact threshold at which impairment occurs is not always readily apparent. Therefore, the Service will apply a standard that offers a greater assurance that impairment will not occur. *The Service will do this by avoiding impacts it determines to be unacceptable.* These are impacts that fall short of impairment, but are still not acceptable within a particular park's environment. **Park managers must not allow uses that would cause unacceptable impacts; they must evaluate existing or proposed uses and determine whether the associated impacts on park resources and values are acceptable.**[19]

This places even more stringent requirements on park managers to prevent impacts and maintain resources in their relatively natural state. One of the stated goals of the *Management Policies* is to "[p]ass on to future generations natural, cultural, and physical resources *that meet desired conditions better than they do today*,"[20] emphasizing long-term goals that improve resources for the benefit of future generations.

According to NPS's *2006 Management Policies*, taken together, the Organic Act and General Authorities Act "establish for NPS managers: (1) a strict mandate to protect park resources and values; (2) a responsibility to actively manage all park uses; and (3) when necessary, an obligation to regulate their amount, kind, time, and place in such a way that future generations can . . . appreciate their national significance in as good or better condition than the generation that preceded them."[21]

NPS Management Guidelines state that "in cases when there is uncertainty as to the impacts of activities on park natural resources, the protection of natural resources will predominate. The Service will reduce such uncertainty by facilitating and building a science-based understanding of park resources and the nature and extent of the impacts involved."[22] In making a determination of whether there would be an impairment, the NPS decision-maker must use his or her judgment, and must consider any environmental assessments, relevant scientific and scholarly studies, advice or insights offered by subject matter experts and others who have relevant knowledge or experience, and the results of civic engagement and public involvement activities related to the decision.

The establishment of a marine reserve in Biscayne National Park is the best, most effective method for protecting Biscayne's severely threatened coral reef ecosystem and reversing a decades-long trend that has led to unacceptable impacts to and the probable impairment of fundamental park resources. Marine reserves work quickly, protecting habitat and improving the

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[19] Id., at § 1.4.7.1 (emphasis added).
[20] Id. (emphasis added).
[21] Id., at § 8.1.
[22] Id., at § 4.1.

quantity and size of fish stocks.[23] The creation of a marine reserve in Biscayne will provide an area where declining reef fish can recover, protect internationally endangered coral reef communities, provide park visitors with the opportunity to experience a healthy, vibrant coral reef ecosystem, and establish a baseline by which to evaluate the efficacy of other management strategies.

Decades of scientific research have indicated that marine reserves, when properly designed and enforced, can be hugely successful as fisheries management and coral reef management tools. Specifically, marine reserves established in the Dry Tortugas have yielded substantial benefits in the protection and restoration of degraded resources in a relatively short period of time. Studies have indicated an increase in the size and abundance of once over-fished reef fish species with the boundaries of the reserves and documented the spillover of more and larger fish outside of reserves.[24] Moreover, an economic study concluded that no recreation and commercial fishers reported financial losses and that commercial catches of reef fish actually increased in the region. Additional information regarding scientific support for the effectiveness and benefits of marine reserves are laid out in Attachment 1.

Throughout the General Management planning process, NPS has conducted extensive public outreach and engagement and has received overwhelming (over 90%) public support in favor of the creation of a marine reserve. NPS held 22 public workshops, attended by over 1,000 members of the general public, and received 43,000 pieces of correspondence on the issue. Support for the creation of a marine reserve comes from Miami-Dade County (Attachment 2); widely-respected and established local anglers Dr. Martin Arostegui, Captain Gil Muratori, and Captain Bouncer Smith (Attachment 3); world-renowned scientists and marine conservation experts Jean-Michel Cousteau, Dr. Sylvia Earle, and Dr. Jeremy Jackson (Attachment 4); numerous environmental and community organizations (Attachment 5); local dive shops and diving organizations (Attachment 6); the Everglades Coalition (Attachment 7); the Ocean Reef Club Association (Attachment 8); NPCA's Sun Coast Regional Council (Attachment 9); and over 20,000 of NPCA's members and supporters nationwide. Public opinion is clearly strongly in favor of the conservation of Biscayne's incredible coral reef ecosystem through the creation of a marine reserve.

Again, thank you for the opportunity to provide this written testimony.

Attachments:

1. Scientific support for the creation of a marine reserve
2. Miami-Dade County Resolution in support of the creation of a marine reserve in Biscayne National Park
3. Support letter by local anglers Dr. Martin Arostegui, Captain Gil Muratori, and Captain Bouncer Smith

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[23]Bohnsack, J. 1994. How marine fishery reserves can improve reef fisheries. Proceedings of the 43rd Gulf and Caribbean Fisheries Institute 43: 217-241; Bohnsack, J., Ault, J. 1996. Management strategies to conserve marine biodiversity. Oceanography, Volume 9, Number 1, pp. 73-82; Halpern, B. 2003. The impacts of marine reserves: Do reserves work and does reserve size matter? Ecological Applications, 13, (1), Supplement. Pp. S117-S137.
[24]U.S. Department of the Interior National Park Service & Florida Fish and Wildlife Conservation Commission, *Implementing the Dry Tortugas National Park Research Natural Area Science Plan: The Five Year Report*, 2012, 4-13. Ibid., 24-27.

4. Support letter by marine conservation experts Jean-Michel Cousteau, Dr. Sylvia Earle, and Dr. Jeremy Jackson
5. Support letter by environmental organizations
6. Support letter by dive shops and organizations
7. Everglades Coalition Resolution in support of the creation of a marine reserve
8. Ocean Reef Club Association letter of support
9. Support letter by NPCA's Sun Coast Regional Council

Attachment 1: Scientific Support for the Creation of a Marine Reserve

Scientific Support for Marine Reserves

Scientific evidence in support of the effectiveness of marine reserves as both fisheries management and coral reef ecosystem protection tools is abundant. The following section will provide an in-depth evaluation of the benefits and evidence in support of no-take marine reserves. This evidence should be considered in contrast to the absence of any scientific evidence supporting the SRZ provided in the new preferred alternative.

1. No-Take Marine Reserves as Fishery Management Tools

Although a marine reserve was originally included in the 2011 Draft GMP/EIS as a tool for ecosystem-based management, the inclusion of fisheries management tools in the new preferred alternative makes fisheries management relevant to the actions outlined in the Supplemental Draft GMP/EIS. In response to increasing concerns about threatened fish stocks, marine reserves have the capacity to address the declines in reef fish populations. Marine reserves are gaining wide acceptance as fishery management tools because they reduce fishing mortality.[25] Reduced mortality can lead to increases in abundance of spawning fish, providing insurance against recruitment failure and maintaining or enhancing yields in fished areas.[26] Reserves are most likely to benefit surrounding fisheries if they also act as a source of larvae to the surrounding areas,[27] so it is important to designate them in spawning or nursery areas. According to several scientific papers, "[t]here is a growing consensus that MPAs should be an integral component of any marine management plan, including fisheries management programs."[28] There is overwhelming support for no-take marine reserves within scientific literature.

There is ample evidence that marine reserves benefit fish populations. The science journal *Fisheries Research* has published a report stating that "abundance, mean size of individuals, and spawning biomass of exploited populations tend to be greater inside no-take reserves than in comparable areas subject to harvesting."[29] A well-documented study by Darlene Johnson *et. al*. concluded that a no-take marine reserve within Kennedy Space Center in Florida had significant beneficial effects on a variety of populations.[30] Furthermore, according to James Bohnsack, Research Fishery Biologist at the National Marine Fisheries Service Southeast Fisheries Science Center in Miami, no-take marine reserves have many benefits, including protecting ecosystem structure and function and benefiting fisheries in

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[25] Jennings, Simon, "Patterns and Prediction of Population Recovery in Marine Reserves," *Reviews in Fish Biology and Fisheries*, Vol. 10 (2001): 209.
[26] Ibid., 209.
[27] Ibid., 227.
[28] Alder, Jacqueline, Dirk Zeller, Tony Pitcher, and Rashid Sumaila, "A Method for Evaluating Marine Protected Area Management," *Coastal Management*, Vol. 30 (2002): 121.
[29] Rowe, Sherrylynn, "Population Parameters of American Lobster Inside and Outside No-Take Reserves in Bonavista Bay, Newfoundland," *Fisheries Research*, Vol. 56 (2002): 167.
[30] Johnson, Darlene, Nicholas Funicelli, and James Bohnsack, "Effectiveness of an Existing Estuarine No-Take Fish Sanctuary within the Kennedy Space Center, Florida," *North American Journal of Fisheries Management*, Vol. 191(1999): 436.

surrounding areas.[31] Bohnsack points to the successful example of St. Lucia's no-take marine reserve, where total fish biomass has doubled and landings have increased up to ninety percent within five years of closing part of the coral reef to fishing.[32] Dr. Callum Roberts co-authored a study analyzing the positive benefits of the St. Lucia reserve, citing that, despite local fishermen's initial skepticism, they ultimately benefitted from increased catches because the marine reserve served as a nursery for nearby fisheries.[33] Both Cape Canaveral and St. Lucia offer examples of success in waters of the relatively nearby South Atlantic and Caribbean.

According to the World Wildlife Fund (WWF), fish live longer and grow larger within reserves, and as the numbers increase, fish leave the reserve and enter fishing grounds.[34] WWF cites several examples:

- The sizes of Nassau grouper in the Bahamas Exuma Cays are six times greater in the reserve than outside of it;
- In the western US, the number of rockfish eggs and larvae originating in one reserve is fifty-five times greater than outside the reserve;
- Catch per unit effort increased one-hundred ten percent in fishing grounds close to Mombassa Marine National Park in Kenya;
- There is a reported increase of eighty-five percent in catches close to Spain's Tabarca Marine Reserve.[35]

Fishermen reportedly congregate at the boundaries of marine reserves in the Florida Keys,[36] providing good anecdotal evidence that these reserves benefit fisheries.

The National Park System Advisory Board points out that the strictly-enforced no-take marine reserves in the area of the Channel Islands National Park have resulted in thriving populations of marine creatures within park boundaries.[37] Furthermore, only five years after the establishment of a marine reserve in Dry Tortugas National Park, scientific studies have shown more and larger fish with increased spawning rates within the reserve, including red grouper, mutton snapper, yellowtail snapper, and hogfish.[38] In contrast, the number and size of the same species outside the reserve have remained the same or declined. The National Park Service itself has already had great success in the use of marine reserves to improve fisheries and ecosystem protection.

Other examples of documented successes include data that suggest that no-take reserves in Bonavista Bay, Newfoundland have resulted in increased survival of American lobster, and evidence of greater fecundity, size and abundance of spiny lobsters at the Tonga Island Marine Reserve in New Zealand.[39]

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[31] Bohnsack, James, "New Evidence that No-Take Marine Reserves Benefit Fisheries," *Coastlines: Information about Estuaries and Near Coastal Waters*, 12.2 (2002): 7.
[32] Ibid., 7.
[33] See, National Public Radio, All Things Considered interview with Callum Roberts, www.npr.org/programs/a…marine_reserve/011203.marine_reserve.html, Dec. 3, 2001. This mentions that the study was documented in the Nov. 30, 2001 issue of *Science*.
[34] World Wildlife Fund, *Marine Reserves: Like Money in the Bank*, WWF Endangered Seas Campaign, Washington DC (no date).
[35] Ibid.
[36] Ibid.
[37] NPS Advisory Board, *Rethinking the National Parks for the 21st Century: NPS Advisory Board Report*, 2001, 18.
[38] National Park Service, Florida Fish and Wildlife Conservation Commission, *Implementing the Dry Tortugas National Park Research Natural Area Science Plan the 5-Year Report*, 2012, iii.
[39] Davidson, R.J., E. Villouta, R.G. Cole, and R.G.F. Barrier, "Effects of Marine Reserve Protection on Spiny Lobster (*Jasus edwardsii*) Abundance and Size at Tonga Island Marine Reserve, New Zealand," *Aquatic Conserv: Mar. Freshw. Ecosyst.* Vol. 12 (2002): 213. The mean abundance increased by 22%, 5 years after the reserve's establishment, indicating an annual population increase of 4.4%. Ibid.

Worldwide, fisheries managers have embraced the concept of no-take marine reserves, and fishermen are experiencing benefits.

2. No-Take Marine Reserves as Coral Reef Protection Tools

Coral reefs in the U.S. and around the world are in crisis.[40] The World Resources Institute published results of a global coral reef survey, and concluded that sixty percent of the world's reefs are now threatened by human activity.[41] A task force of U.S. government agencies, where the co-chair is the Department of Interior within which NPS is housed, estimates that ten percent of all coral reefs are degraded beyond recovery.[42] The realization that urgent action is necessary prompted the creation of the U.S. Coral Reef Task Force to pursue ways to save our dwindling national coral reef treasures.[43] One of the primary priorities of the Task Force is to increase the creation of marine reserves to protect these precious resources. This recommendation is consistent with endorsement of marine reserves by the National Research Council, the principal operating arm of the National Academy of Sciences and the National Academy of Engineering,[44]and other scientists.[45] The National Park Service is obligated to help implement this Task Force recommendation.

Biscayne National Park is highlighted in the Coral Reef Task Force's public information material as "the largest single NPS unit with coral reefs" with "a marine area of more than 168,000 acres…established in 1968 to protect and preserve a nationally significant marine ecosystem of mangrove shorelines, a shallow bay, undeveloped islands, and coral reefs."[46] The same material highlights the fact that Biscayne National Park suffers more than 170 boat and ship groundings yearly.[47] Clearly, NPS officials associated with the Coral Reef Task Force look towards Biscayne as an important focus of implementing the Task Force's recommendations. This leads to the conclusion that system-wide, Biscayne is viewed as an important candidate for a coral reef no-take marine reserve as mandated by the Task Force's Action Plan.

In addition to Biscayne National Park's duty to carry out the Coral Reef Task Force's recommendation, we believe that the park also has a duty to use marine reserves to protect its reefs via the National Park Service's strong commitment to protect marine resources. The NPS management guidelines for marine resources contain eleven objectives, including the following:

1. Maintain and restore all components and processes of naturally evolving ecosystems, recognizing that change caused by extreme natural events (e.g. storms, red tide) is an integral part of functioning natural ecosystems;
2. Maintain genetic diversity of marine ecosystems;
3. Regulate and mitigate human activities to minimize adverse impacts.[48]

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[40] See, e.g. Whitty, Julia, "Shoals of Time: Are We Witnessing the Extinction of the World's Coral Reefs? In *Harper's Magazine*, Vol. 302, no. 1808 (2001): 55-65; Hinrichson, Don, "Coral Reefs in Crisis", *People and the Planet*, Vol. 6, no. 2, WWF (1997): 6-11.
[41] Hinrichson, Don, "Reefs at Risk," *Defenders*, Vol. 74., no. 3 (1999): 8.
[42] U.S. Coral Reef Task Force, *National action plan to conserve coral reefs*, March 2000, Available at http://coralreef.gov/CTRFAxnPlan9.PDF, p.3.
[43] U.S. Executive Order 13089 Coral Reef Protection, June 11, 1998.
[44] National Research Council, Marine protected areas: tools for sustaining ocean ecosystems, Nov. 2000, http://books.nap.edu/catalog/1994.html.
[45] Souter, David W. and Olof Linden, "The Health and Future of Coral Reef Systems, *Ocean and Coastal Management*, vol. 43, (2000): 681.
[46] U.S. Department of Interior, *Protecting the Nation's Coral reefs: National Park Service*, http://coralreef.gov/nps.cfm.
[47] Ibid.
[48] National Park Service, *Natural Resources Management Guidelines* (NPS-77), 95.

Besides these management guidelines, an even stronger mandate for Biscayne to consider no-take marine reserves comes from the National Park System Advisory Board (NPSAB). The Board has stated:

> **Commercial and recreational fishing pressure has been intense within national marine sanctuaries and many parks and refuges. In fact, significant loss of top predators due to fishing pressure threatens the long-term future of fishing in those areas. There is a long-held and erroneous belief that marine systems are so vast that their resources cannot be affected by human activities. Current assessments of marine habitats, fisheries, and water quality show otherwise, demonstrating dramatic declines in the health of marine ecosystems worldwide…**
>
> To ensure the long-term survival and health of our marine systems, we must create a strategically designed system of no-take marine reserves, covering a broad range of representative marine habitats, especially important to spawning. The Park Service, as one of the federal agencies focused on conserving wildlife for future generations, should play a leadership role in implementing such a system. Marine protected areas, like upland parks, will only be saved in the long run by the enlightened support of the public. The Park Service should think beyond the vision of maintaining sustainable parks to encourage sustainable communities and ecosystems with parks as part of them.[49]

NPS also has clear authority to designate marine reserves for coral protection. The Code of Federal Regulations provides authorization for closing areas and limiting public use to protect resources, providing public notice of closures or use limits, prohibiting the destruction, defacing, or disturbing of resources, and protecting fish and wildlife and permit research.[50]

Policies and marine reserves have successfully protected coral reefs in many jurisdictions throughout the world. The World Wildlife Fund reports that fishermen have cooperated to create a coral reef marine reserve at the Tubbataha Reef National Marine Park in the Philippines, resulting in the return of large groupers and snappers to the local fisheries.[51] Sumilon and Apo Island marine reserves in the Philippines, created in 1974, have established a framework for coral reef management that "has been shown to enhance fish yields" as well as "protect and maintain nearshore coral reef habitats for biodiversity and multiple economic uses."[52] According to a publication of the International Union for Conservation of Nature and Natural Resources (IUCN), coral reef marine reserves have benefited reef communities in a number of countries:

> Impressive benefits have resulted from protecting other coral reefs; e.g. in the Netherlands Antilles (Bonaire Marine Park), where diving tourism has increased; in the Seychelles (Ste. Anne National Marine Park), where the park is used by both residents and tourists for picnicking, swimming, sailing, snorkeling, diving and glass bottom boat excursions; in Fiji (tai Island), where subsistence catches have increased, tourist activity has expanded, and the holders of traditional fishing rights are involved in managing resorts and boats; and in Kenya (Malindi/Watamu, Mombasa, and Kisite/Mpunguti National Parks and Reserves), where resultant tourism generates

[49] NPS Advisory Board, *Rethinking National Parks*, 17-18.
[50] 36 C.F.R. 1.5, 1.6, 1.10, 2.1, 2.2, 2.3, 2.4, 2.5.
[51] Supra, (WWF).
[52] White, Alan, Catherine A. Courtney, and Albert Salamanca, "Experience with Marine Protected Area Planning and Management in the Philippines," *Coastal Management*, Vol. 30 (2002).

> revenues through gate, guide, and camping fees, rental of boats and equipment, and hotel expenses. It also has indirect benefits, creating jobs in hotels for guides and boatmen.[53]

In summary, both national policies on coral reef protection and Advisory Board recommendations call for the use of marine reserves for protecting marine resources. As the largest coral reef park in the national park system, Biscayne National Park must take these guidelines into account when determining management actions appropriate to protect the park's severely threatened, fundamental coral reef resources.

3. Additional Benefits of Marine Reserves

An additional benefit of marine reserves is that they provide valuable baseline information about the health of marine resources. Marine reserves can be valuable for the study of unaltered ecological processes and serve as important baselines or control areas for harvested populations of fish.[54] As a unit of the National Park System, managers must be guided by high-quality, scientifically acceptable information, data, and impact assessments, and where information is inadequate, long-term research or monitoring may be necessary to understand the effects of potential management actions.[55] A marine reserve would provide managers with key information about how the coral reef ecosystem responds to such protection. Proper enforcement and monitoring of the marine reserve could provide much-needed data to inform future management decisions.

The IUCN has recommended that marine reserves be designed to simultaneously accomplish as many conservation objectives as possible.[56] A marine reserve in Biscayne National Park would accomplish four necessary goals: provide a protected area where declining reef fish can recover to benefit fisheries, provide an area to protect internationally endangered coral reef communities, and provide data, research about the effects of marine reserves on marine resources of South Florida, and ensure that the diving and snorkeling communities are able to enjoy the incredible resources without the extractive pressures of fishing.

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[53] Salm, Rodney., John Clark, and Erkki Siirila, Marine and Coastal Protected Areas: A Guide for Planners and Managers, Third Edition, IUCN, Gland, Switz. (2000): 15.
[54] NPS, *National Resources Management Guidelines* (NPS-77), 34.
[55] NPS, *Management Policies 2001*, Sec. 4.1.1, 29.
[56] Salm et al., Marine and Coastal Protected Areas, 14.

Attachment 2: Miami-Dade County Resolution in Support of the Creation of a Marine Reserve in Biscayne National Park

MEMORANDUM

Agenda Item No. 11(A)(5)

TO:	Honorable Chairwoman Rebeca Sosa and Members, Board of County Commissioners	**DATE:**	December 16, 2014
FROM:	R. A. Cuevas, Jr. County Attorney	**SUBJECT:**	Resolution supporting the creation of a marine reserve within Biscayne National Park in order to better ensure the conservation and protection of the marine resources in Biscayne National Park

The accompanying resolution was prepared and placed on the agenda at the request of Prime Sponsor Commissioner Barbara J. Jordan.

R. A. Cuevas, Jr.
County Attorney

RAC/smm

/

MEMORANDUM

(Revised)

TO: Honorable Chairwoman Rebeca Sosa
and Members, Board of County Commissioners

DATE: December 16, 2014

FROM: R. A. Cuevas, Jr.
County Attorney

SUBJECT: Agenda Item No. 11(A)(5)

Please note any items checked.

_____	**"3-Day Rule" for committees applicable if raised**
_____	**6 weeks required between first reading and public hearing**
_____	**4 weeks notification to municipal officials required prior to public hearing**
_____	**Decreases revenues or increases expenditures without balancing budget**
_____	**Budget required**
_____	**Statement of fiscal impact required**
_____	**Ordinance creating a new board requires detailed County Mayor's report for public hearing**
✓	**No committee review**
_____	**Applicable legislation requires more than a majority vote (i.e., 2/3's ____, 3/5's ____, unanimous _____) to approve**
_____	**Current information regarding funding source, index code and available balance, and available capacity (if debt is contemplated) required**

Approved _____ Mayor
Veto _____
Override _____

Agenda Item No. 11(A)(5)
12-16-14

RESOLUTION NO. _____

RESOLUTION SUPPORTING THE CREATION OF A MARINE RESERVE WITHIN BISCAYNE NATIONAL PARK IN ORDER TO BETTER ENSURE THE CONSERVATION AND PROTECTION OF THE MARINE RESOURCES IN BISCAYNE NATIONAL PARK; URGING THE DIRECTOR OF THE NATIONAL PARK SERVICE, THE REGIONAL DIRECTOR OF THE SOUTH EAST REGION OF THE NATIONAL PARK SERVICE, AND THE SUPERINTENDENT OF BISCAYNE NATIONAL PARK TO CREATE SUCH A MARINE RESERVE WITHIN BISCAYNE NATIONAL PARK

WHEREAS, Biscayne National Park (the "Park") is a national treasure which protects part of the third-largest coral reef system in the word and the longest remaining stretch of mangrove forest on the East Coast of Florida; and

WHEREAS, about 95 percent of Biscayne National Park is covered by water, and the Park provides habitat and nursery grounds for important commercial and recreational fish, shellfish and crustaceans, in addition to providing refuge to threatened and endangered species; and

WHEREAS, Biscayne National Park protects "a rare combination of terrestrial, marine, and amphibious life in a tropical setting of great natural beauty," and it is one of the largest marine parks in the National Park System; and

WHEREAS, Biscayne National Park is a significant economic driver; it directly sustains an estimated 374 jobs in the local area, and in 2013, it was visited by approximately half a million people who spent approximately $29 million, generating a large number of additional jobs; and

WHEREAS, within Biscayne National Park, the health of the coral reef has been deteriorating and some fish populations, including important commercial and recreational species such as snapper and grouper, have been notably declining; and

WHEREAS, these problems are believed to be due to many cumulative stressors including pollution, warming seas, over-fishing and over-use; and

WHEREAS, Biscayne National Park is in the process of updating its General Management Plan, which will guide management of the Park over the next 20 years, and as part of that process, Biscayne National Park is considering the creation of a marine reserve in a portion of the Park, in order to protect the Park's severely threatened coral reef ecosystems; and

WHEREAS, Biscayne National Park is also considering other alternatives for its General Management Plan that would not include a marine reserve, and the Park currently intends to publish its final General Management Plan sometime in 2015; and

WHEREAS, the creation of marine reserves is a science-based tool that could be used by Biscayne National Park to protect coral reef ecosystems and fish populations, reduce impacts from marine debris, reduce damage to coral reefs, and provide areas where different types of recreational uses could enjoy marine resources; and

WHEREAS, marine reserves have been shown to work in other places; for example, a recent report on the Dry Tortugas marine reserve showed improvement in previously exploited fish stocks such as mutton snapper, yellowtail snapper, red grouper, black grouper and hogfish, and the open areas that surround the Dry Tortugas marine reserve now have larger fish sizes and greater numbers of fish; and

WHEREAS, the creation of a marine reserve in Biscayne National Park would help ensure that a healthy, vibrant Biscayne National Park continues to exist to support the local economy of Miami-Dade County for many years into the future,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA, that this Board:

Section 1. Supports the creation of a marine reserve within Biscayne National Park in order to better ensure the conservation and protection of the marine resources in Biscayne National Park.

Section 2. Urges the Director of the National Park Service, the Regional Director of the South East Region of the National Park Service and the Superintendent of Biscayne National Park to create a marine reserve within Biscayne National Park through the Park's General Management Plan.

Section 3. Directs the Clerk of the Board to transmit certified copies of this resolution to the Miami-Dade County Congressional Delegation, the Director of the National Park Service, the Regional Director of the South East Region of the National Park Service and the Superintendent of Biscayne National Park.

Section 4. Directs the County's federal lobbyists to advocate for the passage of legislation and promulgation of rules accomplishing the goals set forth herein, and authorizes and directs the Office of Intergovernmental Affairs to amend the 2015 federal legislative package to include this item.

The Prime Sponsor of the foregoing resolution is Commissioner Barbara J. Jordan. It was offered by Commissioner , who moved its adoption. The motion was seconded by Commissioner and upon being put to a vote, the vote was as follows:

Rebeca Sosa, Chairwoman

Bruno A. Barreiro	Esteban L. Bovo, Jr.
Daniella Levine Cava	Jose "Pepe" Diaz
Audrey M. Edmonson	Sally A. Heyman
Barbara J. Jordan	Jean Monestime
Dennis C. Moss	Sen. Javier D. Souto
Xavier L. Suarez	Juan C. Zapata

The Chairperson thereupon declared the resolution duly passed and adopted this 16th day of December, 2014. This resolution shall become effective upon the earlier of (1) 10 days after the date of its adoption unless vetoed by the County Mayor, and if vetoed, shall become effective only upon an override by this Board, or (2) approval by the County Mayor of this Resolution and the filing of this approval with the Clerk of the Board.

MIAMI-DADE COUNTY, FLORIDA

BY ITS BOARD OF
COUNTY COMMISSIONERS

HARVEY RUVIN, CLERK

By:_____
Deputy Clerk

Approved by County Attorney as
to form and legal sufficiency.

Abbie Schwaderer-Raurell

Attachment 3: Support Letter by Local Anglers Dr. Martin Arostegui, Captain Gil Muratori, and Captain Bouncer Smith

July 21, 2015

The Honorable Ileana Ros-Lehtinen
United States House of Representatives
2206 Rayburn HOB
Washington, DC 20515

Dear Congresswoman Ros-Lehtinen,

We, the undersigned anglers and life-long users of Biscayne National Park, write to you in strong support of the creation of a no-take marine reserve in Biscayne National Park as proposed in Alternative 8 of the park's General Management Plan (GMP). We are extremely concerned about the proposed "Preserving Public Access to Public Waters Act" and the roadblocks it could put in place preventing the National Park Service from protecting some of America's most treasured natural resources. Fishing and boating are of great importance to us and we view the creation of a marine reserve in Biscayne National Park as a way to ensure that our children and grandchildren have access to the same incredible fishing opportunities that we have enjoyed.

We have been fishing the waters of Biscayne National Park for decades and have seen the decline in the health of Biscayne's fisheries and coral reefs with our own eyes. Years ago, the waters within the park were filled with large grouper, mutton snapper, and grunts. Healthy coral reefs were filled with fish. Today, conditions are drastically different. The vast majority of mutton snapper, mangrove snapper, and hogfish are undersized and you rarely see grouper. Strong action needs to be taken *now* if we want our children and grandchildren to have the opportunity to enjoy fishing in Biscayne National Park.

South Florida is the fishing and boating capital of the world and the recreational fishing industry is extremely important to our local economy. We need to consider the impacts of a continued decline in the health of corals and fisheries on our economy. If people are no longer able to catch fish here, they will go somewhere else, taking their money and business with them. We cannot be shortsighted in our approach to resource management. We need to understand that conserving a small portion of our reef now will help to ensure the health of our fisheries for decades to come. Marine reserves work and some of the best fishing in the world is located just outside their borders.

After seeing the benefits of marine reserves firsthand, we teamed up to develop a presentation explaining the science behind marine reserves and the way they work to benefit fishing. Over the past year, we have been presenting these results to fishing clubs and community groups all over South Florida, educating other anglers and citizens about how we can improve the future of fishing in Florida. We truly believe that a marine reserve covering just 6% of Biscayne National Park's waters, which still allows for recreational fishing in the majority of the park, is our best bet to reversing the rapid decline in local fisheries.

We urge you to support the creation of a marine reserve in Biscayne National Park.

Sincerely,

Martin Arostegui MD
Past Chief of Staff-Cedars Medical Center
Holder of 440 International Game Fish Association World Records
martyarostegui@gmail.com

Captain Gil Muratori
Past President of the Metropolitan South Florida Fishing Tournament
Volunteer Educator for Biscayne and Everglades National Parks
gilmuratori@bellsouth.net

Captain Bouncer Smith
Full time charter captain in South Florida since 1966
Selected by the International Game Fish Association to its Hall of Fame as a "Legendary Captain" 2014
captbouncer@bellsouth.net

Cc:
Senator Bill Nelson
Senator Marco Rubio
Congressman Gus Bilirakis
Congresswoman Corinne Brown
Congressman Vern Buchanan
Congresswoman Kathy Castor
Congressman Curtis Clawson
Congressman Ander Crenshaw
Congressman Carlos Curbelo
Congressman Ron Desantis
Congressman Theodore Deutch
Congressman Mario Diaz-Balart
Congresswoman Lois Frankel
Congresswoman Gwen Graham
Congressman Alan Grayson
Congressman Alcee Hastings
Congressman David Jolly
Congressman John Mica
Congressman Jeff Miller
Congressman Patrick Murphy
Congressman Richard Nugent
Congressman Bill Posey
Congressman Thomas Rooney
Congressman Dennis Ross
Congresswoman Debbie Wasserman Schultz
Congressman Daniel Webster
Congresswoman Frederica Wilson
Congressman Ted Yoho

Attachment 4: Support Letter by Marine Conservation Experts Jean-Michel Cousteau, Dr. Sylvia Earle, and Dr. Jeremy Jackson

March 20, 2015

Sally Jewell, Secretary
United States Department of the Interior
1849 C Street NW
Washington, DC 20240

Dear Secretary Jewell,

We, the undersigned scientists, explorers and ocean advocates, are united in our support for the creation of a marine reserve in Biscayne National Park to protect its incredible marine biodiversity for the use and enjoyment of current and future generations. We are committed to the conservation of the extraordinary wildlife, landscapes, and outdoor experiences protected by our national parks and firmly believe that the National Park Service must take strong action to preserve Biscayne's spectacular underwater resources.

Biscayne National Park is a national treasure and is home to a portion of the third largest barrier reef ecosystem in the world and the only living reef tract in the continental United States. It is the largest marine park in the National Park System, created to protect "a rare combination of terrestrial, marine, and amphibious life in a tropical setting of great natural beauty" for present and future generations. Located in the backyard of one the largest metropolitan areas in the nation, Biscayne provides visitors with access to an underwater world that they might never otherwise be able to discover. The park is also a significant economic driver, supporting a variety of economic and recreational activities, such as fishing, diving, snorkeling, and boating. According to a National Park Service Report, nearly half a million visitors to Biscayne in 2013 spent over $29 million and sustained 374 jobs in the local area.[57] These economic benefits are dependent on a healthy, sustainable Biscayne National Park.

Unfortunately, Biscayne's once vibrant coral reefs and abundant reef fish populations have deteriorated in health over the last several decades. The approximately 6% of Biscayne's reefs that remain alive continue to be under stress from derelict fishing gear, warming seas, and the absence of a stable, healthy ecological food web resulting from overfishing.[58] Back in 2001, scientists warned of the imminent collapse of many fisheries resources without immediate proactive management.[59] Now 14 years later, we in desperate need of strong leadership on the part of the Department of the Interior and National Park Service to show a commitment to preserving our nation's most cherished places.

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[57]Cullinane, T. C., Huber, C., & Koontz, L. *2013 National Park visitor spending effects: Economic contributions to local communities, states, and the nation.* 2014, Natural Resource Report NPS/NRSS/EQD/NRR—2014/824, National Park Service, Fort Collins, Colorado.

[58]National Park Service South Florida / Caribbean Network. 2013. Annual administrative report (FY 2012) and work plan (FY 2013) for inventories and Vital Signs monitoring: South Florida / Caribbean Network. Natural Resources Report NPS/SFCN/NRR—2013/702. National Park Service, Fort Collins, Colorado.

[59]Ault, J. S., Smith, S. G., Meester, G. A., Luo, J., & Bohnsack, J. A. *Site characterization for Biscayne National Park: Assessment of fisheries resources and habitats.* NOAA Technical Memorandum 2001 NMFS-SEFSC-468.

The establishment of a marine reserve is the best, most effective method for protecting Biscayne's severely threatened coral reef ecosystem. Marine reserves work quickly, improving the size and quantity of fish stocks and protecting habitat.[60] A marine reserve in Biscayne National Park would accomplish four goals: provide an area where declining reef fish can recover; provide an area to protect internationally endangered coral reef communities; provide visitors with the opportunity to experience the wonders of a vibrant coral reef ecosystem that is relatively unaltered by extractive activities; and establish a baseline that can be used to compare the effectiveness of other management strategies.

We understand that the Park Service is alternatively considering a seasonal closure of fishing in what is called a Special Recreation Zone (SRZ). One of our major concerns with this proposal is that fishing effort may merely be redistributed to periods when the area is open to fishing, known as the derby effect.[61] If this occurs, any gains made in improving fisheries and protecting habitat may be reversed due to intensive fishing effort at the end of the closed season.[62] The derby effect may actually harm resources even more than leaving the area open all year, especially when anglers respond to the end of the closed season with destructively high force, which happened with grouper and snapper fisheries in the Gulf of Mexico.[63]

The Dry Tortugas marine reserves established in Dry Tortugas National Park and the Florida Keys National Marine Sanctuary, on the other hand, have had substantial benefits in terms of protecting and restoring degraded resources. Research documented increases in the size and abundance of many over-exploited species within the reserve areas[64] and spillover of more and larger fish occurred outside of reserve boundaries.[65] Furthermore, an economic study indicated that no financial losses were reported by recreation or commercial fishers in the area and commercial catches of reef fish actually increased in the region.[66] Marine reserves also provide the public with an opportunity to better understand the impacts of human activity on a local

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[60]Bohnsack, J. 1994. How marine fishery reserves can improve reef fisheries. Proceedings of the 43rd Gulf and Caribbean Fisheries Institute 43: 217-241; Bohnsack, J., Ault, J. 1996. Management strategies to conserve marine biodiversity. Oceanography, Volume 9, Number 1, pp. 73-82; Halpern, B. 2003. The impacts of marine reserves: Do reserves work and does reserve size matter? Ecological Applications, 13, (1), Supplement. Pp. S117-S137.

[61]Anderson, L.G., *The Economics of Fisheries Management,* 2nd revised ed., Blackburn Press, Caldwell, New Jersey, 2004, 296.

[62]Beets, J., M. Manuel, *Temporal and Seasonal Closures Used in Fisheries Management: A Review with Application to Hawai'i* Department of Marine Science, University of Hawai'i-Hilo, August, 2007.

[63]Coleman, F.C., P. Baker, C.C. Koenig, *A Review of Gulf of Mexico Marine Protected Areas: Successes, Failures, and Lessons Learned*, Fisheries 29: 10-21, 2004.

[64]Ault, J. S., Smith, S. G., Bohnsack, J. A., Luo, J., Zurcher, N., McClellan, D. B., Ziegler, T. A., Hallac, D. E., Patterson, M., Feeley, M. W., Ruttenberg, B. I., Hunt, J., Kimball, D., & Causey, B. *Assessing coral reef fish populations and community changes in response to marine reserves in the Dry Tortugas, Florida, USA.* Fisheries Research 144 (2013) 28-37.

[65]U.S. Department of the Interior National Park Service & Florida Fish and Wildlife Conservation Commission, *Implementing the Dry Tortugas National Park Research Natural Area Science Plan: The Five Year Report*, 2012, 4-13. Ibid., 24-27.

[66]Jeffrey, C.F.G., V.R. Leeworthy, M.E. Monaco, G. Piniak, M. Fonseca (eds.), *An Integrated Biogeographic Assessment of Reef Fish Populations and Fisheries in Dry Tortugas: Effects of No-take Reserves,* Prepared by the NCCOS Center for Coastal Monitoring and Assessment Biogeography Branch, Silver Spring, MD, NOAA Technical Memorandum NOS NCCOS 111, 2012.

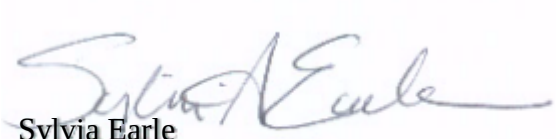
ecosystem.[67] The creation, enforcement, and administration of a marine reserve would be cost-effective and simple in comparison to other alternatives. When considering the limited resources of the National Park Service, effective and inexpensive enforcement and implementation would greatly contribute to the success of resource conservation.

Thus far, the public comment periods on the issue have demonstrated clear public support for the creation of a marine reserve. In 2011, 17,891 comments were received on the Biscayne National Park General Management Plan/Environmental Impact Statement, with over 98% (17,597) of those comments in support of a marine reserve. In 2014, 18,000 comments were received on the Supplemental Draft General Management Plan, with nearly 78% (14,000) of those comments in support of a marine reserve.

It is the responsibility of the National Park Service and ultimately, the Secretary of the Interior to protect the treasures found within our national parks unimpaired for the enjoyment of present and future generations. If swift, decisive action is not taken immediately, some of Biscayne's magnificent marine creatures and habitat may be gone forever. We are counting on your leadership to fully and adequately protect the spectacular marine resources that truly define the character of Biscayne National Park.

Sincerely,

Jean-Michel Cousteau
President and Founder
Ocean Futures Society



Sylvia Earle
Explorer in Residence, National Geographic Society
Founder, Mission Blue

[67]Bohnsack, J., Ault, J. 1996. Management strategies to conserve marine biodiversity. Oceanography, Volume 9, Number 1, pp. 73-82.

Jeremy Jackson
Senior Scientist Emeritus Smithsonian Institution
Professor of Oceanography, Emeritus Scripps Institution of Oceanography

Attachment 5: Support Letter by Environmental Organizations

May 28, 2015

Sally Jewell, Secretary
United States Department of the Interior
1849 C Street NW
Washington, DC 20240

Dear Secretary Jewell,

On behalf of the undersigned organizations, we write to you to express our strong support for the creation of a marine reserve in Biscayne National Park to protect the park's incredible but severely threatened coral reef ecosystem. We are deeply committed to the conservation of the unique landscapes, resources, wildlife, and recreational opportunities protected by the National Park Service and look toward your leadership in ensuring the future sustainability of Biscayne National Park.

Located in the backyard of the city of Miami, Biscayne National Park is a national treasure, home to one of the largest barrier reefs in the world and the only living coral reef in the continental United States. It is one of our country's largest marine national parks and offers visitors the opportunity to explore a unique underwater world that they might never otherwise be able to discover. Biscayne National Park was created to protect "a rare combination of terrestrial, marine, and amphibious life in a tropical setting of great natural beauty" for present and future generations. In addition to its great ecological value, the park is a significant economic generator, supporting a variety of economic and recreational activities, including diving, snorkeling, boating, and fishing. According to the National Park Service, over half a million visitors to Biscayne National Park in 2014 spent more than $32 million and sustained 459 jobs in the local area. Unfortunately, Biscayne's resources have rapidly deteriorated in health over the last few decades and scientists warn that some species populations within the park indicate "imminent resource collapse." Immediate action needs to be taken to ensure the long-term health of Biscayne National Park.

Marine reserves are one of the quickest and most effective science-based solutions for conserving the future health and sustainability of Biscayne's coral reef ecosystem. Creating a marine reserve in Biscayne National Park would help to improve the health of the park's coral reefs, and increase fish size, diversity and abundance. Marine reserves implemented at Dry Tortugas National Park and the Florida Keys National Marine Sanctuary have shown substantial benefits in the protection and restoration of degraded resources. Studies have documented increases in the size and abundance of once over-exploited species within the reserve areas and spillover of more and larger fish outside of reserve boundaries. Furthermore, an economic study prepared by the National Oceanographic and Atmospheric Administration indicated that no financial losses were reported by recreational or commercial fishers in the area and commercial catches of reef fish actually increased in the region. Similar protections are urgently needed to protect the threatened resources of Biscayne National Park.

The U.S. Department of the Interior and the National Park Service have a duty to protect the resources of our spectacular system of national parks unimpaired for the enjoyment of present and future generations. We look for your leadership on this issue and strongly encourage you to create a marine reserve to protect Biscayne National Park's treasured system of threatened reef fisheries and coral reef ecosystems.

Sincerely,
(Signatures waived to expedite delivery)

John McCabe
Immediate Past President
"Ding" Darling Wildlife Society

Paton White
President
Audubon Society of the Everglades

Jaclyn Lopez
Florida Director, Staff Attorney
Center for Biological Diversity

Kathleen E. Aterno
Florida Director
Clean Water Action

Mary Barley
Chair
Everglades Trust

Charlie Causey
President
Florida Keys Environmental Fund

Deirdre Macnab
President
League of Women Voters of Florida

Dr. Lance Morgan, Ph.D.
President
Marine Conservation Institute

Dr. Rachel Silverstein, Ph.D.
Executive Director & Waterkeeper
Miami Waterkeeper

Caroline McLaughlin
Biscayne Program Analyst
National Parks Conservation Association

Drew Martin
Vice Chair
Palm Beach County Soil and Water Conservation District

Millard McCleary
Executive Program Director
Reef Relief

Marjorie Holt
Chair/Conservation Chair
Sierra Club Central Florida Group

Doug Fetterly
Co-Team Lead
Sierra Club Marine Action Team

Stephen Mahoney
Conservation Chair
Sierra Club Miami Group

Doug Young
President
South Florida Audubon Society

Matthew Schwartz
Executive Director
South Florida Wildlands Association

Laura Reynolds
Executive Director
Tropical Audubon Society

Attachment 6: Support Letter by Dive Shops and Organizations

February 20, 2014

Brian Carlstrom, Superintendent
Biscayne National Park
9700 SW 328 Street
Homestead, FL 33033-5634

Re: Biscayne National Park's Supplemental Draft General Management Plan/Environmental Impact Statement

Dear Superintendent Carlstrom,

The undersigned businesses and organizations are leaders in or otherwise associated with the sport diving industry in South Florida. In response to the release of Biscayne National Park's Supplemental Draft General Management Plan/Environmental Impact Statement (GMP/EIS), we would like to reiterate our support for the creation of a marine reserve in Biscayne National Park (BNP).

The future of our business and the quality of our diving experiences are closely associated with the health, diversity, and sustainability of the marine resources of South Florida. Therefore, we are invested in ensuring the ecological integrity of Biscayne National Park (BNP), especially of the coral reef ecosystem. BNP is an incredibly unique combination of environments and we have a keen interest in promoting effective management that will preserve and protect park resources for the education, inspiration, recreation, and enjoyment of present and future generations. To that end, we support the creation of a marine reserve in BNP to ensure the park's coral reef ecosystems are sufficiently protected to provide a high-quality diving and snorkeling experience.

As you know, Congress intended the National Park System to be protected for the "common benefit of all the people of the United States," and thus held to a higher standard of protection that will maintain the value of such areas now *and in the future*. We believe that there is strong scientific consensus, supported by abundant evidence, that marine reserves are uniquely effective in restoring, sustaining, and conserving coral reef ecosystems. Particularly when placed in areas heavily impacted by fishing activities, marine reserves result in relatively rapid increases in size and abundance of previously targeted fish and invertebrates. They also improve overall species richness and diversity, as evidenced by the early results of the Pole and Troll Zone in Everglades National Park and in the Research Natural Area of Dry Tortugas National Park. Coral reef habitats protected by marine reserves typically support communities that are significantly and often strikingly different from those that continue to be subjected to extractive activities.

We are concerned that the new agency preferred alternative does not provide sufficient protection for these critical resources. Furthermore, it is not backed by sound science or evidence, and there is no scientific precedent to support claims that it will work. We would like to know why the public was not engaged in the development of the two new alternatives outlined

in the Supplemental Draft GMP/EIS. The engagement and involvement of interested stakeholders is critical to developing an effective and accepted plan for park management.

We believe that the establishment of a marine reserve in Biscayne National Park, along with proper implementation, enforcement, and public outreach, will help to restore the reef system and its full diversity and abundance of marine life. Successful restoration of these fragile ecosystems would have strong potential to transform the park into a world class diving and tourism destination with huge economic opportunities and benefits to the local economy. Moreover, if designed and managed properly, a large marine reserve on the reef tract in BNP could benefit anglers because of the opportunity to land more and larger fish outside of the reserve, when compared to other areas in South Florida.

Consequently, we take this opportunity to publically support the establishment of a marine reserve on the coral reef tract within Biscayne National Park. Should a decision be made to create a marine reserve in the park, the undersigned groups stand ready, willing, and able to work with you to build public support, as well as helping to develop effective management and public outreach strategies.

Sincerely,

(Signatures waived to expedite delivery)

Sasha Boulanger
Owner
South Beach Dive and Surf
850 Washington Ave.
Miami Beach FL 33139

Kamau Sadiki
Vice President
National Association of Black Scuba Divers
641-233-0353
ksadiki@gmail.com

Kenneth B. Stewart
Co/Founder, Program Director
Diving With a Purpose
www.divingwithapurpose.com
615-730-4906

Kenneth B. Stewart
Co/Founder
Tennessee Aquatic Project and Development, Inc.
1309 Jackson St.
Nashville, TN 37208
kennstewart@clearwire.net

Attachment 7: Everglades Coalition Resolution in Support of the Creation of a Marine Reserve

Everglades Coalition

1000 Friends of Florida
Arthur R. Marshall Foundation
Audubon Florida
Audubon Society of the Everglades
Audubon of Southwest Florida
Caloosahatchee River Citizens Association / Riverwatch
Center for Biological Diversity
Clean Water Action
Collier County Audubon Society
Conservancy of Southwest Florida
Defenders of Wildlife
Ding Darling Wildlife Society
Earthjustice
Environment Florida
Everglades Coordinating Council
Everglades Foundation
Everglades Law Center
Florida Conservation Alliance
Florida Defenders of the Environment
Florida Keys Environmental Fund
Florida Native Plant Society
Florida Oceanographic Society
Florida Wildlife Federation
Friends of the Arthur R. Marshall Loxahatchee National Wildlife Refuge
Friends of the Everglades
Hendry Glades Audubon Society
Institute for Regional Conservation
Izaak Walton League Florida Division
Izaak Walton League Florida Keys Chapter
Izaak Walton League Mangrove Chapter
Izaak Walton League of America
Last Stand
League of Women Voters of Florida
Loxahatchee River Coalition
Martin County Conservation Alliance
National Audubon Society
National Parks Conservation Association
National Wildlife Federation
National Wildlife Refuge Association
Natural Resources Defense Council
Ocean Research & Conservation Association
Reef Relief
Sanibel-Captiva Conservation Foundation
Save It Now, Glades!
Sierra Club
Sierra Club Broward Group
Sierra Club Calusa Group
Sierra Club Central Florida Group
Sierra Club Florida Chapter
Sierra Club Loxahatchee Group
Sierra Club Miami Group
Snook and Gamefish Foundation
South Florida Audubon Society
Tropical Audubon Society
The Urban Environment League of Greater Miami

A Resolution of the Everglades Coalition in Support of the Establishment of a Marine Reserve in Biscayne National Park to Promote Coral Reef Ecosystem Conservation and Enhancement

WHEREAS, Biscayne National Park is a national treasure, protecting part of the third-largest coral reef system in the world and the longest stretch of mangrove forest remaining on Florida's east coast, providing habitat and nursery grounds for important commercial and recreational fish, shellfish, and crustaceans, and offering refuge to many endangered species;

WHEREAS, Biscayne is the largest marine park in the National Park System, established by Congress to protect "a rare combination of terrestrial, marine, and amphibious life in a tropical setting of great natural beauty" for present and future generations;

WHEREAS, Biscayne Bay is closely linked to the greater Everglades ecosystem, directly connected to the waters of Florida Bay and receiving much-needed freshwater inflows from the Everglades;

WHEREAS, coral reef health and fish populations in Biscayne National Park have been on the decline for decades due to many cumulative stressors, including acidification, warming seas, over-fishing and over-use, leaving some species populations on the verge of collapse;

WHEREAS, Biscayne National Park is in the process of updating its General Management Plan, which will guide park management over the next 20 years and is considering the creation of a marine reserve as an alternative to protect the park's severely threatened coral reef ecosystems;

WHEREAS, marine reserves are a science-based tool used to protect coral reef ecosystems and fish populations, reducing impacts from marine debris and damage to coral reefs, and providing areas where different types of recreational users can enjoy marine resources without interference from extractive activities.

Therefore, be it resolved:

The Everglades Coalition, with 55 organizations dedicated to the full protection and restoration of America's Everglades, is in support of the creation of a marine reserve within Biscayne National Park in order to ensure the conservation and protection of Biscayne's incredible marine resources for the benefit of all Americans for generations to come.

Cara Capp
Cara Capp
National Co-Chair

Jason Totoiu
State Co-Chair

450 N. Park Road, Suite 301, Hollywood Florida 33021 | evergladescoalition.org | info@evergladescoalition.org

Attachment 8: Ocean Reef Club Association Letter of Support

August 3, 2015

The Honorable Marco Rubio
United States Senate
Washington, D.C. 20510

Dear Senator Rubio:
As you know, the Ocean Reef Community Association (ORCA) has been working with your office for a number of years regarding the General Management Plan for Biscayne National Park. Recently, the National Park Service announced that the General Management Plan (GMP) for Biscayne National Park will incorporate Alternative 8 – a plan that protects strong natural and cultural resources while improving opportunities for quality visitor experiences. ORCA is pleased with the outcome of this process and we strongly support Alternative 8.

Alternative 8 is the culmination of several rounds of stakeholder input that we believe will strengthen Florida's reputation as the "Fishing Capital of the World," while ensuring the health of the region's coral reef ecosystem for future generations. The marine reserve zone established under Alternative 8 will not only allow visitors to experience a natural and healthy reef ecosystem but will also benefit recreational fisherman who will see larger and more numerous fish from the reserve spill over into the surrounding waters.

It is with great appreciation that the Ocean Reef Community Association (ORCA) and its residents thank you for your continued support of this critical issue. We commend and applaud your successful efforts to renovate Biscayne National Park with a responsible approach that balances the needs of the region and its community. Due to your actions, the finalized management plan adopts measures that enhance fish and wildlife without deterring tourism or recreational fishing. Alternative 8 will not only protect Florida's ecosystem, it will protect its economy too.

In recognition of your efforts, we would like to extend a cordial invitation for you to visit the Ocean Reef community in Florida during the congressional recess in August and experience firsthand our scenic parks and recreational fishing. Please let us know if you need any further information regarding this invitation, and we will be happy to comply.

Again, on behalf of ORCA, thank you for you and your staff's support during this long, complicated process.
Sincerely,

David C. Ritz, President

Attachment 9: Support Letter by NPCA's Regional Council

November 4, 2014

Superintendent Brian Carlstrom
Biscayne National Park
National Park Service
9700 SW 328 St.
Homestead, FL 33033

Dear Superintendent Carlstrom:

We, the undersigned members of the National Parks Conservation Association Sun Coast Regional Council, are united in our support for the creation of a marine reserve within Biscayne National Park in order to protect its unique assemblage of marine biodiversity. We are committed to the conservation of the resources, landscapes, and recreational experiences of our national parks and strongly believe that the National Park Service must act now to preserve Biscayne's incredible underwater ecosystems.

Biscayne National Park is a national treasure and home to one of the largest barrier reefs in the world. It is the largest marine park in the National Park System, created to protect, "a rare combination of terrestrial, marine, and amphibious life in a tropical setting of great natural beauty" for present and future generations. In addition to its ecological value, the park is a significant economic driver, supporting a variety of economic and recreation activities, such as fishing, diving, snorkeling, and boating. According to a National Park Service report, nearly half a million visitors to Biscayne in 2013 spent over $29 million and sustained 374 jobs in the local area.[68] Unfortunately, Biscayne's resources have deteriorated in health over the last several decades and scientists warn that that status of some populations indicates "imminent resource collapse."[69] To ensure the long-term health of Biscayne, park managers should implement and enforce strong, effective, and feasible management policies.

The ability of marine reserves to protect and restore threatened coral reef ecosystems and fish populations around the world have been detailed by a substantial amount of research over the course of several decades. The Dry Tortugas marine reserves established in Dry Tortugas National Park and the Florida Keys National Marine Sanctuary have had substantial benefits in terms of protecting and restoring degraded resources. Research results documented increases in the size and abundance of many over-exploited species within the reserve areas[70] and spillover of

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[68] Cullinane, T. C., Huber, C., & Koontz, L. *2013 National Park visitor spending effects: Economic contributions to local communities, states, and the nation.* 2014, Natural Resource Report NPS/NRSS/EQD/NRR—2014/824, National Park Service, Fort Collins, Colorado.

[69] Ault, J. S., Smith, S. G., Meester, G. A., Luo, J., & Bohnsack, J. A. *Site characterization for Biscayne National Park: Assessment of fisheries resources and habitats.* NOAA Technical Memorandum 2001 NMFS-SEFSC-468.

[70] Ault, J. S., Smith, S. G., Bohnsack, J. A., Luo, J., Zurcher, N., McClellan, D. B., Ziegler, T. A., Hallac, D. E., Patterson, M., Feeley, M. W., Ruttenberg, B. I., Hunt, J., Kimball, D., & Causey, B. *Assessing coral reef fish populations and community changes in response to marine reserves in the Dry Tortugas, Florida, USA.* Fisheries Research 144 (2013) 28-37.

more and larger fish occurred outside of reserve boundaries.[71] Furthermore, an economic study indicated that no financial losses were reported by recreational or commercial fishers in the area and commercial catches of reef fish actually increased in the region.[72] Similar results are needed within Biscayne National Park in order to protect the park's failing resources.

It is the responsibility of the National Park Service to protect the resources of our national parks unimpaired for the enjoyment of present and future generations. If current practices within Biscayne National Park do not change, Biscayne's incredible underwater world will not be around for our children and grandchildren to discover. We strongly urge you to act now, with the establishment of a marine reserve informed by strong science, to fulfill your duty to the American people to protect the severely threatened, yet incredibly unique resources of Biscayne National Park.

If you have questions, please contact Caroline McLaughlin, Biscayne Program Analyst, cmclaughlin@NPCA.org.

Sincerely,

Irela Bagué

Paul Martin

Sara Fain

Bruce C. Matheson

Bruce Garrison

Olga Melin

Pam Garrison

JoAnn Tredennick

[71]U.S. Department of the Interior National Park Service & Florida Fish and Wildlife Conservation Commission, *Implementing the Dry Tortugas National Park Research Natural Area Science Plan: The Five Year Report*, 2012, 4-13. Ibid., 24-27.

[72] Jeffrey, C.F.G., V.R. Leeworthy, M.E. Monaco, G. Piniak, M. Fonseca (eds.), *An Integrated Biogeographic Assessment of Reef Fish Populations and Fisheries in Dry Tortugas: Effects of No-take Reserves,* Prepared by the NCCOS Center for Coastal Monitoring and Assessment Biogeography Branch, Silver Spring, MD, NOAA Technical Memorandum NOS NCCOS 111, 2012.