

Memorandum of Agreement

Between the

**State of Florida
Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute**

And the

**National Oceanic and Atmospheric Administration
National Ocean Service
Office of National Marine Sanctuaries**

NOS Agreement No. MOA-2010-026/8081

I. PURPOSE AND SCOPE

The purpose of this Memorandum of Agreement (MOA) between the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), through the Office of National Marine Sanctuaries (ONMS), and the Florida Fish and Wildlife Conservation Commission (FWC) is to facilitate collaborative monitoring, research, and data management conducted by the FWC Fish and Wildlife Research Institute (FWRI) for the Florida Keys National Marine Sanctuary (FKNMS).

II. BACKGROUND

The ONMS and the State of Florida have joint overlapping jurisdictional responsibilities within the FKNMS boundaries; NOAA and the State signed a Compact Agreement that supported co-management of the FKNMS by the State and Federal governments. On July 1, 1997, the final regulations set forth in the FKNMS management plan became effective throughout the Sanctuary.

III. AUTHORITIES

Pursuant to section 311(a) of the National Marine Sanctuaries Act (NMSA), 16 U.S.C. 1442(a), NOAA may enter into cooperative agreements, contracts, or other agreements with, or make grants to, States, local governments, regional agencies, interstate agencies, or other persons to carry out the purposes and policies of this title. Pursuant to NMSA section 311(e) (16 U.S.C. 1442(e)), NOAA may enter into an agreement with a State or Federal agency to use the personnel, services, or facilities of such agency on a reimbursable or nonreimbursable basis, to assist in carrying out the purposes and policies of the NMSA. The Florida FWC is authorized by Section 379.2251, Florida Statutes, to enter into cooperative agreements with federal agencies for the purpose of preserving saltwater fisheries within and without State waters. The Florida FWC and NOAA enter into this MOA pursuant to 16 U.S.C. 1431 and section 379.2251, Florida Statutes.

IV. TERMS

Monitoring and research are critical to achieving the FKNMS's primary goal of resource protection. The FWRI has the staff, services, and facilities needed to conduct monitoring and research projects as well as to provide a data management system. The FKNMS Science Coordinator shall discuss research, monitoring, and data management needs of the FKNMS Zone Monitoring Program and additional monitoring projects with the FWRI South Florida Regional Laboratory Research Administrator. These discussions shall identify activities to be conducted by the FWRI for the FKNMS based on the FKNMS Annual Operating Plan, FKNMS Comprehensive Science Plan, and other monitoring and research needs as they arise.

FWRI shall prepare a Statement of Work (SOW) for each separate activity with a detailed budget and schedule of deliverables. The FKNMS Superintendent or designee shall review and may approve each

SOW. Each SOW must be submitted to the FKNMS at least 60 days in advance of the proposed start-date of each SOW.

FWRI agrees to provide the personnel, services and facilities pursuant to this Agreement as described in each SOW.

Operations and Administration

The FWC will provide research staff whose mission will be to accomplish the tasks as set forth in each approved SOW. Additional staff may be hired as required using funds provided by ONMS.

Variations from the SOWs may occur subject to the concurrent approval of the FWRI South Florida Regional Laboratory Research Administrator and the FKNMS Superintendent or designee.

Administrative support for the researchers shall be provided by FWC.

Maintenance of FWRI research vessels and vehicles shall be the responsibility of FWC. NOAA funds may be used for this purpose to the extent they support activities under this MOA, and FKNMS will provide vessel support depending on availability.

V. FUNDING, PAYMENT, AND REIMBURSEMENT ARRANGEMENTS

- A. Funding for each fiscal year is subject to the availability of appropriated funds.
- B. Incremental funding will be based on the annual SOW and provided by amendment to this Agreement.
- C. Accounting and Fiscal Data:
 - 1. FWC
EIN¹: 59-3105845
DUNS²: 611208224

¹ Employer Identification Number (Tax ID Number)

² Dunn and Bradstreet's Data Universal Numbering System

2. NOAA
EIN: 52-0821608
DUNS No.: 78-4769085

D. FY 2010 Accounting and Fiscal Data:
\$100,000
Appropriation Symbol: 1310/111450
Type of Funds/Expiration: Two-year, 09/30/2011
CBS³ ACCS⁴: 10-14-0005-01-00-00-00
H8K3BHW PFK/25120000

E. FWC will provide quarterly invoices to: Department of Commerce, NOAA, Florida Keys National Marine Sanctuary, 33 East Quay Road, Key West, Florida 33040.

VI. CONTACTS

The points of contact to this Agreement are:

ONMS

Sean Morton
Florida Keys National Marine Sanctuary
33 East Quay Road
Key West, FL 33040
(305) 809-4700
Sean.Morton@noaa.gov

FWRI

Gil McRae
100 Eighth Avenue, SE
St. Petersburg, FL 33701-5020
(727) 896-8627
gil.mcrae@fwc.state.fl.us

Technical Contact:

Brian Keller
NOAA Office of National Marine Sanctuaries
c/o Florida Institute of Oceanography
830 First Street South
St. Petersburg, FL 33701
(727) 553-1201
Brian.Keller@noaa.gov

Technical Contact:

John Hunt
FWRI- South Florida Regional Lab
2796 Overseas Highway, Suite 119
Marathon, FL 33050
(305) 289-2330
john.hunt@fwc.state.fl.us

Financial Contact:

Mary Tagliareni
P.O. Box 1083
Key Largo, FL 33037
(305) 852-7717 ext. 30
Mary.Tagliareni@noaa.gov

Administrative Contact:

Linda Torres
100 Eighth Avenue, SE
St. Petersburg, FL 33701-5020
(727) 821-4755
linda.torres@myFWC.com

³ Commerce Business System (formerly CAMS - Commerce Administrative Management System)

⁴ Accounting Classification Code Structure

VII. PERIOD

This Agreement will become effective upon the signature of the approving officials of the parties entering into this Agreement and will expire on September 30, 2015. The parties will review this MOA at least annually to determine whether it needs to be amended.

VIII. MODIFICATION/CANCELLATION PROVISION

The provisions of this Agreement may be modified by amendment subject to the written agreement of both parties. Amendments relating to increased funding for a particular SOW will be submitted by the FWRI South Florida Regional Laboratory Research Administrator for authorization by the FKNMS Superintendent or designee.

Either party upon 60 days advance written notice to the other party may terminate this Agreement.

IX. OTHER PROVISIONS

Nothing herein is intended to conflict with current NOAA or FWC directives. If the terms of this Agreement are inconsistent with existing directives of either of the agencies entering into this Agreement, then those portions of this Agreement which are determined to be inconsistent shall be invalid, but the remaining terms and conditions not affected by the inconsistency shall remain in full force and effect. At the first opportunity for review of the Agreement, all necessary changes will be accomplished by either an amendment to this Agreement or by entering into a new Agreement, whichever is deemed expedient to the interest of both parties.

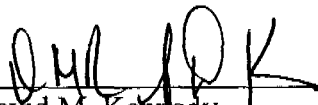
Should disagreement arise on the interpretation of the provisions of this Agreement, or amendments and/or revisions thereto, that cannot be resolved at the operating level, the area(s) of disagreement shall be stated in writing by each party and presented to the other party for consideration. If agreement on interpretation is not reached within 30 days, the parties shall forward the written presentation of the disagreement to respective higher officials for appropriate resolution.


All responsibilities under this MOA are subject to the availability of appropriated funds.

X. APPROVALS

ACCEPTED AND APPROVED FOR THE
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

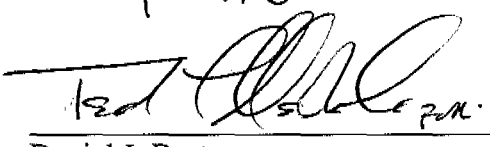
ACCEPTED AND APPROVED FOR THE
STATE OF FLORIDA
FISH AND WILDLIFE CONSERVATION
COMMISSION


BY: 
David M. Kennedy
Acting Assistant Administrator

BY: 
Nick Wiley
Executive Director
Florida Fish and Wildlife Conservation
Commission

DATE: 5/18/10

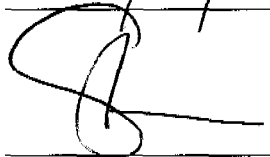
DATE: 6-18-10

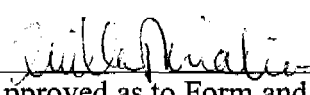
BY: 
Daniel J. Basta
Director
Office of National Marine Sanctuaries

BY: 
Gil McRae
Director
Fish and Wildlife Research Institute

DATE: 5/20/2010

DATE: 5/28/10

BY: 
Sean A. Morton
Sanctuary Superintendent (A)
Florida Keys National Marine Sanctuary

BY: 
Approved as to Form and
Legal Sufficiency
FWCC Office of General Counsel

DATE: 5/21/10

DATE: 6/7/10

**Federal Fiscal Year 2010
Budget Estimate**

**Performance Evaluation of Marine Zoning in the
Florida Keys National Marine Sanctuary**

Personnel Costs		\$29,900
Indirect Costs		
Current Federally-negotiated rate – 54.23% of personnel costs		\$16214.77
Expenses and Contracts & Grants		\$53,885.23
Travel	\$3,000	
Vessel Fuel	\$600	
V16 Coded Tags	\$10,000	
Ship Time	\$35,000	
Field Supplies	\$5285.23	
Total FY 2010 Estimated Budget		\$100,000

**Federal Fiscal Year 2010
Statement of Work**

**Performance Evaluation of Marine Zoning in the
Florida Keys National Marine Sanctuary**

Spatial and temporal rates of movement of acoustically tagged snappers, groupers and lobsters will be measured in the Tortugas region, including annual spawning migratory movements between Riley's Hump (RH), the Tortugas North & South Ecological Reserves (TNER and TSER) and the Dry Tortugas National Park. Spiny lobster monitoring in the Western Sambo Ecological Reserve (WSER) will continue. Results will assess the importance of connectivity between adjacent Marine Protected Areas (MPA) and provide information for an ecosystem-based approach to reef fish and lobster management.

In past years, our research focus has been on the efficacy of the two largest ecological reserves in the Florida Keys National Marine Sanctuary (FKNMS), the Western Sambo Ecological Reserve (WSER) and Tortugas North Ecological Reserve (TNER). We have been evaluating coral reef MPA effectiveness in terms of habitat use and movement, recognizing the potential need to alter MPA boundaries to include additional coral reef habitat for spawning of indicator species such as lobsters, snappers, and groupers. Our Tortugas Regional Array, first funded in FY08, includes a large number of ultrasonic receivers (VR2s: a tracking receiver that provides transmitter position and bearing) capable of providing habitat use and home range data and linkages between foraging habitat (Dry Tortugas National Park [DRTO], the DRTO Research Natural Area [RNA] and the TNER) and spawning grounds within the TSER. This Coral Reef Conservation Program (CRCP) project builds on past research and monitoring in the FKNMS by Florida Fish and Wildlife Conservation Commission (FWC) and will focus on connectivity between MPAs in the Dry Tortugas region, including the connections between populations of fish in the DRTO, the RNA, and the TNER and spawning habitat at Riley's Hump (RH), located within the TSER. As with other research conducted by FWC, developing partnerships is essential for the success of this project. Currently we are collaborating with Dr. T. Kellison, (NMFS/SEFSC Beaufort, NC), M. Burton (NMFS/SEFSC Beaufort, NC), Dr. J. Ault, (Univ. of Miami), Dr. W. Pratt (Mote Marine Lab) and Dr. K. Hart (USGS). Our far field TNER and TSER receivers are complementary with our FWC/USGS telemetry field design in the DRTO and other researchers working in the Tortugas. Combined, these programs provide additional VR2s along the north side and central portion of the RNA. Fishes that are tagged at the spawning aggregation have been detected at stations established by these research groups and vice versa, providing invaluable data on the connectivity of coral reef ecosystem.

Our Tortugas Regional Array covering TNER, TSER, RNA, DRTO and open use areas of the FKNMS has been collecting data since May 2008. Receiver coverage in the area is complemented by 3 collaborative sonic tagging projects within TNER and DRTO, including the newly established RNA (FWC/USGS-RNA; Pratt-DRTO; Hart-DRTO). We will continue to share information collected by all our arrays. All VR2s except at TSER will be serviced and downloaded seasonally (early summer & fall). Remaining VR2s at TSER will be downloaded and redeployed in July 2010. This data will include fish tagged in FY10 as well as FY08/09. In addition the VR28, a tracking 4-channel receiver that provides transmitter position and bearing, will be towed from a small boat and used to expand spatial coverage of the VR2s. Specific areas to be covered by the VR28 include the deep water TSER habitat (Miller's Ledge) and open use areas East and West of TSER. A cruise to RH will be scheduled for May 2010

(peak spawning period) to continue to acoustically tag mutton snapper (10) and tagging efforts will expand to include black grouper (10). Fish will be surgically implanted or externally tagged in-situ with V16 coded transmitters that use a single-frequency coding scheme. In-situ implant methodology avoids exposure of fish to barotraumas-induced mortality associated with hook and line capture from deep water. 10 of these tags will be equipped with a depth sensor and all tags will last the duration of the study. During the proposed Coral Reef Conservation Program (CRCP) timeframe, we will continue to tag the snapper/grouper complex on our RNA project (FWC/USGS), which focuses on immigration and emigration of targeted reef fishes in the RNA, contributing to information collected at RH. Data downloaded will yield time, location and depth and will provide species-specific information on fish movement rates and spawning activities. This information will be analyzed to examine movement and core utilization areas of snappers/groupers in association with specific habitat features as well as assess movement between MPAs. All data collected will be entered into an FWC Access data base with statistical analyses using SPSS or SAS (statistical analysis software). Spatial and temporal data will be processed using ArcGIS and Tracking Analysis software to examine movement patterns in association with habitats and MPA (Marine Protected Area) boundaries. Life history and fisheries ecology information from this study will facilitate an ecosystem based approach to fisheries management. Finally, we will continue annual surveys of lobster in and adjacent to the WSER, with extra effort to survey the outlier reef near the WSER. Surveys of the unprotected outlier reef will be useful for sanctuary managers considering rezoning plans. We will continue to use a combination of belt-transects and the capture, measurement, and release of at least 50 lobsters per stratum to estimate abundance and size structure inside and outside the Ecological Reserve. In addition, we will incorporate sonic tagging of lobsters in the Tortugas region.

A progress report will be submitted in November 2010.