

County of Monroe

The Florida Keys



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MODIFICATION TO MONROE COUNTY'S REQUEST FOR SUPPORT FROM THE RESTORE ACT FEDERAL COUNCIL ALLOCATION FOR THE FLORIDA KEYS WATER QUALITY PROTECTION PROGRAM

REQUEST:

This additional submission serves to update Monroe County's request for Federal Council Allocation funding and emphasize how it meets the Council's Comprehensive Restoration Plan goals, and the State of Florida's priorities for projects to be considered for funding.

In recognition of the much lower scale of available funding in the Federal Council Allocation than originally anticipated we would like to ask that DEP combine Monroe County's current proposals in the DEP portal¹ into a single proposal, under the umbrella of Water Quality Protection and to reduce the amount of our total request \$10M.

Monroe County maintains its request for funding consideration for Florida Keys' wastewater, storm water and canal water infrastructure projects, which are rooted in the Water Quality Protection Plan for the Florida Keys National Marine Sanctuary, an unrivaled ecological treasure in the Gulf of Mexico.

However, we would like to add an additional component -- that of land acquisition for the purpose of critical buffer area for the U.S. Navy's premier flight military installation, Naval Air Station Key West, and which also serves to protect water quality.

SUMMARY:

The degradation of water quality threatens the unique, fragile and complex marine ecosystem of the Florida Keys National Marine Sanctuary. This ecosystem is the lifeblood of the State and local commercial fisheries and a marine-based tourism economy unrivaled in the State of Florida.

In 1985, the State of Florida recognized the importance of the marine ecosystem and designated the Florida Keys' waters as "Outstanding Florida Waters" (OFW). In 1990, the United States Congress created the Florida Keys National Marine Sanctuary (FKNMS) and directed the US EPA, Florida DEP, and NOAA to develop a comprehensive, scientifically-supported Water Quality Protection Program (WQPP) to restore water quality to protect the unique habitats and abundant species of fish and wildlife. (A map of the FKNMS is attached.)

Per the federal requirements of the WQPP and the State's OFW regulations Monroe County is required to halt degradation and improve water quality by implementing corrective actions related to:

- **Wastewater** treatment (per the Monroe County Wastewater Master Plan);
- **Storm water** runoff (per the Monroe County Storm water Master Plan); and
- **Canal water** degradation (per the Monroe County Canal Management Master Plan).

Additionally, the military installation located in the Florida Keys, US Naval Air Station Key West requires **buffer land acquisition**. NASKW has recently identified properties within its impact zone as priorities in terms of potential encroachment threats. Acquisition of these parcels clearly helps protect the mission of the US Navy; and by preserving these mostly waterfront parcels from upland development, water quality is also significantly protected.

¹ In the DEP portal, Monroe County has two proposals: \$50M for the Monroe County Cudjoe Regional Advanced Wastewater Treatment Facility and \$32M for Storm Water Retrofits and Canal Water Restoration.)

MONROE COUNTY'S REQUEST MEETS THE FOLLOWING FEDERAL COUNCIL ALLOCATION AND STATE OF FLORIDA CRITERIA:

- ✓ **COMPLIES WITH FEDERAL COUNCIL'S COMPREHENSIVE GULF RESTORATION PLAN GOALS:**
 - Restore and Conserve Habitat and
 - Restore Water Quality
- ✓ **COMPLIES WITH STATE OF FLORIDA'S RESTORATION PRIORITIES:**
 - Storm water / Wastewater infrastructure projects and
 - Water Quality projects including those which achieve water quality benefits provided by the preservation of buffer lands around bases.
- ✓ **LEVERAGES FEDERAL, STATE, AND LOCAL PARTNERSHIP:**
 - The Florida Keys Water Quality Protection Program is a 25-year collaborative effort by Federal, State and Local Governments, non-governmental organization, academics and local citizens.
 - The Congress directed US Environmental Protection Agency and the State of Florida, in consultation with NOAA, to prepare a Water Quality Protection Program which was included in the Sanctuary's comprehensive management plan which provides a comprehensive ecosystem management approach for the long-term protection of diverse natural resources in Keys waters.
 - Congress also directed the US EPA, FDEP and NOAA to establish a Steering Committee to develop guidance and policy for the development and implementation of the WQPP, oversee the implementation activities, and report progress to Congress with Biennial Reports. Members of the Steering Committee include: US EPA, FDEP, NOAA, US Army Corp of Engineers, US National Park Service, US Fish and Wildlife Service, FDEO, and FI Fish and Wildlife Conservation Commission.
 - The National Oceanic and Atmospheric Administration is the federal agency that oversees the National Marine Sanctuary program. The Florida Department of Environmental Protection (FDEP) is the state partner involved in FKNMS management. The county and municipal governments of the Florida Keys are the local partners charged with implementing wastewater, storm water and canal water improvements.
- ✓ **FLORIDA KEYS WATER QUALITY LEVERAGES SIGNIFICANT FEDERAL, STATE, AND LOCAL INVESTMENT AND RESOURCES:**
 - Local: \$470M
 - State: Authorized \$200M/Expended \$100M
 - Federal: Authorized \$200M/Expended \$61M
- ✓ **IS SUPPORTED BY SCIENCE:**
 - Since 1995, scientists from Florida International University have been collecting water quality samples at 154 sites throughout the Florida Keys as part of the Water Quality Protection Program. Water quality is based on many factors, including the levels of specific nutrients -- nitrogen and phosphate -- which are often found in high concentrations in wastewater and storm water. If the levels of these nutrients get too high it put stress on marine life, making them more prone to disease and even death. Thirty special studies and years of consecutive years of status and trend monitoring of water quality, corals, and seagrass habitat have been completed. Monitoring data provide the scientific underpinnings for effective management of the FKNMS and efficacy of corrective actions. Results from the monitoring project are entered into a publicly available database and comprehensive computer mapping data management system.

✓ **SUPPORTS ECOLOGICALLY IMPORTANT GOALS:**

- The Florida Keys National Marine Sanctuary contains one of North America's most prolific and diverse assemblages of terrestrial, estuarine, and marine fauna and flora. The area is one of the most complex ecosystems on Earth, and includes mangrove-fringed shorelines, mangrove islands, seagrass meadows, hardbottom habitats, thousands of patch reefs, and one of the world's largest coral reef tracts. The Key's ecosystem supports a diverse assemblage of species, including commercially and recreationally important, unique to the area or spatially limited due to habitat constraints.

Of note:

- Monroe County is home to the **second largest National Marine Sanctuary in the U.S.:** 3,800 square miles of protected area encompassing State and Federal waters, a marine ecosystem unrivaled in the nation.
- Monroe County's waters support over **6,000 species of fish, invertebrates and plants, and critical spawning habitats to over 520 species** of recreational and commercial migratory, endemic, coastal & pelagic finfish and shellfish, providing unparalleled support to fisheries and essential habitats throughout Florida and the Gulf. (*NOAA's Florida Keys National Marine Sanctuary Revised Management Plan, 2007.*)
- Monroe County's waters **provide habitat for 80 percent of the fish species in the U.S.,** and most commercially valuable fish species depend on Monroe County nearshore waters at some point during their development. (*US Army Corps' Florida Keys Water Quality Improvement Program Management Plan, 2006.*)
- Monroe County's waters contain the world's largest seagrass bed in the world: **1.5M acres of seagrass, and the world's third largest coral reef,** and only living coral reef in the continental United States. Seagrasses and corals form an interconnecting and interdependent habitat to dozens of threatened and endangered species.

✓ **HAS A CLEAR ECONOMIC RETURN ON INVESTMENT:**

- The Florida Keys marine environment supports a **national and international tourism industry that generates \$2.2 billion.** More than **four million** tourists come to see or catch fish and other marine wildlife. These visitors directly support charter boats for diving, snorkeling, sailing and fishing, dive shops, bait and tackle shops, marinas, restaurants, hotels, motels, and camp grounds, and, indirectly, a multitude of support businesses. (*Monroe County Tourist Development Council, 2011.*)
- Monroe County generates **\$165M annually in sales tax for the State of Florida.**
- Monroe County is home to the **most valuable commercial fishing port in the State of Florida,** and the only port in the entire state of Florida to rank among the nation's top 50 ports in landings tonnage or landings value. (*NOAA's Fisheries of the United States, August 2012.*)
- Monroe County is the **fifth most valuable fishing port in the Gulf of Mexico and 13th most valuable in the nation.** (*NOAA's Fisheries of the United States, August 2012.*) This doesn't even take into consideration the millions of dollars of shrimp caught off the Florida Keys and landed at other ports around the Gulf of Mexico.
- **Commercial fishing is the second largest industry** in Monroe County. Some of the most important commercial species are spiny lobster, stone crab, pink shrimp, mackerel, grouper and snapper. The commercial fleet supports about 1,200 families, which is close to 5 percent of the Monroe County's population.

✓ **SUPPORTS TRULY UNIQUE MARINE AND LAND-BASED HABITATS:**

- **Seagrass Meadows:** *The Florida Keys have the largest documented seagrass bed in the world – 5,900 sq. miles.* Seagrasses are a primary food source for many organisms including the manatee and green sea turtle both of which are endangered marine herbivores. The predominant turtle grasses, which happen to be particularly vulnerable to pollution, are habitat, nursery and feeding grounds for a host of attaching invertebrates and for the larvae and young of many organisms. These include shrimp, spiny lobster, sea urchins, sponges, snapper, sea trout, barracuda and grunts. Some animals feed directly on the seagrass blades and roots while others scrape the epiphytes from the seagrass blades. Large predators also visit seagrass beds in search of prey.

Seagrasses are also a natural trap for sediments that often enter coastal waters as a result of runoff from the land. Particles settle out of the water column, becoming trapped among the blades and roots of the seagrasses. The removal of sediments and nutrients from the water results in high water clarity and nutrient-poor waters is required for the survival of coral reefs. Seagrasses also stabilize bottom sediments with their dense roots and rhizomes that form a secure mat. This sediment stabilization and erosion prevention is especially important during storms and hurricanes that often threaten Florida's coastline.

- **Coral Reef:** *The Florida reef tract is the most extensive living coral reef system in North American waters and the third largest reef system in the world.* Coral reefs are important habitat, refuge, feeding and nursery grounds for countless fishes and invertebrates, including those of commercial and recreational value. Coral reefs are among the most diverse communities on this planet, often described as "rainforests of the sea" – and they require clear, shallow waters. Water quality threats to reefs may result in upsetting the ecological balance of the reef as well as having indirect impacts on other nearby habitats. Colonies of tiny polyps form the complex structure of coral reefs by secreting calcium carbonate. The waving forests of sea whips and sea fans in the Keys are a uniquely Caribbean feature, and are not found on reefs in the Pacific and Indian Oceans.

- **Mangroves:** The Key's mangroves serve as valuable nursery areas for shrimp, crustaceans, mollusks, and fishes, and are a critical component of Florida's commercial and recreational fishing industries. These habitats provide a rich source of food while also offering refuge from predation. Snook, gray snapper, tarpon, jack, sheepshead, and red drum all feed in the mangroves. Florida's fisheries would suffer a dramatic decline without access to healthy mangrove habitats.

In addition to commercially important species, mangroves also provide habitat and feeding ground for number of threatened and endangered species. Threatened species include: American Alligator, Green Sea Turtle and Loggerhead Sea Turtle. Endangered species include: American Crocodile, Hawksbill Sea Turtle, Southern Bald Eagle, Peregrine Falcon, Brown Pelican, and West Indian Manatee.

- **Federal Species Focus Areas:** Due to the Florida Keys' small land area, land habitats here (pineland forests, tropical hardwood hammocks, freshwater wetlands, and salt marsh wetlands) are as dependent on water quality as our marine habitats; they are easily threatened by degraded water quality and bolstered by improved water quality.

Additionally, a very large number of parcels within the Species Focus Areas remain in private ownership, and therefore represent potential development and destruction of the only suitable habitat for numerous federally endangered or threatened species such as the Eastern Indigo Snake, Key Deer, Key Largo Cotton Mouse, Key Tree Cactus, Lower Keys March Rabbit, and the Shaws Swallowtail Butterfly.

The Florida Keys house three national wildlife refuges—Key West National Wildlife Refuge, Great White Heron National Wildlife Refuge, and National Key Deer Refuge. These are a collection of low-lying, subtropical islands between the Gulf of Mexico and the Atlantic Ocean that protect all the vital habitats representative of the Florida Keys ecosystem, including the globally imperiled pine rockland and tropical hardwood hammock, and provide a haven for a diversity of native flora and fauna, including endemic, threatened, endangered, and candidate species, including hundreds of wading and migratory bird species.

✓ **SUPPORTS MILITARY INSTALLATION BUFFERING NEEDS AND WATER QUALITY:**

- The Florida Keys is home to Naval Air Station Key West. NAS Key West is a state-of-the-art training facility for air-to-air combat fighter aircraft of all military services, with perfect flying weather year round and unparalleled aerial ranges. It is the U.S. Navy's premier flight training facility, hosting 60,000 training operations a year. NAS Key West encompasses more than 5,800 acres in the Lower Keys, and the Gulf water and air ranges span 134,000 square miles.

Air station facilities can support up to 100 aircraft and more than 800 personnel at one time, as well as provide port operations for visiting ships. NAS Key West also supports operational and readiness requirements for the Department of Defense, Department of Homeland Security (e.g., U.S. Coast Guard), Air National Guard and Army National Guard units, other federal agencies, and allied military forces; and hosts 30 separate tenant commands, including Fighter Squadron Composite 111, Strike Fighter Squadron 106, U.S. Army Special Forces Underwater Operations School and Headquarters, and Joint Interagency Task Force South (JIATF South).

- NASKW generates almost **\$800M in economic activity**, and almost 8,000 jobs in Monroe County. (*Florida Defense Factbook, January 2013, Enterprise Florida, Haas Center.*)
- The presence of the Naval Air Station Key West requires additional land acquisition needs for buffering against base encroachment particularly in its crash and noise zones. There are approximately 519 vacant, privately-owned parcels (ie, with development/encroachment potential) within the "military installation area of impact"(MIAI).

Among these, NASKW has identified high priority encroachment threats. They are listed below. Acquisition of these parcels will bolster the buffer area which helps protect the mission of the US Navy; and by preserving these mostly waterfront parcels from upland development, water quality is also significantly protected. (A map of the military installation with the sites prioritized for buffer acquisition is attached.)

1. North Boca Chica Key, aka "Sub pens": 124 acres; within Accident Potential Zone 1 and is in excess of 80 DNL. (Currently being marketed for residential development.)
2. Enchanted Island: 4 acres; within Accident Potential II and is located within 65-70 DNL. (Development agreement exists allowing high end residential development>)
3. Gulf Seafood Commercial Fishing Property: 8 acres; this is a prime commercial fishing property, however its zoning allows for residential development which brings a far higher investment return than maintaining it as commercial fishing site.)
4. Numerous additional scatter-site parcels within the MIAI particularly those in the accident potential zones and highest noise contour areas. (All currently vacant with potential residential development.)

Florida Keys
Management Areas



**NAVAL AIR STATION KEY WEST
BOCA CHICA, FLORIDA KEYS
MILITARY INSTALLATION AREA OF IMPACT AND RANKED BUFFER AREAS**



