OFFICIAL FILE COPY
CLERK OF THE BOARD
OF COUNTY COMMISSIONERS
MIAMI-DADE COUNTY, FLORIDA

Memorandum

MIAMI-DADE COUNTY

Date: October 1, 2013

Agenda Item No. 3(B)(8)

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

From: Carlos A. Gimenez
Mayor

Subject: Resolution Authorizing Execution of Agreement No. 4600002913 with the South Florida Water Management District for the South Florida Estuarine Submerged Aquatic Vegetation and Water Quality Monitoring Network

Resolution No. R-789-13

Recommendation
It is recommended that the Board approve the attached resolution authorizing the execution of Agreement No. 4600002913 with the South Florida Water Management District. This Agreement provides Miami-Dade County with $570,000 over a five (5) year period to perform submerged aquatic vegetation and water quality monitoring activities in Northeast Florida Bay.

Scope
This Agreement encompasses parts of Commission District 9 (Commissioner Moss).

Fiscal Impact/Funding Source
This Agreement provides Miami-Dade County with a total of $570,000 over a five (5) year period to perform monitoring activities. No matching funds are required by the County.

Track Record / Monitor
The Chief of Restoration and Enhancement Section, Stephen Blair, within the Department of Regulatory and Economic Resources, Division of Environmental Resources Management (RER-DERM), will monitor the activities performed with these funds.

Background
This contract provides data necessary to evaluate effects of regional restoration efforts, such as the Comprehensive Everglades Restoration Plan, on seagrass communities in coastal embayments and to document changes in these resources resulting from regional water management activities. This sampling will document the potential ecological and water quality impacts of altering the Taylor Slough/C-111 Canal discharge on seagrass communities in northeast Florida Bay, Manatee Bay and Barnes Sound.

The data will contribute to assessing the restoration activities under the Comprehensive Everglades Restoration Plan. In addition, the South Florida Water Management District's Restoration Coordination and Verification Program will use the data to provide scientifically defensible metrics to determine if restoration goals are being met. These goals include increased seagrass species diversity, spatial extent and stability, and improved habitat for fisheries and wading birds.

Since 1993, the County has had similar multi-year contracts with the South Florida Water Management District to monitor submerged aquatic vegetation and water quality in northeast Florida Bay. The attached Agreement No. 4600002913 will allow Miami-Dade County to continue monitoring submerged aquatic vegetation and water quality through FY 2018.

Jack Osterholt, Deputy Mayor

MEMORANDUM

(Revised)

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

DATE: October 1, 2013

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

SUBJECT: Agenda Item No. 3(B)(8)

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. 3(B)(8)
10-1-13

RESOLUTION NO. R-789-13

RESOLUTION AUTHORIZING THE MAYOR OR MAYOR'S DESIGNEE TO EXECUTE AGREEMENT NO. 4600002913 WITH THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT FOR THE SOUTH FLORIDA ESTUARINE SUBMERGED AQUATIC VEGETATION AND WATER QUALITY MONITORING NETWORK; AUTHORIZING THE MAYOR OR MAYOR'S DESIGNEE TO EXECUTE ANY NECESSARY AMENDMENTS TO THE AGREEMENT; AND AUTHORIZING THE MAYOR OR MAYOR'S DESIGNEE TO EXERCISE ALL RIGHTS CONTAINED THEREIN

WHEREAS, this Board desires to accomplish the purposes outlined in the accompanying memorandum, a copy of which is incorporated herein by reference,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA, that this Board authorizes the Mayor or Mayor's designee to execute Agreement No. 4600002913 with the South Florida Water Management District for the South Florida estuarine submerged aquatic vegetation and water quality monitoring network, in substantially the form attached hereto and made part hereof; authorizes the Mayor or Mayor's designee to execute any necessary amendments to the agreement; and authorizes the Mayor or Mayor's designee to exercise all rights contained therein.

The foregoing resolution was offered by Commissioner **Esteban L. Bovo, Jr.**, who moved its adoption. The motion was seconded by Commissioner **Rebeca Sosa** and upon being put to a vote, the vote was as follows:

Rebeca Sosa, Chairwoman			**aye**
Lynda Bell, Vice Chair			**absent**
Bruno A. Barreiro	**absent**	Esteban L. Bovo, Jr.	**aye**
Jose "Pepe" Diaz	**aye**	Audrey M. Edmonson	**aye**
Sally A. Heyman	**absent**	Barbara J. Jordan	**aye**
Jean Monestime	**aye**	Dennis C. Moss	**absent**
Sen. Javier D. Souto	**aye**	Xavier L. Suarez	**aye**
Juan C. Zapata	**absent**		

The Chairperson thereupon declared the resolution duly passed and adopted this 1st day of October, 2013. This resolution shall become effective ten (10) days after the date of its adoption unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board.

MIAMI-DADE COUNTY, FLORIDA
BY ITS BOARD OF
COUNTY COMMISSIONERS

HARVEY RUVIN, CLERK

By: ***Christopher Agrippa***
Deputy Clerk

Approved by County Attorney as
to form and legal sufficiency.

Abbie Schwaderer-Raurell

INVOICE REFERENCE NO. 950000____

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
LOCAL GOVERNMENTAL AGREEMENT

AGREEMENT NO. 4600002913

BETWEEN THE

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

AND

MIAMI-DADE COUNTY

THIS AGREEMENT is entered into as of the _____ by and between the South Florida Water Management District (**DISTRICT**) and Miami-Dade County (**COUNTY**).

WHEREAS, the **DISTRICT** is a government entity created by Chapter 373, Florida Statutes; and

WHEREAS, the **DISTRICT** desires to enter into a cooperative agreement with the **COUNTY** for monitoring services for the South Florida Estuarine Submerged Aquatic Vegetation (SAV) and Water Quality Monitoring Network in northeast Florida Bay, Manatee Bay and Barnes Sound; and

WHEREAS, this monitoring effort is imperative to document and identify potential impacts from upstream water management activities; and

WHEREAS, the **COUNTY** warrants and represents that it has no obligation or indebtedness that would impair its ability to fulfill the terms and conditions of this **AGREEMENT**; and

WHEREAS, the Governing Board of the **DISTRICT,** at its August 15, 2013 meeting, approved entering into this **AGREEMENT** with the **COUNTY**.

NOW, THEREFORE, in consideration of the covenants and representations set forth herein and other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, the parties agree as follows:

1. The **DISTRICT** agrees to contribute funds and the **COUNTY** agrees to perform the work set forth in Exhibit "A" attached hereto and made a part hereof, subject to availability of funds and in accordance with their respective authorities for water quality and submerged aquatic vegetation monitoring through the South Florida Estuarine Submerged Aquatic Vegetation and Water Quality Monitoring Network.

2. The period of performance of this **AGREEMENT** shall commence on the date of execution of this **AGREEMENT** and shall continue for a period of five (5) years.

3. The total **DISTRICT** contribution shall not exceed the amount of $570,000.00. The **DISTRICT** shall make payment upon completion and acceptance of the deliverables as described in the Payment and Deliverable Schedule set forth in Exhibit "B", which is attached hereto and made a part of this **AGREEMENT**. The **DISTRICT's** contribution is subject to adequate documentation to support actual expenditures within the not-to-exceed **AGREEMENT** funding limitation of $570,000.00. In no event shall the **DISTRICT** be liable for any contribution hereunder in excess of this amount. This **AGREEMENT** is subject to multi-year funding allocations. Funding for each applicable fiscal year of this **AGREEMENT** will be subject to Governing Board budgetary appropriation. In the event the **DISTRICT** does not approve funding for any subsequent fiscal year, this **AGREEMENT** shall terminate upon expenditure of the current funding, notwithstanding other provisions in this **AGREEMENT** to the contrary. The **DISTRICT** will notify the **COUNTY** in writing after the adoption of the final **DISTRICT** budget for each subsequent fiscal year if funding is not approved for this **AGREEMENT**.

4. The **COUNTY** shall submit quarterly financial reports to the **DISTRICT** providing a detailed accounting of all expenditures incurred hereunder throughout the term of this **AGREEMENT**. The **COUNTY** shall report and document the amount of funds expended per month during the quarterly reporting period and the **AGREEMENT** expenditures to date within the maximum not-to-exceed **AGREEMENT** funding limitation.

5. The **COUNTY** is not required to cost share any specific and determined amount for this **AGREEMENT**.

6. All work to be performed under this **AGREEMENT** is set forth in Exhibit "A", Statement of Work, which is attached hereto and made a part of this **AGREEMENT**. The **COUNTY** shall submit quarterly progress reports detailing the status of work to date for each task. The work specified in Exhibit "A" shall be under the direction of the **COUNTY** but shall be open to periodic review and inspection by either party. No work set forth in Exhibit "A" shall be performed beyond September 30, 2018 unless authorized through execution of an amendment to cover succeeding periods.

7. The **COUNTY** is hereby authorized to contract with third parties (subcontracts) for services awarded through a competitive process required by Florida Statutes. The **COUNTY** shall not subcontract, assign or transfer any other work under this **AGREEMENT** without the prior written consent of the **DISTRICT's** Project Manager. The **COUNTY** agrees to be responsible for the fulfillment of all work elements included in any subcontract and agrees to be responsible for the payment of all monies due under any subcontract. It is understood and agreed by the **COUNTY** that the **DISTRICT** shall not be liable to any subcontractor for any expenses or liabilities incurred under the subcontract(s).

8. Both the **DISTRICT** and the **COUNTY** shall have joint ownership rights to all work items, including but not limited to, all documents, technical reports, research notes, scientific data, computer programs, including the source and object code, which are developed, created or otherwise originated hereunder by the other party, its subcontractor(s), assign(s), agent(s) and/or successor(s) as required by the Exhibit "A", Statement of Work. Ownership of all equipment and hardware purchased by the **COUNTY** with **DISTRICT** funding under this **AGREEMENT** shall be returned and title transferred from the **COUNTY** to the **DISTRICT** immediately upon termination or expiration of this **AGREEMENT** unless written authorization to retain the equipment is provided by the **DISTRICT**.

9. The **COUNTY**, to the extent permitted by law, assumes any and all risks of personal injury, bodily injury and property damage attributable to negligent acts or omissions of the **COUNTY** and the officers, employees, servants and agents thereof. The **COUNTY** represents that it is self-funded for Worker's Compensation and liability insurance, covering bodily injury, personal injury and property damage, with such protection being applicable to the **COUNTY**, its officers and employees while acting within the scope of their employment during performance of under this **AGREEMENT**. In the event that the **COUNTY** subcontracts any part or all of the work hereunder to any third party, the **COUNTY** shall require each and every subcontractor to identify the **DISTRICT** as an additional insured on all insurance policies as required by the **COUNTY**. Any contract awarded by the **COUNTY** shall include a provision whereby the **COUNTY's** subcontractor agrees to indemnify, pay on behalf, and hold the **DISTRICT** harmless from all damages arising in connection with the **COUNTY's** subcontract.

10. The **COUNTY** and the **DISTRICT** further agree that nothing contained herein shall be construed or interpreted as (1) denying to either party any remedy or defense available to such party under the laws of the State of Florida; (2) the consent of the State of Florida or its agents and agencies to be sued; or (3) a waiver of sovereign immunity of the State of Florida beyond the waiver provided in Section 768.28, Florida Statutes.

11. The parties to this **AGREEMENT** are independent entities and are not employees or agents of the other parties. Nothing in this **AGREEMENT** shall be interpreted to establish any relationship other than that of independent entities, between the **DISTRICT**, the **COUNTY**, their employees, agents, subcontractors or assigns, during or after the term of this **AGREEMENT**. The parties to this **AGREEMENT** shall not assign, delegate or otherwise transfer their rights and obligations as set forth in this **AGREEMENT** without the prior written consent of the other parties. Any attempted assignment in violation of this provision shall be void.

12. The parties to this **AGREEMENT** assure that no person shall be excluded on the grounds of race, color, creed, national origin, handicap, age or sex, from participation in, denied the benefits of, or be otherwise subjected to discrimination in any activity under this **AGREEMENT**.

13. The **COUNTY**, its employees, subcontractors or assigns, shall comply with all applicable federal, state and local laws and regulations relating to the performance of this **AGREEMENT**. The **DISTRICT** undertakes no duty to ensure such compliance, but will attempt to advise the **COUNTY**, upon request, as to any such laws of which it has present knowledge.

14. Either party may terminate this **AGREEMENT** at any time for convenience upon thirty (30) calendar days prior written notice to the other party. In the event of termination, all funds not expended by the **COUNTY** for authorized work performed through the termination date shall be returned to the **DISTRICT** within sixty (60) days of termination.

15. The **COUNTY** shall allow public access to all project documents and materials in accordance with the provisions of Chapter 119, Florida Statutes. Should the **COUNTY** assert any exemptions to the requirements of Chapter 119 and related Statutes, the burden of establishing such exemption, by way of injunctive or other relief as provided by law, shall be upon the **COUNTY**.

16. The **COUNTY** shall maintain records and the **DISTRICT** shall have inspection and audit rights below. The **COUNTY** shall similarly require each subcontractor to maintain and allow access to such records for audit purposes:

A. Maintenance of Records: The **COUNTY** shall maintain all financial and non-financial records and reports directly or indirectly related to the negotiation or performance of this **AGREEMENT** including supporting documentation for any service rates, expenses, research or reports. Such records shall be maintained and made available for inspection for a period of five (5) years from the expiration date of this **AGREEMENT**.

B. Examination of Records: The **DISTRICT** or designated agent shall have the right to examine in accordance with generally accepted governmental auditing standards all records directly or indirectly related to this **AGREEMENT**. Such examination may be made only within five (5) years from the expiration date of this **AGREEMENT**.

C. Extended Availability of Records for Legal Disputes: In the event that the **DISTRICT** should become involved in a legal dispute with a third party arising from performance under this **AGREEMENT**, the **COUNTY** shall extend the period of maintenance for all records relating to the **AGREEMENT** until the final disposition of the legal dispute. All such records shall be made readily available to the **DISTRICT**.

17. Whenever the **DISTRICT's** contribution includes state or federal appropriated funds, the **COUNTY** shall, in addition to the inspection and audit rights set forth in paragraph 16 above, maintain records and similarly require each subcontractor to maintain and allow access to such records in compliance with the requirements of the Florida State Single Audit Act and the Federal Single Audit Act, as follows:

A. Maintenance of Records: The **DISTRICT** shall provide the necessary information to the **COUNTY** as set forth in Exhibit "C". The **COUNTY** shall maintain all financial/non-financial records through:

(1) Identification of the state or federal awarding agency, as applicable
(2) Project identification information included in the Catalog of State Financial Assistance (CSFA) or the Catalog of Federal Financial Assistance (CFDA), as applicable
(3) Audit and accountability requirements for state projects as stated in the Single Audit Act and applicable rules of the Executive Office of Governor, rules of the Chief Financial Officer and rules of the Auditor General and the State Projects Compliance Supplement Audit/accountability requirements for federal projects as imposed by federal laws and regulations
(4) Submission of the applicable single audit report to the **DISTRICT**, as completed per fiscal year

B. Examination of Records: The **DISTRICT** or designated agent, the state awarding agency, the state's Chief Financial Officer and the state's Auditor General and/or federal awarding agency shall have the right to examine the **COUNTY's** financial and non-financial records to the extent necessary to monitor the **COUNTY's** use of state or federal financial assistance and to determine whether timely and appropriate corrective actions have been taken with respect to audit findings and recommendations which may include onsite visits and limited scope audits.

18. All notices or other communication regarding this **AGREEMENT** shall be in writing and forwarded to the attention of the following individuals:

South Florida Water Management District
Attn: Amanda McDonald, Project Manager
Attn: Donna Lavery, Contract Specialist

3301 Gun Club Road
West Palm Beach, FL 33406
Telephone No. (561) 753-2400 x4648
Email amcdonal@sfwmd.gov

Miami-Dade County
Attn: Stephen Blair, Project Manager
Restoration & Enhancement Section
Department of Regulatory and Economic Res.
701 NW 1st Court Suite 400
Miami, FL 33136
Telephone No. (305) 372-6853
Email blairs@miamidade.gov

19. Invoices, clearly marked "ORIGINAL", shall be sent to the attention of Accounts Payable at the **DISTRICT's** address specified below. All invoices shall reference the **AGREEMENT** and Invoice Reference Numbers specified on page one of this **AGREEMENT**. In addition, a copy of the invoice shall be sent to the attention of the **DISTRICT's** Project Manager either at the address specified in paragraph 18 above or via email using the email address also specified above.

South Florida Water Management District
Attention: Accounts Payable
P.O. Box 24682
West Palm Beach, Florida 33416-4682

20. **COUNTY** recognizes that any representations, statements or negotiations made by **DISTRICT** staff do not suffice to legally bind **DISTRICT** in a contractual relationship unless they have been reduced to writing and signed by an authorized **DISTRICT** representative. This **AGREEMENT** shall inure to the benefit of and shall be binding upon the parties, their respective assigns, and successors in interest.

21. This **AGREEMENT** may be amended, extended or renewed only with the written approval of the parties. The **DISTRICT** shall be responsible for initiating any amendments to this **AGREEMENT**, if required.

22. This **AGREEMENT**, and any work performed hereunder, is subject to the Laws of the State of Florida. Nothing in this **AGREEMENT** will bind any of the parties to perform beyond their respective authority, nor does this **AGREEMENT** alter the legal rights and remedies which the respective parties would otherwise have, under law or at equity.

23. Should any term or provision of this **AGREEMENT** be held, to any extent, invalid or unenforceable, as against any person, entity or circumstance during the term hereof, by force of any statute, law, or ruling of any forum of competent jurisdiction, such invalidity shall not affect any other term or provision of this **AGREEMENT**, to the extent that the **AGREEMENT** shall remain operable, enforceable and in full force and effect to the extent permitted by law.

24. Failures or waivers to insist on strict performance of any covenant, condition, or provision of this **AGREEMENT** by the parties shall not be deemed a waiver of any of its rights or remedies, nor shall it relieve the other party from performing any subsequent obligations strictly in accordance with the terms of this **AGREEMENT**. No waiver shall be effective unless in writing and signed by the party against whom enforcement is sought. Such waiver shall be limited to provisions of this **AGREEMENT** specifically referred to therein and shall not be deemed a waiver of any other provision. No waiver shall constitute a continuing waiver unless the writing states otherwise.

25. Any dispute arising under this **AGREEMENT** which cannot be readily resolved shall be submitted jointly to the signatories of this **AGREEMENT** with each party agreeing to seek in good faith to resolve the issue through negotiation or other forms of non-binding alternative dispute resolution mutually acceptable to the parties. A joint decision of the signatories, or their designees, shall be the disposition of such dispute.

26. This **AGREEMENT** states the entire understanding and agreement between the parties and supersedes any and all written or oral representations, statements, negotiations, or agreements previously existing between the parties with respect to the subject matter of this **AGREEMENT**.

27. Any inconsistency in this **AGREEMENT** shall be resolved by giving precedence in the following order:
    (a) Terms and Conditions outlined in preceding paragraphs 1 – 26
    (b) Exhibit "A" Statement of Work
    (c) Exhibit "B" Payment and Deliverable Schedule
    (d) all other exhibits, attachments and documents specifically incorporated herein by reference

IN WITNESS WHEREOF, the parties or their duly authorized representatives hereby execute this AGREEMENT on the date first written above.

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
BY ITS GOVERNING BOARD

By:_____
Dorothy A. Bradshaw, Procurement Bureau Chief

OFFICE OF COUNSEL APPROVED

By: _____

Print: Frank Mendez

Date: 7/23/13

SFWMD PROCUREMENT APPROVED

By: O Lawson

Date: 7-24-13

MIAMI-DADE COUNTY

By:_____
Name of Authorized Individual

Title:_____

EXHIBIT "A"
STATEMENT OF WORK
South Florida Estuarine Submerged Aquatic Vegetation And Water Quality Monitoring Network

1. 0 - INTRODUCTION

This Agreement between Miami-Dade County, Department of Regulatory and Economic Resources (**County**) and the South Florida Water Management District (**District**) continues the long-term submerged aquatic vegetation (SAV) and water quality monitoring network in South Florida estuaries for five years (October 1, 2013 to September 30, 2018) for the contractual dollar amount of $570,000. This program, ongoing since 1993, has a substantial period of record that is a valuable baseline to evaluate estuarine restoration efforts as well as to identify potential impacts on this valuable resource from upstream water management activities. Continuation of this sampling effort is imperative to document potential ecological and water quality impacts of altering Taylor Slough, S18C, and S-197 discharges on SAV communities in northeast Florida Bay, Manatee Bay and Barnes Sound. This coastal region is very sensitive to changes in freshwater flow associated with improved operations and restoration (Figure 1).

The District has a requirement for the protection of Florida Bay as part of the Minimum Flows and Levels (MFL) Rule and also has a requirement for protection as the Bay is a part of the Everglades Protection Area. Operation of the Aerojet canal hydrologic ridge and water deliveries to Everglades National Park have direct impacts on the area covered by this monitoring program. In addition, future restoration activities and ongoing water management through the South Dade Conveyance System will continue to influence the Florida Bay resources, including seagrass habitat and fisheries species, which are dependent on the distribution and timing of fresh water inflows. A minimum hydrologic need was quantitatively defined in the adopted MFL Rule based on responses of the SAV community, but within the Rule, it was also recognized that the best available information at the time of rule-making may not have been sufficient for defining the needs of many of the Bay's resources. Thus, as restoration progresses, the desired targets may shift. Consequently, updates of the technical basis for the Rule are required and these updates cannot be accomplished without sufficient data.

This data is needed as part of a larger effort to establish a baseline and to quantify effects of Everglades restoration. The Restoration Coordination and Verification (RECOVER) program will use these assessment data to provide scientifically defensible metrics to determine if restoration goals are being met. One of these goals is to increase seagrass species diversity, spatial extent, and stability to improve fisheries habitat in this nearshore region, proximate to where wading birds forage.

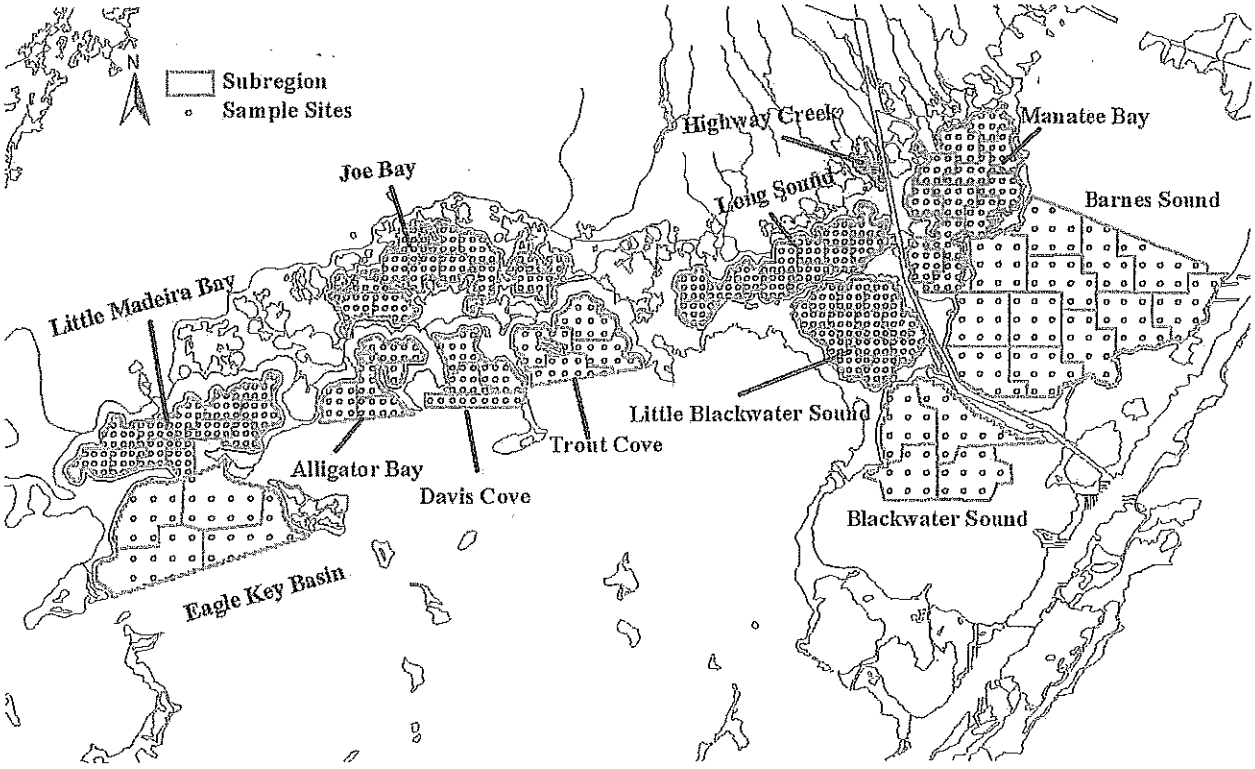

Figure 1 - South Florida Estuarine Submerged Aquatic Vegetation and Water Quality Monitoring Network sampling areas with sub-regions detailed by red polygons. The dots represent the potential sampling locations used up through 2013.

2.0 – PROJECT OBJECTIVES

The goal of this monitoring program is to provide information for spatial and temporal assessment of benthic vegetation communities within the nearshore environment of Florida Bay, Manatee Bay, and Barnes Sound which are heavily influenced by water management operations. The **County** will document the status and trends of benthic vegetation distribution and abundance to allow resource managers to use these data on a near real-time basis to determine impacts of operations decisions and weigh alternative restoration options.

Specific objectives are:

- To further develop an understanding of the relationships between salinity, water quality, and seagrass and macroalgal species distribution and abundance in the South Florida estuary;
- To provide data to distinguish anthropogenically induced changes from natural ecosystem variation;
- To provide data for seagrass model development and calibration as well as to verify model predictions on species- and ecosystem-level responses, and

- To partner with local governments.

The protocol in this multi-year, adaptive statement of work may be modified by mutual agreement through a duly executed amendment to meet Florida Bay South Florida Estuarine Submerged Aquatic Vegetation Project objectives.

The **County** shall collect and analyze samples for a variety of chemical, physical and biological parameters that characterize water quality at 96 random and 10 fixed monitoring stations in the Florida Bay regions (please refer to Figure 1). The **County** shall have a quality assurance system in place to help ensure that the data generated are of acceptable and verifiable quality and are representative of actual field conditions.

The County shall perform the following:

1) Assemble and manage staff ensuring the capacity to complete all tasks on time;
2) Provide transportation required to access all monitoring stations;
3) Maintain all sampling and analysis equipment and supplies required to complete monitoring, analysis and reporting;
4) Work in compliance with **County's** Quality Manual, Chapter 62-160 F.A.C. including following Florida Department of Environmental Protection (FDEP) Field Sampling Standard Operating Procedures (SOP) and National Environmental Laboratory Accreditation Program (NELAP) requirements;
5) Consistently document and convey accurate, verified data including progress reports on a quarterly basis; and
6) Submit corrective and preventative action reports as needed.

3.0 SCOPE OF WORK

The tasks described below and defined in greater detail in the Work Breakdown Structure section will be reported on in a series of quarterly status reports. This monitoring project involves field collection, laboratory procedures, summary of statistical analysis, preparation and submission of quarterly reports. The data collected under this agreement shall be compiled in the District and the **County** databases. The biological techniques will be similar to those used by other researchers conducting work throughout Florida Bay and the Florida Keys National Marine Sanctuary (FKNMS). Since this is an adaptive statement of work, it is expected that the scope of work may change during the term of this agreement as a result of recurrent data evaluations. Any changes to the scope of work must be approved by both the **District** and **County** project managers through a duly executed amendment prior to implementation.

Sampling design and locations – The **County** will continue to monitor the 12 rapid assessment locations monitored in the previous iteration of this agreement as well as the 10 fixed monitoring locations. To reduce costs, sampling at two of the rapid assessment locations (the area outside the mouth of Little Madeira Bay/Eagle Key Basin and Davis Cove) will be decreased to annually instead of quarterly. In addition, sampling at three of

the fixed monitoring locations (Highway Creek, Long Sound, and Joe Bay) will be decreased from twice per year to annually. While these reductions do impair the data resolution, it was determined that shallow sediment depth (Highway Creek, Long Sound, and Joe Bay), similarity to other sampling locations (Davis Cove), or proximity to monitoring by other programs (area outside of Little Madeira Bay) would allow adequate analysis capability to fulfill the objectives of this program.

The parameters measured during each level of sampling are listed below. Descriptions of the methods follow in the Work Breakdown Structure section.

Level 1 - Rapid Assessment:
Benthic Cover
Seagrass short-shoot density
Physical habitat data

Level 2 – Fixed Stations:
Benthic Cover
Seagrass short-shoot density
Seagrass Biomass
Physical habitat data

4.0 WORK BREAKDOWN STRUCTURE

The study elements outlined below will provide information for spatial assessment and resolution of intra- and inter-annual variability in seagrass-macroalgal communities and will provide baseline data to monitor responses of these important benthic communities to water-management alterations or civil-works projects associated with restoration activities.

Sampling design and locations

Rapid assessment sampling will be conducted quarterly (except where noted below) within established sampling polygons at 12 locations stretching from the central Taylor Slough outflow region in northeastern Florida Bay to the US1 corridor and the S-197 outflow region on the east side of US1 (Figure 1). Each of the sampling polygons will be subdivided into sub-regions and a random point will be chosen within each of the sub-regions for sampling with four 50 cm x 50 cm quadrats for benthic vegetation cover. Based on polygon size, each polygon will contain either four or 12 sub-regions. Little Madeira, Joe Bay, Long Sound, Little Blackwater Sound, Manatee Bay, and Barnes Sound will each have 12 sub-regions. The area outside of Little Madeira Bay, Alligator Bay, Davis Cove, Trout Cove, Highway Creek, and northern Blackwater Sound will each have four sub-regions. Each area will be sampled quarterly except for the area outside of Little Madeira Bay and Davis Cove which will both be sampled annually.
This spatial layout differs slightly from previous iterations of this project, but will provide a sampling design that is more statistically defensible and more similar to the South Florida Fish Habitat Assessment Program (FHAP), which samples in the interior of Florida Bay

and on the southwest coast of Everglades National Park. The exact layout of the new sub-regions will be presented in the approved Quality Assurance Project Plan as well as the methodology for selecting the random sites within each region.

Fixed station sampling will remain similar to previous iterations of this project with the exception of decreasing the temporal resolution of sites with little to no sediment available for biomass coring. There are 10 fixed monitoring sites (Figure 2): the mouth of Taylor River (TR), the mouth of Little Madeira Bay (LM), Joe Bay (JB), Trout Cove (TC), Highway Creek (HC), Long Sound (LS), Blackwater Sound (BW), inner Manatee Bay (M1), outer Manatee Bay (M2), and the mouth of Manatee Bay entering Barnes Sound (M3). At each of the fixed monitoring points, three 1 m x 1 m quadrats have been established along a transect for quantifying benthic vegetation cover. These stations will be visited twice a year except for JB, HC, and LS which do not have sufficient sediment depth for biomass sampling. These three stations will be sampled annually instead for all metrics except biomass.

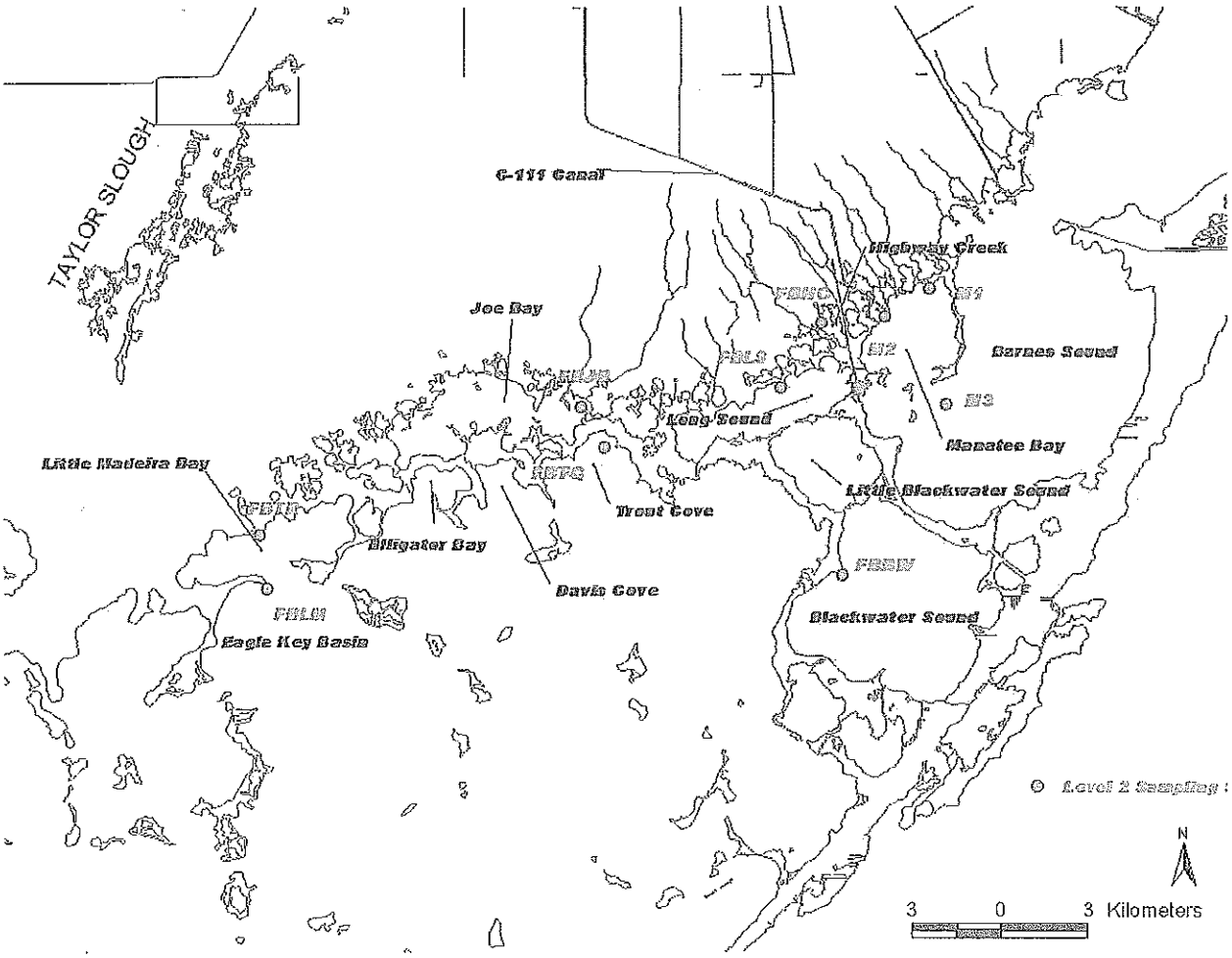

Figure 2. South Florida Estuarine Submerged Aquatic Vegetation and Water Quality Monitoring Network fixed station sampling locations (red dots).

Performance measures

Benthic Cover – Benthic plant community structure will be visually quantified using a modified Braun-Blanquet cover abundance index (BBCA) at each sampling point. A series of quadrats will be placed on the bottom at each sampling location. Species occurring within the quadrats will be assigned a cover/abundance value according to the following scale:

0.1 = <5% cover with a solitary individual/shoot
0.5 = <5% cover with few individuals/shoots (sparse)
1 = <5% cover with numerous individuals/shoots
2 = ≥5% cover and ≤25% cover
3 = >25% cover and ≤50% cover
4 = >50% cover and ≤75% cover
5 = >75% cover

Seagrass short shoot density – In addition, the occurrence of flowers and fruits will be noted as comments for each quadrat. Seagrass shoot counts will be conducted in a subset of the quadrat area: two 25 cm x 25 cm subquads at the rapid assessment sites and five random 20 cm x 20 cm subquads at the fixed station sampling.

Seagrass biomass determination – Biomass samples shall be collected semiannually (May and November) at seven of the 10 fixed stations using three cores arbitrarily placed on the sediment surface adjacent to the transect at each site and processed to provide estimates per species of shoot density, total standing crop, and below-ground biomass. Samples are collected by rotating the 8" diameter corer into the sediment to ~30 cm. The corers are rinsed in the field to remove adhered sediment and frozen in separate zipper-lock freezer bags until analysis. If removal of the sediment is unsuccessful, the sample shall be discarded. In the laboratory, samples are thawed and rinsed to remove remaining sediment and sorted into seagrass by species or macroalgal groups. The number of short shoots for intact *Thalassia testudinum*, *Halodule wrightii*, and *Ruppia maritima* shoots will be recorded. Each seagrass species is divided into fractions representing live rhizomes and roots, shoots and stems, blades, and dead material. Epiphytes are removed by scraping and all fractions are then rinsed in 10% HCl, dried at 60 degrees C, and weighed. Macroalgae are also rinsed in 10% HCl, dried at 60 degrees C, and weighed. These specific procedures used to estimate biomass parameters are comparable with those used in the FHAP.

Physical Habitat Data – In situ measurements of the water column at each site shall include a photosynthetically active radiation (PAR) profile. A LiCor photometer system with two 4pi sensors shall be used to measure PAR. Associated data will be read, collected and stored using a LI-Cor 1400 datalogger (The **County** shall document and report the time of day for each monitoring site and the GPS location of each random monitoring site). Coefficients of light attenuation (K) shall be calculated from the raw values obtained from the instrument. A Hydrolab Surveyor or YSI multiparameter analyzer shall be used to measure water column parameters such as dissolved oxygen, salinity, conductivity,

temperature and pH at the surface, one meter depth and bottom. Measurements shall be made coincident with the vegetation sampling at each sampling event and location.

Task Descriptions

Since this project is an annual monitoring project and a continuation of an existing program, the reporting and tasks will be in accordance with the **District's** fiscal year. The first quarter of the year will be October – December with the first quarterly status report due in January. Each year, the following tasks will be delivered (with the exception of Task 1 which will only occur at the initiation of this agreement and Task 7 which will occur as detailed in its description)

Task 1- Quality Assurance Project Plan

A current quality assurance project plan (QAPP) shall be submitted to and approved by the District. The new QAPP shall include, at minimum, a full description of sampling methodologies and instrumentation, data templates, electronic data formats, descriptions of ongoing efforts to maintain data quality, and details contained in section 6 of this statement of work.

Deliverable – The current QAPP, modified to include changes to the methodology for locating sampling sites, sampling frequency, and sampling metrics. A framework should be presented for incorporating modifications to the sampling procedures and performance measures.

Timeframe – Due within 60 days of execution of this agreement.

Task 2 – First Quarter Status Report

The first quarterly status report should be a brief summary of activities in the first quarter of the fiscal year (October - December). Activities to be included would be the sampling of the rapid assessment sites and the fixed stations within this quarter.

Deliverable – Quarterly status report detailing accomplishments in the first quarter (field sampling, sample processing, and data entry) and associated Quality Assurance/ Quality Controlled (QA/QC) data files. See Section 5.0 for guidelines on reporting and data formats.

Timeframe – Due annually by January 30th.

Task 3 – Second Quarter Status Report

The second quarterly status report should be a brief summary of activities in the second quarter of the fiscal year (January – March). Activities to be included would be the sampling of the rapid assessment sites within this quarter.

Deliverable – Quarterly status report detailing accomplishments in the second

quarter (field sampling, sample processing, and data entry) and associated QA/QC'd data files. See Section 5.0 for guidelines on reporting and data formats.

Timeframe – Due annually by April 30th.

Task 4 – Third Quarter Status Report

The third quarterly status report should be a brief summary of activities in the third quarter of the fiscal year (April - June). Activities to be included would be the sampling of the rapid assessment sites and the fixed stations within this quarter.

Deliverable – Quarterly status report detailing accomplishments in the third quarter (field sampling, sample processing, and data entry) and associated QA/QC'd data files. See Section 5.0 for guidelines on reporting and data formats.

Timeframe – Due annually by July 31st.

Task 5 – Intercalibration Exercise

Required for quality assurance purposes, an annual intercalibration exercise will be conducted between agencies and partners using the BBCA method to monitor benthic vegetation within the southern coastal systems. The exercise will be organized by RECOVER or the **District** and will consist of at least a half-day field exercise where all parties concurrently assign BBCA scores to quads in the field with following checks and discussions. These exercises are designed to prevent data drift between groups. The **County** will provide at least two (2) members who routinely conduct BBCA monitoring as well as at least one boat for transportation to selected intercalibration sites if needed. All attempts will be made to schedule the intercalibration in the April-June timeframe to coincide with the spring sampling that all groups perform.

Deliverable – Documented participation in the intercalibration exercise each spring. Documentation should include the names of the personnel who attended and the roles performed (participant, boat captain, etc.) as well as equipment that was used (boats and number of quads). This can be delivered and invoiced with the third quarter status report.

Timeframe – Due annually by July 31st.

Task 6 – Fourth Quarter Status Report

The fourth quarterly status report should be a brief summary of activities in the fourth quarter of the fiscal year (July - September). Activities to be included would be the sampling of the rapid assessment sites within this quarter. Because of fiscal year accounting, this quarterly report must be submitted at the end of the quarter.

Deliverable – Quarterly status report detailing accomplishments in the fourth quarter (field sampling, sample processing, and data entry) and associated QA/QC'd data files. See Section 5.0 for guidelines on reporting and data formats.

Timeframe – Due annually by September 29th.

Task 7 – Purchase Replacement Surface Water Sampling Equipment

Equipment utilized by the **County** for this sampling program was originally purchased under Contract #ML060543 with the **District**. The equipment is over 3 years old and is no longer supported by the manufacturer. Mounting repair costs and/or lack of technical support by the manufacturer warrant the complete replacement of these units. The **County** shall purchase one complete Hydrolab or YSI sampling system during Year 2 of this agreement and one complete Li-cor sampling system during Year 4 of this agreement.

Deliverable – Report describing replacement process for each piece of equipment and the specifications and description of the new equipment.

Timeframe – Due by September 29th in years 2 and 4.

5.0- DATA MANAGEMENT AND REPORTING

5.1 Data Format for Deliverables

The data shall be submitted to the **District** in a specific digital format. The **County** shall validate the data in accordance with the data quality objectives stated in the quality assurance plan and this agreement. At a minimum, the **County** shall validate the data to determine conformance to field and laboratory method and QA/QC requirements, meeting accuracy and precision targets, that documentation and entries are complete and accurate, that the results are reasonable and within historical limits, and that any anomalous results or non-conformances are reflected in data reports by using appropriate data qualifiers.

All data submittals shall conform to existing **District** guidelines or other format as requested by the **District**. For all sample matrices, the result data shall be submitted electronic formats. This tool aids in processing analytical data, validating format and completeness, checking the data quality and compliance with the method and data quality objectives for all analytical data submitted to the **District**.

5.2 Field Data Sheets

The **County** shall be required to document field collection information and measurements on Field Data sheets including pre and post sonde calibration information. Field notes other than collected data shall be documented using waterproof ink in a bound waterproof notebook. Data entry and reporting: All Field data entered into a spreadsheet should be initialed and dated by the entry technician and the QA/QC technician.

Field Data sheets shall be archived by the **County** for the duration of this agreement and be available upon request to the **District**.

5.3 Reporting

Quarterly reports will be submitted at the end of each quarter of the agreement, with the date of submittal listed in the Task Description. An electronic copy of raw data will also be provided.

Quarterly data reports shall: 1) identify activities undertaken during the reporting period; 2) state any problems encountered; 3) attest to the validity of the data; 4) include all quality assurance data with laboratory and field QA/QC reports (*i.e.*, the results of field blanks, equipment blanks, precision as percent relative standard deviation, accuracy checks, method blanks and calibration data (initial and continuing verification)) consistent with the Field Service Quality Manual (FSQM); 5) include electronic scans of all sample chain of custody forms, field equipment calibration, field equipment maintenance and field notes in accordance with the deliverable schedule; and 6) include all electronic analytical data in accordance with the deliverable schedule. Quarterly reports shall also include results of all internal and external system and performance audits, as well as any corrective actions and shall be due within ninety (90) days after the end of the quarter.

The **County** shall list all publications and reports authored by the **County** that make use of the data collected in the aforementioned reports submitted to the **District.**

The County shall, at a minimum, include/discuss the following information in the Quarterly monitoring report:

I. Executive Summary

II. Project Background (or Introduction)

- Description of the monitoring area
- Historical information
- Purpose of monitoring project
- Period covered by report
- Include a map of study area with monitoring stations

III. Methods

A. Field Data collection and Laboratory Analyses

- QA/QC summary of: 1) accuracy and precision data; 2) calibration data (correlation or regression coefficients, instrument response for each

calibration standard); 3) a description of all analytical, instrumentation or computer problems detected during testing of **District** samples; 4) how each problem was resolved; 5) any observed/expected effect on the result; and 6) description of all quality control problems encountered and identification of the **District** samples affected.

The **County's** shall be expected to qualify any data that failed the QA/QC criteria, and notify the **District** of these failures, in writing, including those that are noted after data submittal to the **District**. The **District** may instruct the **County** to suspend or discontinue sending regular samples to their laboratory if there are any major or recurring problems, until the problem root cause has been identified and corrective actions are implemented.

B. Monitoring Problems

- In narrative form (problems/issues and corrective actions), specify any monitoring problems that may have occurred during the course of the monitoring quarter. Monitoring problems can be (and are not limited to) inclement weather (i.e., tropical storms and hurricanes), equipment failures, scheduling problems, etc. Also include how these problems were resolved and what steps have been taken (with the exception of climatological events) to ensure that these problems are not repeated.

IV. Changes/Updates to Previously Submitted Data/Reports

V. References

6.0- QUALITY ASSURANCE/QUALITY CONTROL

The quality system that will be implemented in sample collection (Surface water quality monitoring and submerged aquatic vegetation) shall explicitly commit to incorporating procedures that shall reduce systematic errors within specified tolerable limits. In addition, the **County** will have to document Quality Control (QC) procedures and evaluate the quality of the data being produced.

District QA staff may conduct laboratory and field quality control audits.

If a laboratory or field audit is conducted by the **District** that results in corrective actions, the **County** shall respond with an explanation of how they will resolve each item within thirty (30) days from the receipt of the audit report. Follow-up audits may be conducted to verify implementation of corrective action plan.

The **County** shall notify the **District** Project Manager immediately if it or its subcontractor loses certification for any parameter(s) analyzed for this agreement. When requested, the laboratory shall provide the **District** with results of all performance evaluation and Round

Robin studies in which it participates, as well as audit reports. The **District** may also ask for MDL studies and QC charts during the duration of the agreement. The laboratory may not change the method without prior written approval from the **District**. If the laboratory's proposed method is not listed in the approved Quality Manual, they shall provide a Florida Department of Environmental Protection (DEP) approved Method Validation package for each method.

All field activities including on-site tests and sample collection shall follow all applicable procedures described in DEP-SOP-001/01 (February 1, 2004). Alternate field procedures may be used only after they have been approved according to the requirements of Rules 62-160.220, and 62-160.330, F.A.C and approved by the **District** Project Manager.

All digital data delivered to the **District** must have been validated by a separate person from the data entry technician, and both the data entry technician's and the Quality Assurance (QA) technician's dated initials should be included on each datasheet before it is archived in hardcopy by the **County** for the duration of this agreement.

In addition, all sample collection and field measurements identified in the tasks of this Cooperative Agreement are subject to the following QA/QC specific requirements:

a) The **County** shall ensure that only qualified and properly trained staff conduct sampling or field measurements for this project. The **County** staff shall demonstrate knowledge of FDEP Sampling SOPs, and operation of field instruments/equipment. The **County** shall document and keep a permanent file of training in employee's files to be available during audits.

b) The **County** shall submit a list of sampling personnel that are or will be assigned to the project, or updates on personnel to the **District** Project Manager during the term of this agreement.

c) The **County** shall provide all deployed equipment, multi-parameter water quality analyzer and calibration standards. The **County** shall maintain an adequate stock of all supplies to ensure that measurements are collected according to schedule.

d) All field probes used for field measurements shall be calibrated before and verified after each day of sampling and documented accordingly per FDEP-SOP requirements. All calibration documentation shall be provided to the **District** Project Manager as a part of the quarterly report.

e) The **District** may review field sampling and laboratory quality assurance/quality control (QA/QC) procedures and conduct field and laboratory audits as desired at any time.

f) All site conditions observed during sample collection and in-situ field measurements shall be recorded on waterproof field sheets using indelible marker and as directed by FDEP-SOP FD1000.

g) The **County** shall be notified, in writing, 30 days in advance of any project related changes, including those related to sampling frequencies, parameter lists, etc.

h) If the **District** detects a problem with a sample result, the **District** Project Manager shall notify the **County** Project Manager in writing via email. The **County** shall address and resolve quality assurance issues within 45 days of **District** notification. The **District** Project Manager shall communicate any deficiencies to the **County** prior to payment authorization. In addition, the **District** will not reimburse the **County** for data that are not of acceptable quality.

i) Annually, at least one site per basin will feature a quality check for the benthic cover assessment by having two divers score the same quad. After scoring, the two divers should discuss any discrepancies in the scores and a single agreed upon set of scores will be submitted as part of the normal dataset. The individual scoring should be kept and documented as part of the QA/QC data. The **County** QA/QC data should be submitted in a **separate spreadsheet** to the **District** for archiving purposes, with all site and quadrat specifications included. If this procedure is conducted once per day during the Biscayne Bay sampling (not included as part of this agreement), it is permissible to provide documentation of that QA/QC report in fulfillment of this requirement.

j) Annual inter-calibration exercise: The **County** shall participate in annual inter-calibration exercises. The annual field exercise would bring representatives from both groups together for participation, thus helping to facilitate greater communication between groups. This exercise would be organized by the **District** each spring and any questions/concerns about metrics/methods that have arisen during the previous year of sampling would also be discussed. The **County** will abide by decisions about procedures resulting from the group discussion in subsequent sampling events.

k) Data entry and reporting: Field data entered into a spreadsheet should be initialed and dated by the technician. **Data entry needs to be QA/QC'd by a separate person from the entry technician.** This will help to eliminate any reporting errors, typos, or omissions from the field sheet to the master spreadsheet. Additionally, the QA/QC procedure needs to be initialed and dated by both technicians. Any corrections or changes made on a data sheet should be recorded by a single line-strike (not erasing) and initialed and dated by the person making the change.

6.1- Specific Requirements Regarding the BBCA Methodology

- **Do not manipulate macrophytes after throwing sample quadrat**. The area of scoring interest lies within the sample quadrat as viewed from directly above. Therefore, macrophytes that are in contact with quadrat edges should be scored according to how they occlude the bottom (bent, compacted, or otherwise) in the scoring area. **Do not adjust macrophytes on quadrat edges for their inclusion or exclusion**. Similarly, any short shoots that hang over the quadrat and are in the scoring area should be scored accordingly.

- Quadrat design and construction: The construction of the quadrats may cause visual and/or scoring bias. The **County** shall utilize the ¾" PVC quadrats with the "T" joints on the corners because they seemed to impact the benthic community less (bending and compaction). There should be no strings crossing the quadrat used for scoring as they can cause compaction of the vegetation and possibly increase the total cover estimate. The **interior** dimensions of the sample quadrat should measure 50 cm on each side (total interior area = 0.25 m^2).
- When estimating BBCA scores, the **County** should focus on scoring the area that is not covered (bare sediment) versus the area that is covered because macrophyte morphology (vertical profile and abundance) can cause visual bias leading the observer to increase the total estimate of cover.
- Short shoot counts should never be taken before BBCAs. This can cause a bias in the mind of the observer, especially when plants are numerous but have little cover (e.g. *Halodule*).
- Benthic microbial mats are not to be included in total macrophyte cover estimates and are otherwise not scored in any way.
- Detritus should be removed if it is obscuring the view of macrophytes in a way that could impact scoring ability. However, it may not be possible to remove it without impacting macrophyte profile or visibility (sediment re-suspension) in some locations, so observers should use their own judgment and caution.

- An important consideration for the BBCA scale are **solitary individuals with large cover**. If the total cover of the individual is less than 5% then the score should be 0.1, but if the cover is greater than or equal to 5% then the score would be whichever score represented the cover amount (2 through 5). Similarly, if a single individual occupied less than 5% but seemed large, the score is still a 0.1. This is applicable to sparse (0.5) and numerous (1) individuals as well. In summary, if the cover is less than 5%, the abundance (not the cover) determines the score, but if the cover is 5% or greater, then only cover should be considered.

7.0- PROJECT MANAGEMENT

7.1 Statement of Work Change Control:

Changes in the statement of work must be requested of the project manager in writing, with supporting justification. Any requested changes in the statement of work will require, on the part of the **County**, submission of an updated project work plan with supporting detail, updated scheduling and budget information. **No changes in the statement of work will occur without the appropriate approvals from the funding agency.**

7.2 Data Management:

Any data derived from the project will be provided to the project manager with the submission of each report. A data management system is under development at the **District** and will be used once the system is fully operational. The **County** is to submit their data electronically (email or ftp) with their report. Submission of all data is required for agreement closeout. All data formatting, analysis, and delivery will be required to meet the data standards developed by the project.

7.3 General Quality Assurance/Quality Control Requirement:

All protocols must adhere to the FDEP's QA Rule 62-160, NELAC, and applicable chapters of CERP QASR. The **County** must provide copies for **District** records as soon as new information becomes available for list of deficiencies and corrective actions from internal/external system audits.

The **District** must be allowed to conduct laboratory and field audits of the **County** during normal working hours. Final reports, both paper and electronic, shall be resubmitted within (1) week of any corrections taking place along with a letter explaining the corrections.

8.0 CONTINGENCIES

Every effort shall be made to complete all the tasks as described; however, it is recognized that some measurements may be missed occasionally due to inclement weather, unforeseen unsafe working conditions, or equipment failure. The **District** may amend this Agreement for a time extension in the event of a natural disaster or major storm.

Expedient monitoring of existing tasks may be requested during or after unusual events that may affect water-related resources. While every effort shall be made to accommodate such requests, unscheduled monitoring shall be conducted based on staff availability and it is understood that some requests may not be fulfilled. Field data collected from these sampling events shall be provided to the **District** in a preliminary letter report within thirty days of collection. The final version of these data shall conform to the formats described in the Data Management and Reporting section of this document and shall be reported in a separate section of the quarterly report for that period.

EXHIBIT "B"

Summary Schedule of Tasks, Deliverables, and Associated Costs

A summary deliverable schedule for each task associated with this project is provided below. The schedule is based on a five-year period (Please refer to table 4).

The County hereby agrees to provide the District all deliverables, data and information described in the Statement of Work in electronic form. Acceptability of all work shall be based on the judgment of the District that the work is technically credible, accurate, precise and timely.

The District shall review and forward, within fifteen (15) working days of receipt, recommended revisions (letter format), if any, to each report for incorporation by the County into the final submission.

The County shall submit invoices in the amounts listed in the schedule below. All invoices shall list the deliverables submitted to the District as set forth under Tasks 1 through 7 of this Agreement. **The District may refuse payment for data that does not meet District/FDEP quality assurance/quality control criteria. Payment of invoices shall be contingent upon delivery and acceptance by the District of all deliverables and work products due within the invoiced period.**

Total payment by the District for all work completed herein shall not exceed the amount of **$570,000**. The below values represent an estimate and may be higher or lower for any given quarter. However, the total amount for these tasks shall not exceed $111,612 for Fiscal Year 2014, $118,888 for Fiscal Year 2015, $112,000 for Fiscal Year 2016, $115,500 for Fiscal Year 2017; and $112,000 for Fiscal Year 2018.

Table 4- PAYMENT AND DELIVERABLE SCHEDULE

Year 1	Deliverable Description	Deliverable Due Date	Invoice Due Date	Total Payments Not to Exceed
	County shall participate in an inter-agency Braun-Blanquet methods inter-calibration exercises that will be held by District and inter-agency ADAPT program workshop	As needed	Upon completion (No later than 9/29/2014)	$4,000
	Submission of a QAPP	Within 60 days of agreement execution	30-Jan-14	$5,000
	Quarterly Data Report 10-12/2013	30-Jan-14	30-Jan-14	$22,000
	Quarterly Data Report 1-3/2014	30-Apr-14	30-Apr-14	$27,000
	Quarterly Data Report 4-6/2014	31-Jul-14	31-Jul-14	$27,000
	Quarterly Data Report 7-9/2014	29-Sep-14	29-Sep-14	$26,612
	Total (Fiscal Year 2014)			**$111,612**
Year 2	County shall participate in an inter-agency Braun-Blanquet methods inter-calibration exercises that will be held by District and inter-agency ADAPT program workshop	As needed	Upon completion (No later than 9/29/2015)	$4,000
	Submission of report documenting replacement of a YSI sampling system	Upon Completion	Upon completion (No later than 9/29/2015)	$6,500
	Quarterly Data Report 10-12/2014	30-Jan-15	30-Jan-15	$27,388
	Quarterly Data Report 1-3/2015	30-Apr-15	30-Apr-15	$27,000
	Quarterly Data Report 4-6/2015	31-Jul-15	31-Jul-15	$27,000
	Quarterly Data Report 7-9/2015	29-Sep-15	29-Sep-15	$27,000
	Total (Fiscal Year 2015)			**$118,888**

	Deliverable Due Date	Deliverable Due Date	Invoice Due Date	Total Payments Not to Exceed Due Date
Year 3	County shall participate in an inter-agency Braun-Blanquet methods inter-calibration exercises that will be held by District and inter-agency ADAPT program workshop	As needed	Upon completion (No later than 9/29/2016)	$4,000
	Quarterly Data Report 10-12/2015	30-Jan-16	30-Jan-16	$27,000
	Quarterly Data Report 1-3/2016	30-Apr-16	30-Apr-16	$27,000
	Quarterly Data Report 4-6/2016	31-Jul-16	31-Jul-16	$27,000
	Quarterly Data Report 7-9/2016	29-Sep-16	29-Sep-16	$27,000
	Total (Fiscal Year 2016)			**$112,000**
Year 4	County shall participate in an inter-agency Braun-Blanquet methods inter-calibration exercises that will be held by District and inter-agency ADAPT program workshop	As needed	Upon completion (No later than 9/29/2017)	$4,000
	Submission of report documenting replacement of a Li-Cor sampling system	Upon Completion	Upon completion (No later than 9/29/2017)	$3,500
	Quarterly Data Report 10-12/2016	30-Jan-17	30-Jan-17	$27,000
	Quarterly Data Report 1-3/2017	30-Apr-17	30-Apr-17	$27,000
	Quarterly Data Report 4-6/2017	31-Jul-17	31-Jul-17	$27,000
	Quarterly Data Report 7-9/2017	29-Sep-17	29-Sep-17	$27,000
	Total (Fiscal Year 2017)			**$115,500**
Year 5	County shall participate in an inter-agency Braun-Blanquet methods inter-calibration exercises that will be held by District and inter-agency ADAPT program workshop	As needed	Upon completion (No later than 9/29/2013)	$4,000
	Quarterly Data Report 10-12/2017	30-Jan-18	30-Jan-18	$27,000
	Quarterly Data Report 1-3/2018	30-Apr-18	30-Apr-18	$27,000
	Quarterly Data Report 4-6/2018	31-Jul-18	31-Jul-18	$27,000
	Quarterly Data Report 7-9/2018	29-Sep-18	29-Sep-18	$27,000
	Total (Fiscal Year 2018)			**$112,000**
Total Payment				**$570,000**