

**PALM BEACH COUNTY
BOARD OF COUNTY COMMISSIONERS**

AGENDA ITEM SUMMARY

Meeting Date: June 3, 2008

Consent

Regular

Workshop

Public Hearing

Department

Submitted By: Environmental Resources Management
Submitted For: Environmental Resources Management

I. EXECUTIVE BRIEF

Motion and Title: Staff recommends motion to:

A) approve a Contract in the amount of \$140,000 with Florida Institute of Technology (FIT) to conduct a sediment sourcing study in the Lake Worth Lagoon (LWL) and the drainage canals of the C-51 and L-8 Basins expiring July 31, 2009;

B) accept Purchase Order No. 4500024531 from the South Florida Water Management District (SFWMD) for \$80,000 to cost-share this study;

C) approve a Budget Amendment of \$80,000 in the LWL fund for the LWL Monitoring Project to recognize revenue from the purchase order; and

D) authorize the County Administrator or his designee to sign all future time extensions, task assignments, certifications, and other forms associated with the Contract, and necessary minor amendments that do not change the scope of work or terms and conditions of the Contract.

Summary: The Contract authorizes FIT to assess sediment sources that are discharged into the LWL through the C-51 Canal. This study is part of the monitoring efforts described in the revised Lake Worth Lagoon Management Plan, approved by the Board of County Commissioners on April 1, 2008 (R2008-0569). The Contract expires July 31, 2009. Stormwater runoff is a major source of sediment input to the LWL that negatively impacts water quality and estuarine habitats. Information from this study will be used to develop specific Best Management Practices (BMPs) to reduce pollution. Funding is provided through the Florida Department of Environmental Protection (FDEP) Contract no. LP6046 (R2006-0583, R2006-2257, R2007-2279) and the SFWMD. Countywide (SF)

(Continued on page 3)

Attachments:

- 1. Contract
- 2. Certificate of Insurance
- 3. Purchase Order
- 4. Budget Amendment

Recommended by: *Richard E. Welby* 5/19/08
Department Director Date

Approved by: *Jah* 5/30/08
Asst. County Administrator Date

II. FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2008	2009	2010	2011	2012
Capital Expenditures	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Operating Costs	<u>140,000</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
External Revenues	<u>(80,000)</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>
Program Income (County)	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>
In-Kind Match (County)	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>
NET FISCAL	<u>60,000</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>
# ADDITIONAL FTE POSITIONS (Cumulative)	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

Is Item Included in Current Budget? Yes No X
Budget Account No.: Fund 1229 Department 380 Unit 3057 Object 3401
 Program 3057ex

B. Recommended Sources of Funds/Summary of Fiscal Impact:

C. FDEP Contract LP6046 \$ 60,000
 South Florida Water Management District \$ 80,000
 \$140,000

C. Department Fiscal Review:

Jessica Roll

III. REVIEW COMMENTS

A. OFMB Fiscal and /or Contract Dev. and Control Comments:

atwillhite 5.23.08 / *Am-J. Jucor 5/25/08*
 OFMB *5/22/08* *5/21/08* *5/27/08* Contract Development and Control

B. Legal Sufficiency:

This Contract complies with our contract review requirements.

Maureen Joy
 Assistant County Attorney

C. Other Department Review:

 Department Director

Background and Justification (continued from Page 1):

The C-51 Canal contributes approximately half of the freshwater inflow to the LWL. Because this canal delivers water from the Everglades Agricultural Area and Lake Okeechobee, it is expected that it contributes over half of the suspended sediment load to the Lagoon.

This is a one (1)+ year Contract between the County and FIT for the collection, analysis and summary of sediment sources that are discharged into the LWL through the C-51 Canal. Analysis of data generated from samples collected under this Contract will be used to develop management strategies to reduce sediment loading, and for the development and prioritization of BMPs.

Funding for this monitoring effort will be provided through a purchase order from the SFWMD for \$80,000, and the Lake Worth Lagoon Partnership Program, Contract no. LP6046. This pass-through grant program from FDEP and the SFWMD provides funds to the County for construction and monitoring projects to benefit water quality and habitat in the LWL.

Attachment 1

CONTRACT FOR CONSULTING/PROFESSIONAL SERVICES

This Contract is made as of the ____ day of _____, 2008, by and between Palm Beach County, a Political Subdivision of the State of Florida, by and through its Board of Commissioners, hereinafter referred to as the COUNTY, and Florida Institute of Technology, a private university authorized to do business in the State of Florida, hereinafter referred to as the CONSULTANT, whose Federal I.D. is 59-6046500.

In consideration of the mutual promises contained herein, the COUNTY and the CONSULTANT agree as follows:

ARTICLE 1 - SERVICES

The CONSULTANT'S responsibility under this Contract is to provide research and consultation services in the area of sediment sourcing, as more specifically set forth in the Scope of Work detailed in Exhibit A.

The COUNTY'S representative/liaison during the performance of this Contract shall be Richard E. Walesky, telephone no. 561-233-2400.

The CONSULTANT'S representative/liaison during the performance of this Contract shall be as specified in Article 26.

ARTICLE 2 - SCHEDULE

The CONSULTANT shall commence services upon receipt of the COUNTY's written Notice to Proceed and complete all services by July 31, 2009.

Reports and other items shall be delivered or completed in accordance with the detailed schedule set forth in Exhibit A.

ARTICLE 3 - PAYMENTS TO CONSULTANT

- A. The total amount to be paid by the COUNTY under this Contract for all services and materials including, if applicable, "out of pocket" expenses (specified in paragraph C below) shall not exceed a total contract amount of One Hundred Forty Thousand Dollars (\$140,000). The CONSULTANT shall bill the County quarterly in accordance with Exhibit A.
- B. Invoices received from the CONSULTANT pursuant to this Contract will be reviewed and approved by the COUNTY's representative, to verify that services have been rendered in conformity with the Contract. Approved invoices will then be sent to the Finance Department for payment. Invoices will normally be paid within thirty (30) days following the COUNTY representative's approval.

- C. "Out-of-pocket" expenses including, but not limited to, mailing charges, copying fees, telephone charges and miscellaneous supplies will not be reimbursed under this Contract.
- D. Final Invoice: In order for both parties herein to close their books and records, the CONSULTANT will clearly state "final invoice" on the CONSULTANT'S final/last billing to the COUNTY. This shall constitute CONSULTANT'S certification that all services have been properly performed and all charges and costs have been invoiced to Palm Beach County. Any other charges not properly included on this final invoice are waived by the CONSULTANT.

ARTICLE 4 - TRUTH-IN-NEGOTIATION CERTIFICATE

Signature of this Contract by the CONSULTANT shall also act as the execution of a truth-in-negotiation certificate certifying that the wage rates, over-head charges, and other costs used to determine the compensation provided for in this Contract are accurate, complete and current as of the date of the Contract and no higher than those charged the CONSULTANT'S most favored customer for the same or substantially similar service.

The said rates and costs shall be adjusted to exclude any significant sums should the COUNTY determine that the rates and costs were increased due to inaccurate, incomplete or noncurrent wage rates or due to inaccurate representations of fees paid to outside consultants. The COUNTY shall exercise its rights under this Article 4 within three (3) years following final payment.

ARTICLE 5 - TERMINATION

This Contract may be terminated by the CONSULTANT upon sixty (60) days' prior written notice to the COUNTY's representative in the event of substantial failure by the COUNTY to perform in accordance with the terms of this Contract through no fault of the CONSULTANT. It may also be terminated, in whole or in part, by the COUNTY, with or without cause, immediately upon 30 days written notice to the CONSULTANT. Unless the CONSULTANT is in breach of this Contract, the CONSULTANT shall be paid for services rendered to the COUNTY'S satisfaction through the date of termination. After receipt of a Termination Notice and except as otherwise directed by the COUNTY the CONSULTANT shall:

- A. Stop work on the date and to the extent specified.
- B. Terminate and settle all orders and subcontracts relating to the performance of the terminated work.
- C. Transfer all work in process, completed work, and other materials related to the terminated work to the COUNTY.
- D. Continue and complete all parts of the work that have not been terminated.

ARTICLE 6 - PERSONNEL

The CONSULTANT represents that it has, or will secure at its own expense, all necessary personnel required to perform the services under this Contract. Such personnel shall not be employees of or have any contractual relationship with the COUNTY.

All of the services required herein shall be performed by the CONSULTANT or under its supervision, and all personnel engaged in performing the services shall be fully qualified and, if required, authorized or permitted under state and local law to perform such services.

Any changes or substitutions in the CONSULTANT'S key personnel, as may be listed in Exhibit A, must be made known to the COUNTY'S representative and written approval must be granted by the COUNTY'S representative before said change or substitution can become effective.

The CONSULTANT warrants that all services shall be performed by skilled and competent personnel to the highest professional standards in the field.

All of the CONSULTANT'S personnel (and all Subcontractors) while on County premises will comply with all COUNTY requirements governing conduct, safety and security.

ARTICLE 7 - SUBCONTRACTING

The COUNTY reserves the right to accept the use of a subcontractor or to reject the selection of a particular subcontractor and to inspect all facilities of any subcontractors in order to make a determination as to the capability of the subcontractor to perform properly under this Contract.

If a subcontractor fails to perform or make progress, as required by this Contract, and it is necessary to replace the subcontractor to complete the work in a timely fashion, the CONSULTANT shall promptly do so, subject to acceptance of the new subcontractor by the COUNTY.

The CONSULTANT is encouraged to seek small business enterprises (SBE) for participation in subcontracting opportunities. The Palm Beach County Board of County Commissioners has established a minimum goal for SBE participation of 15% on all County solicitations. There is no required participation percentage for this Contract.

If the CONSULTANT uses any SBE subcontractors on this project the following provisions shall apply:

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The CONSULTANT agrees to abide by all provisions of the Palm Beach County Code establishing the SBE Program, as amended, and understands that failure to comply with any of the requirements will be considered a breach of contract.

The CONSULTANT understands that each SBE firm utilized on this Contract must be certified by Palm Beach County in order to be counted toward the SBE participation goal.

The CONSULTANT shall provide the COUNTY with a copy of the CONSULTANT's contract with any SBE subcontractor or any other related documentation upon request.

The CONSULTANT understands the requirements to comply with the tasks and proportionate dollar amounts throughout the term of this Contract as it relates to the use of SBE firms.

The CONSULTANT agrees to maintain all relevant records and information necessary to document compliance pursuant to Palm Beach County Code, Chapter 2, Article III, Sections 2-71 through 2-80.13 and any revisions thereto, and will allow the COUNTY to inspect such records.

ARTICLE 8 - FEDERAL AND STATE TAX

The COUNTY is exempt from payment of Florida State Sales and Use Taxes. The COUNTY will sign an exemption certificate submitted by the CONSULTANT unless the CONSULTANT is itself exempt. The CONSULTANT shall not be exempted from paying sales tax to its suppliers for materials used to fulfill contractual obligations with the COUNTY, nor is the CONSULTANT authorized to use the COUNTY'S Tax Exemption Number in securing such materials.

The CONSULTANT shall be responsible for payment of its own and its share of its employees' payroll, payroll taxes, and benefits with respect to this contract.

ARTICLE 9 - AVAILABILITY OF FUNDS

The COUNTY'S performance and obligation to pay under this contract for subsequent fiscal years is contingent upon annual appropriations for its purpose by the Board of County Commissioners.

ARTICLE 10 - INSURANCE

- A. CONSULTANT shall, at its sole expense, agree to maintain in full force and effect at all times during the life of this Contract, insurance coverages and limits (including endorsements), as described herein. CONSULTANT shall agree to provide the COUNTY with at least ten (10) day prior notice of any cancellation, non-renewal or material change to the insurance coverages. The requirements contained herein, as well as COUNTY's review or acceptance of insurance maintained by CONSULTANT are not intended to and shall not in any manner

limit or qualify the liabilities and obligations assumed by CONSULTANT under the contract.

- B. **Commercial General Liability** CONSULTANT shall maintain Commercial General Liability at a limit of liability not less than **\$500,000** Each Occurrence. CONSULTANT shall provide this coverage on a primary basis.
- C. **Business Automobile Liability** CONSULTANT shall maintain Business Automobile Liability at a limit of liability not less than **\$500,000** Each Accident for all owned, non-owned and hired automobiles. In the event CONSULTANT doesn't own any automobiles, the Business Auto Liability requirement shall be amended allowing CONSULTANT to agree to maintain only Hired & Non-Owned Auto Liability. This amended requirement may be satisfied by way of endorsement to the Commercial General Liability, or separate Business Auto coverage form. CONSULTANT shall provide this coverage on a primary basis.
- D. **Worker's Compensation Insurance & Employers Liability** CONSULTANT shall maintain Worker's Compensation & Employers Liability in accordance with Florida Statute Chapter 440, including Federal Act endorsement for U.S. Longshoremen=s and Harbor Workers Act when any work is on or contiguous to navigable bodies of U.S. waterways and ways adjoining. CONSULTANT shall provide this coverage on a primary basis.
- E. **Watercraft Liability** CONSULTANT shall provide Watercraft Liability, or equivalent Protection & Indemnity coverage, which shall have minimum limits of \$500,000 per occurrence combined single limit for bodily injury and property damage. Coverage shall include "Palm Beach County Board of County Commissioners, a Political Subdivision of the State of Florida, its Officers, Employees and Agents" as an Additional Insured.
- This coverage requirement may also be satisfied via endorsement to the CONSULTANT'S Commercial General Liability policy with a "CG 24 12 Boats" endorsement or similar endorsement.
- F. **Additional Insured** CONSULTANT shall endorse the COUNTY as an Additional Insured with a CG 2026 Additional Insured - Designated Person or Organization endorsement, or its equivalent, to the Commercial General Liability. The Additional Insured endorsement shall read "Palm Beach County Board of County Commissioners, a Political Subdivision of the State of Florida, its Officers, Employees and Agents." CONSULTANT shall provide the Additional Insured endorsements coverage on a primary basis.
- G. **Waiver of Subrogation** CONSULTANT hereby waives any and all rights of Subrogation against the COUNTY, its officers, employees and agents for each required policy. When required by the insurer, or should a policy condition not permit an insured to enter into a pre-loss agreement to waive subrogation without

an endorsement, then CONSULTANT shall agree to notify the insurer and request the policy be endorsed with a Waiver of Transfer or rights of Recovery Against Others, or its equivalent. This Waiver of Subrogation requirement shall not apply to any policy, which a condition to the policy specifically prohibit such an endorsement, or voids coverage should CONSULTANT enter into such an agreement on a pre-loss basis.

- H. **Certificate(s) of Insurance** Prior to execution of this Contract, CONSULTANT shall deliver to the COUNTY's representative as identified in Article 31, a Certificate(s) of Insurance evidencing that all types and amounts of insurance coverages required by this Contract have been obtained and are in full force and effect. Such Certificate(s) of Insurance shall include a minimum ten (10) day endeavor to notify due to cancellation. The Certificate holder shall be "Palm Beach County, ATTN: ERM Director, 2300 North Jog Road, 4th Floor, West Palm Beach, FL 33411-2743," or his successor/current address.
- I. **Umbrella or Excess Liability** If necessary, CONSULTANT may satisfy the minimum limits required above for Commercial General Liability, Business Auto Liability, and Employer's Liability coverage under Umbrella or Excess Liability. The Umbrella or Excess Liability shall have an Aggregate limit not less than the highest "Each Occurrence" limit for Commercial General Liability, Business Auto Liability, or Employer's Liability. The COUNTY shall be specifically endorsed as an "Additional Insured" on the Umbrella or Excess Liability, unless the Certificate of Insurance notes the Umbrella or Excess Liability provides coverage on a "Follow-Form" basis.
- J. **Right to Review** COUNTY, by and through its Risk Management Department, in cooperation with the contracting/monitoring department, reserves the right to review, modify, reject or accept any required policies of insurance, including limits, coverages, or endorsements, herein from time to time throughout the term of this Contract. COUNTY reserves the right, but not the obligation, to review and reject any insurer providing coverage because of its poor financial condition or failure to operate legally.

ARTICLE 11 - INDEMNIFICATION

Each Party shall be responsible for the acts or omissions of its officers, agents and employees, arising during and as a result of their performance of the terms of this Contract to the full extent required or permitted by applicable law. The COUNTY acknowledges the waiver of sovereign immunity for liability in tort contained in Florida Statute Section 768.28 and acknowledges that such statute permits actions at law against the COUNTY to recover damages in tort for money damages up to the amounts set forth in such statute for injury, loss of property, personal injury, or death caused by the negligence or wrongful act or omission of an employee of the COUNTY while acting in the scope of the employee's office or employment under circumstances in which the COUNTY, if a private person, would be liable under the general laws of this State.

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ARTICLE 12 - SUCCESSORS AND ASSIGNS

The COUNTY and the CONSULTANT each binds itself and its partners, successors, executors, administrators and assigns to the other party and to the partners, successors, executors, administrators and assigns of such other party, in respect to all covenants of this Contract. Except as above, neither the COUNTY nor the CONSULTANT shall assign, sublet, convey or transfer its interest in this Contract without the prior written consent of the other. Nothing herein shall be construed as creating any personal liability on the part of any officer or agent of the COUNTY, nor shall it be construed as giving any rights or benefits hereunder to anyone other than the COUNTY and the CONSULTANT.

ARTICLE 13 - REMEDIES

This Contract shall be governed by the laws of the State of Florida. Any legal action necessary to enforce the Contract will be held in Palm Beach County. No remedy herein conferred upon any party is intended to be exclusive of any other remedy, and each and every such remedy shall be cumulative and shall be in addition to every other remedy given hereunder or now or hereafter existing at law or in equity, by statute or otherwise. No single or partial exercise by any party of any right, power, or remedy hereunder shall preclude any other or further exercise thereof.

ARTICLE 14 - CONFLICT OF INTEREST

The CONSULTANT represents that it presently has no interest and shall acquire no interest, either direct or indirect, which would conflict in any manner with the performance of services required hereunder, as provided for in Chapter 112, Part III, Florida Statutes. The CONSULTANT further represents that no person having any such conflict of interest shall be employed for said performance of services.

The CONSULTANT shall promptly notify the COUNTY's representative, in writing, by certified mail, of all potential conflicts of interest of any prospective business association, interest or other circumstance which may influence or appear to influence the CONSULTANT'S judgment or quality of services being provided hereunder. Such written notification shall identify the prospective business association, interest or circumstance, the nature of work that the CONSULTANT may undertake and request an opinion of the COUNTY as to whether the association, interest or circumstance would, in the opinion of the COUNTY, constitute a conflict of interest if entered into by the CONSULTANT. The COUNTY agrees to notify the CONSULTANT of its opinion by certified mail within thirty (30) days of receipt of notification by the CONSULTANT. If, in the opinion of the COUNTY, the prospective business association, interest or circumstance would not constitute a conflict of interest by the CONSULTANT, the COUNTY shall so state in the notification and the CONSULTANT shall, at its option,

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enter into said association, interest or circumstance and it shall be deemed not in conflict of interest with respect to services provided to the COUNTY by the CONSULTANT under the terms of this Contract.

ARTICLE 15 - EXCUSABLE DELAYS

The CONSULTANT shall not be considered in default by reason of any failure in performance if such failure arises out of causes reasonably beyond the control of the CONSULTANT or its subcontractors and without their fault or negligence. Such causes include, but are not limited to, acts of God, force majeure, natural or public health emergencies, labor disputes, freight embargoes, and abnormally severe and unusual weather conditions.

Upon the CONSULTANT'S request, the COUNTY shall consider the facts and extent of any failure to perform the work and, if the CONSULTANT'S failure to perform was without it or its subcontractors fault or negligence, the Contract Schedule and/or any other affected provision of this Contract shall be revised accordingly, subject to the COUNTY'S rights to change, terminate, or stop any or all of the work at any time.

ARTICLE 16 - ARREARS

The CONSULTANT shall not pledge the COUNTY'S credit or make it a guarantor of payment or surety for any contract, debt, obligation, judgment, lien, or any form of indebtedness. The CONSULTANT further warrants and represents that it has no obligation or indebtedness that would impair its ability to fulfill the terms of this Contract.

ARTICLE 17 - DISCLOSURE AND OWNERSHIP OF DOCUMENTS

The CONSULTANT shall deliver to the COUNTY's representative for approval and acceptance, and before being eligible for final payment of any amounts due, all deliverables prepared by and for the COUNTY under this Contract in accordance with Exhibit A.

All drawings, maps, sketches, programs, data base, reports and other data developed, or purchased, under this Contract for or at the COUNTY'S expense shall be and remain the COUNTY'S property and may be reproduced and reused at the discretion of the COUNTY.

The parties agree that the CONSULTANT may use the data and analysis derived from this Agreement in any future publication.

All covenants, agreements, representations and warranties made herein, or otherwise made in writing by any party pursuant hereto, including but not limited to any representations made herein relating to disclosure or ownership of documents, shall

survive the execution and delivery of this Contract and the consummation of the transactions contemplated hereby.

ARTICLE 18 - INDEPENDENT CONTRACTOR RELATIONSHIP

The CONSULTANT is, and shall be, in the performance of all work services and activities under this Contract, an Independent Contractor, and not an employee, agent, or servant of the COUNTY. All persons engaged in any of the work or services performed pursuant to this Contract shall at all times, and in all places, be subject to the CONSULTANT'S sole direction, supervision, and control. The CONSULTANT shall exercise control over the means and manner in which it and its employees perform the work, and in all respects the CONSULTANT'S relationship and the relationship of its employees to the COUNTY shall be that of an Independent Contractor and not as employees or agents of the COUNTY.

The CONSULTANT does not have the power or authority to bind the COUNTY in any promise, agreement or representation.

ARTICLE 19 - CONTINGENT FEES

The CONSULTANT warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the CONSULTANT to solicit or secure this Contract and that it has not paid or agreed to pay any person, company, corporation, individual, or firm, other than a bona fide employee working solely for the CONSULTANT, any fee, commission, percentage, gift, or any other consideration contingent upon or resulting from the award or making of this Contract.

ARTICLE 20 - ACCESS AND AUDITS

The CONSULTANT shall maintain adequate records to justify all charges, expenses, and costs incurred in estimating and performing the work for at least three (3) years after completion or termination of this Contract. The COUNTY shall have access to such books, records, and documents as required in this section for the purpose of inspection or audit during normal business hours, at the CONSULTANT'S place of business.

ARTICLE 21 - NONDISCRIMINATION

The CONSULTANT warrants and represents that all of its employees are treated equally during employment without regard to race, color, religion, disability, sex, age, national origin, ancestry, marital status, or sexual orientation.

ARTICLE 22 - AUTHORITY TO PRACTICE

The CONSULTANT hereby represents and warrants that it has and will continue to maintain all licenses and approvals required to conduct its business, and that it will at all

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times conduct its business activities in a reputable manner. Proof of such licenses and approvals shall be submitted to the COUNTY's representative upon request.

ARTICLE 23 - SEVERABILITY

If any term or provision of this Contract, or the application thereof to any person or circumstances shall, to any extent, be held invalid or unenforceable, the remainder of this Contract, or the application of such terms or provision, to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected, and every other term and provision of this Contract shall be deemed valid and enforceable to the extent permitted by law.

ARTICLE 24- PUBLIC ENTITY CRIMES

As provided in F.S. 287.132-133, by entering into this contract or performing any work in furtherance hereof, the CONSULTANT certifies that it, its affiliates, suppliers, subcontractors and consultants who will perform hereunder, have not been placed on the convicted vendor list maintained by the State of Florida Department of Management Services within the 36 months immediately preceding the date hereof. This notice is required by F.S. 287.133(3)(a).

ARTICLE 25 - MODIFICATIONS OF WORK

The COUNTY reserves the right to make changes in Scope of Work, including alterations, reductions therein or additions thereto. Upon receipt by the CONSULTANT of the COUNTY'S notification of a contemplated change, the CONSULTANT shall, in writing: (1) provide a detailed estimate for the increase or decrease in cost due to the contemplated change, (2) notify the COUNTY of any estimated change in the completion date, and (3) advise the COUNTY if the contemplated change shall affect the CONSULTANT'S ability to meet the completion dates or schedules of this Contract.

If the COUNTY so instructs in writing, the CONSULTANT shall suspend work on that portion of the Scope of Work affected by a contemplated change, pending the COUNTY'S decision to proceed with the change.

If the COUNTY elects to make the change, the COUNTY shall initiate a Contract Amendment and the CONSULTANT shall not commence work on any such change until such written amendment is signed by the CONSULTANT and approved and executed on behalf of Palm Beach County.

ARTICLE 26 - NOTICE

All notices required in this Contract shall be sent by certified mail, return receipt requested, hand delivery or other delivery service requiring signed acceptance. If sent to the COUNTY, notices shall be addressed to:

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Richard E. Walesky, Director
Department of Environmental Resources Management
2300 N Jog Road, 4th Floor
West Palm Beach, FL 33411

With copy to:

Palm Beach County
Attn: County Attorney for ERM
301 North Olive Avenue, Suite 601
West Palm Beach, FL 33401

If sent to the CONSULTANT, notices shall be addressed to:

Florida Institute of Technology
150 West University Blvd. ____
Melbourne, FL 32901 ____
Attn: John P. Politano, Jr., ____
Director, Office of Sponsored Programs

With copy to:

_N/A_____

ARTICLE 27 - ENTIRETY OF CONTRACTUAL AGREEMENT

The COUNTY and the CONSULTANT agree that this Contract sets forth the entire agreement between the parties, and that there are no promises or understandings other than those stated herein. None of the provisions, terms and conditions contained in this Contract may be added to, modified, superseded or otherwise altered, except by written instrument executed by the parties hereto in accordance with Article 25- Modifications of Work.

ARTICLE 28 - CRIMINAL HISTORY RECORDS CHECK

The CONSULTANT shall comply with the provisions of Ordinance 2003-030, the Criminal History Records Check Ordinance ("Ordinance"), as amended from time to time, if CONSULTANT'S employees or subcontractors are required under this contract to enter a "critical facility" as identified in Resolution R-2003-1274. The CONSULTANT acknowledges and agrees that all employees and subcontractors who are to enter a "critical facility" will be subject to a fingerprint based criminal history records check. Although COUNTY agrees to pay for all applicable FDLE/FBI fees required for criminal history record checks, the CONSULTANT shall be solely responsible for the

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financial, schedule, and staffing implications associated in complying with Ordinance 2003-030, as amended from time to time.

ARTICLE 29 – REGULATIONS: LICENSING REQUIREMENTS:

The CONSULTANT shall comply with all laws, ordinances and regulations applicable to the services contemplated herein, to include those applicable to conflict of interest and collusion. The CONSULTANT is presumed to be familiar with all federal, state and local laws, ordinances, codes and regulations that may in any way affect the services offered.

Remainder of page intentionally left blank.

IN WITNESS WHEREOF, the Board of County Commissioners of Palm Beach County, Florida has made and executed this Contract on behalf of the COUNTY and CONSULTANT has hereunto set its hand the day and year above written.

ATTEST:
Sharon R. Bock, Clerk & Comptroller


**PALM BEACH COUNTY
BOARD OF COUNTY COMMISSIONERS:**

By: _____
Deputy Clerk

By: _____
Addie L. Greene, Chairperson

WITNESS:

CONSULTANT:


Signature

Florida Institute of Technology

Carolyn Lockyer
Name (type or print)


Signature


Signature

John P. Politano, Jr.
Director
Office of Sponsored Programs

Deb Hartegan
Name (type or print)

Typed Name

Office of Sponsored Programs

Title

**APPROVED AS TO FORM
AND LEGAL SUFFICIENCY**

By _____
County Attorney

(corp. seal)

**APPROVED AS TO
TERMS AND CONDITIONS**


By 
Richard E. Walesky, Director
Department of Environmental Resources Management

EXHIBIT A
STATEMENT OF WORK
SEDIMENT SOURCING STUDY OF LAKE WORTH LAGOON
AND C-51 BASIN
PALM BEACH COUNTY

1.0 Introduction/Background

Seagrass is a critical habitat in Lake Worth Lagoon (LWL) and the LWL Management Plan recognizes the importance of this resource and the factors responsible for its decline. The decline of seagrass in LWL is partly explained by decreased light penetration due to elevated concentrations of total suspended solids (TSS). Little is currently known about the relative importance of the different components of TSS in attenuating light. The C-51 Canal contributes approximately half of the freshwater inflow to LWL and it is expected that it contributes greater than half of the suspended sediment load to the lagoon. In addition to TSS, large areas of submerged bottom are covered with fine-grained, organic-rich ("muck") sediments that prohibit seagrass from growing and recruiting.

To help protect and restore seagrass and water quality, the goal of this study is to obtain data that can be used to develop strategies to reduce sediment loading to LWL where it attenuates light and causes muck sediments to blanket the lagoon bottom. Likely sources for the various light-attenuating components of TSS will be investigated as well as the likely sources for the components of muck sediments in LWL, the C-51 and the L-8 basin. Potential sources of TSS and muck sediments will be characterized in addition to evaluating the relative importance of these sources to light attenuation.

Once significant contributors to water quality degradation have been identified, strategies can be developed and implemented. This project will allow for the identification, location, and prioritization of stormwater treatment projects with the greatest impact to LWL.

The proposed project area, shown in Exhibit 1, includes the central segment of the LWL and the Canal System within the C-51 and L-8 Basins (Canal System) connecting to Lake Okeechobee. The proposed project will include the following: (1) bottom sediment sampling in LWL and the Canal System with subsequent chemical characterization, (2) measurements of water-column turbidity, TSS, and the chemical composition of suspended particles from LWL and the Canal System, and (3) determination of the spatial extent of turbidity-induced light limitation in the central segment of LWL. The central segment of LWL is included in the North Palm Beach County CERP.

2.0 OBJECTIVES

The objective for this project is to improve the water quality and habitat of the Lake Worth Lagoon estuary by determining sources of muck sediments entering the C-51

Canal and Lake Worth Lagoon. Light attenuating suspended solids, muck sediments and their sources will be identified.

3.0 POINT OF CONTACT

All communication associated with this work order shall be through Palm Beach County Environmental Resources Management Department (ERM) **Contract Manager, Richard Walesky** telephone: (561) 233-2400, Email: rwalesky@co.palm-beach.fl.us.

All communication between ERM and the Consultant shall be done through the contract manager unless directed otherwise by the contract manager for project specific issues. The role of the contract manager is to ensure that communication between ERM and the Consultant is frequent, consistent, and documented. This includes gathering and disseminating documentation and deliverables, schedule review, and invoice review and approval.

4.0 SCOPE OF WORK

To meet the objectives of this project, the Contractor will need to complete the following overall tasks:

1. Collect sediment samples from the central segment of LWL and the Canal System.
2. LWL and Canal System bottom sediment analyses [Total Organic Matter (TOM), grain size, CaCO₃, major and trace elements, SEM-EDX (Scanning Electron Microscopy-Energy Dispersive X-ray Analysis), carbon isotopes].
3. Suspended solids analyses (Total Suspended Solids (TSS), Volatile Suspended Solids (VSS) or Total Organic Carbon (TOC), major and trace elements, SEM-EDX analyses, stable carbon isotopes) and spectral absorbance analyses, with derivation of light attenuation coefficients.
4. Meeting and Final Report (Mid-project meeting, Executive Summary, and final report).

Tasks B and C have been separated into two phases, as described below in the text and budget, to allow the County and the Contractor to evaluate results and conclusions before carrying out the final set of analyses and preparing the Final Report. Task D also will be divided into a mid-project data report and Executive Summary and a final report at the end of the project.

5.0 WORK BREAKDOWN

Task 1. Sediment Survey and Collection of Sediment Samples

Task 1.1. Site Reconnaissance and Station Selection

Contractor will meet with the County to carry out a 1-day reconnaissance of the study area in LWL and the Canal System using a County boat operated by

County staff. At the same time, the Contractor and the County will identify likely sampling sites for bottom and suspended sediments.

Task 1 Deliverable: Meeting summary and revised sample plan as necessary.

Task 2. Bottom Sediment Analyses (Part 1 of 2, see also Task 5).

Task 2.1. Collection of sediments.

Surface sediments will be collected from LWL and the Canal System locations based on results and discussion during the reconnaissance survey. Two sediment cores will be collected from a depositional site in LWL.

Task 2.2. Sediment Composition and Elemental Analyses.

Surface grab samples from LWL and the Canal System will be analyzed for TOM, grain size, CaCO₃ and pertinent geochemical indicator major and trace elements (Al, Si, Fe, K, Ca, Mg, Mn, Cu, Pb, Hg, Zn and other trace elements such as Ag that are determined to be good source of geochemical indicators).

A total of no less than 70 samples (sediments and soils) collected in LWL and the Canal System will be analyzed for the components listed above prior to the Mid-Project meeting. Basic geochemical tools will be used to characterize source samples from the Canal System and apply these fingerprints to sediments from LWL.

Task 2.3. Scanning Electron Microscopy with Energy Dispersion X-ray analysis (SEM-EDX)

A subset of samples taken from the Canal System and the LWL will be analyzed by SEM (at least 10). Samples for SEM will be sieved at 62.5 µm and the fine fraction will be used for SEM. The SEM will be equipped with energy-dispersive x-ray analysis to facilitate point by point resolution of key elements and their ratios to Al and Si (i.e., Mg/Al, K/Al). This data can be used to support the chemical data used for source characterization and subsequent identification of possible sources in LWL.

Task 2.4. Stable Carbon Isotopes

A subset of samples (at least 40) will be analyzed for stable C isotopes. The stable C isotope data will be used to obtain a reasonable characterization of the terrestrial organic matter (e.g., grass cuttings) in the Canal System and in the muck sediments of LWL relative to lagoonal organic matter (e.g., plankton).

Task 2 Deliverables: Data in Excel format plus metal versus Al graphs and other graphs as needed to show sediment composition.

Task 3. Suspended Solids Analyses (Part 1 of 2, see also Task 6).

Task 3.1. Sample Collection for Suspended Sediments.

Water samples will be collected at selected sites in LWL and in the Canal System on 2 occasions during the first portion of the project. In the LWL, samples will be collected at depth 0.5 m below water surface and 0.5 m above lagoon bottom. Sampling in the Canal System will occur when flow through the S-155 structure is >800 CFS (a flow that coincides with measurable suspended sediment transport). In the Canal System, depth and width-integrated samples representative of the water-quality in the cross-section will be collected by the use of the equal-width-increment method. About 20 samples will be collected during each sampling trip for a total of 40 samples. If appropriate, additional samples from the Canal System will be collected with assistance of staff from Palm Beach County at a time other than when the Contractor is able to sample.

Task 3.2. Chemical Analysis of Suspended Sediments.

Water samples will be analyzed for TSS, VSS, and major and trace elements (Al, Si, Fe, K, Mg, Ca, Mn, Cu, Pb, Zn and possibly other trace metals). A total of no less than 40 samples of suspended sediment will be analyzed from LWL and the Canal System.

Task 3.3. SEM-EDX analysis.

A subset of the sample of suspended sediment from the Canal System and the LWL will be analyzed by SEM (at least 4). The SEM will be equipped with energy-dispersive x-ray analysis to facilitate point by point resolution of key elements and their ratios to Al and Si (i.e., Mg/Al, K/Al). This data can be used to support the chemical data used for source characterization and subsequent identification of possible sources in LWL.

Task 3.4. Stable Carbon Isotopes

A subset of samples (at least 30) will be analyzed for stable C isotopes. The stable C isotope data will be used to obtain a reasonable characterization of the terrestrial organic matter (e.g., grass cuttings) in the Canal System and in the muck sediments of LWL relative to lagoonal organic matter (e.g., plankton).

Task 3.5. Spectral Absorbance/light attenuation and relationships with SS/turbidity.

Spectral absorbance and turbidity measurements will be made for all water samples. UV-visible spectrometric absorbance and turbidity of filtered and unfiltered water samples shall be determined in the laboratory on the samples, using a spectrometer and a turbidimeter, respectively. Light attenuation coefficients (K) shall be derived from the absorbance measurements, and statistical relationships of K to TSS components and to turbidity (individually and/or combined) shall be developed. Additionally, statistical relationships between K_{unfilt} shall be derived for each study site separately (should between-site differences in regression lines be significant) or for the sites combined. Turbidity measurements reported by the USGS and provided by the County shall be compared to the findings in this project.

Task 3 Deliverables: Data in Excel format plus metal versus Al graphs and other graphs as needed to show composition of suspended sediment.

Note: Task 6 is Part 2 of the Suspended Sediment portion of the study. The County and the Contractor may determine that it is in the best interests of the project to proceed with the Task 6 sampling of suspended sediment prior to the mid-project meeting due to high water flow that favors timely collection of water samples. However, analysis of these samples, if considered to be in the best interests of the project, can wait until after the mid-project meeting in case some other task is determined to be more pressing at that time.

Task 4. Project Meeting

When sufficient data are available from Tasks 1-3, a meeting will take place between the Contractor and the County. The Contractor will make a presentation and provide copies of the presentation to the County and a brief written Executive Summary including work progress, key findings to date, and recommendations. A copy of the presentation and the Executive Summary shall be provided by September 22, 2008. Then, the Contractor and the County Staff will discuss the best use of the remaining funds to successfully complete the project. The meeting would probably take place during September or October, 2008; however, if work is accelerated for any reason, an earlier meeting date may be arranged.

Task 4 Deliverables: Presentation and Executive Summary.

Task 5. Bottom Sediment Analyses (Part 2 of 2, see also Task 2).

Task 5.1. Sediment Composition and Elemental Analyses.

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Surface sediment samples (and possibly soils or samples from sediment cores) from LWL and the Canal System will be analyzed for TOM, grain size, CaCO₃ and pertinent geochemical indicator major and trace elements (Al, Si, Fe, K, Ca, Mg, Mn, Cu, Pb, Hg, Zn and other trace elements such as Ag that are determined to be good source or geochemical indicators).

A total of no less than 25 samples from the complete sample set of sediments (and soils) collected in LWL and the Canal System will be analyzed for the components listed above based on discussion at the Mid-Project meeting. Basic geochemical tools will be used to characterize source samples from the Canal System and apply these fingerprints to sediments from LWL.

Task 5.2. Scanning Electron Microscopy with Energy Dispersion X-ray analysis (SEM-EDX)

A subset of samples from the LWL and Canal System will be analyzed by SEM (at least 4). Samples for SEM will be sieved at 62.5 µm and the fine fraction will be used for SEM. The SEM will be equipped with energy-dispersive x-ray analysis to facilitate point by point resolution of key elements and their ratios to Al and Si (i.e., Mg/Al, K/Al). This data can be used to support the chemical data used for source characterization and subsequent identification of possible sources in LWL.

Task 5.3. Stable Carbon Isotopes

A subset of samples (at least 10) will be analyzed for stable C isotopes. The stable C isotope data will be used to obtain a reasonable characterization of the terrestrial organic matter in the Canal System and in the muck sediments of LWL.

Task 5.4. Age-Dating Sediments

Sediments from two cores will be age-dated using total ¹³⁷Cs and excess ²¹⁰Pb isotopes. At least 12 layers in each core will be analyzed for geochronology. Sediments from this core also will be analyzed for the various major and trace elements listed above. The core will be collected during the first part of the project; however, because the dating process is time consuming, the task has been listed and budgeted for second part of the project.

Task 5 Deliverables: Data in Excel format plus metal versus Al graphs and other graphs as needed to show sediment composition and ages.

Task 6. Suspended Solids Analyses (Part 2 of 2, see also Task 3).

Task 6.1. Sample Collection for Suspended Sediments.

Water samples will be collected at selected sites in LWL and in the Canal System on 2 occasions during the first portion of the project. In the LWL, samples will be collected at depth 0.5 m below water surface and 0.5 m above lagoon bottom. Sampling in the Canal System will occur when flow through the S-155 structure >800 CFS (a flow that coincides with suspended sediment transport). In the Canal System, depth and width-integrated samples representative of the water-quality in the cross-section will be collected by the use of the equal-width-increment method. About 12 samples will be collected during each sampling trip for a total of 24 samples. If appropriate, additional samples from the Canal System will be collected with assistance of staff from Palm Beach County.

Task 6.2. Chemical Analysis of Suspended Sediments

Water samples shall be analyzed for TSS, VSS, and major and trace elements (Al, Si, Fe, K, Mg, Ca, Mn, Cu, Pb, Zn and possibly other trace metals). A total of no less than 24 samples of suspended sediment will be analyzed from LWL and the Canal System.

Task 6.3. SEM-EDX analysis.

A subset of the sample of suspended sediment from the LWL and the Canal System will be analyzed by SEM (at least 4). The SEM will be equipped with energy-dispersive x-ray analysis to facilitate point by point resolution of key elements and their ratios to Al and Si (i.e., Mg/Al, K/Al). This data can be used to support the chemical data used for source characterization and subsequent identification of possible sources in the LWL.

Task 6.4. Stable Carbon Isotopes

A subset of samples (at least 20) will be analyzed for stable C isotopes. The stable C isotope data will be used to obtain a reasonable characterization of the terrestrial organic matter (e.g., grass cuttings) in the Canal System and in the muck sediments of LWL relative to lagoonal organic matter (e.g., plankton).

Task 6.5. Spectral Absorbance/light attenuation and relationships with SS/turbidity.

Spectral absorbance and turbidity measurements will be made for all water samples. UV-visible spectrometric absorbance and turbidity of filtered and unfiltered water samples shall be determined in the laboratory on the samples, using a spectrometer and a turbidimeter, respectively. Light attenuation coefficients (K) shall be derived from the absorbance measurements, and statistical relationships of K to TSS components and to turbidity (individually and/or combined) shall be developed. Additionally, statistical relationships between K_{unfit} shall be derived for each study site separately (should between-site

differences in regression lines be significant) or for the sites combined. Turbidity measurements reported by the USGS and provided by the County shall be compared to the findings in this project.

Task 6 Deliverables: Data in Excel format plus metal versus Al graphs and other graphs as needed to show composition of suspended sediment.

Task 7. Interpretation and Reporting

Geochemical Fingerprinting of possible sources of particles to LWL

A variety of approaches will be used to fingerprint upland soils/sediments so that identification of sources of fine-grained, organic-rich (muck) sediments can be determined. These approaches include, but are not limited to, element/element ratios, ternary diagrams and multivariate statistical techniques (e.g., factor analysis). Stable carbon isotope data can be used to determine the relative contribution of terrestrial versus lagoon sources of organic matter to muck sediments. The process of developing and refining geochemical fingerprinting will be ongoing throughout the project and will be a primary focus area of the final report. Written recommendations for reduction strategies and BMP's for the management of identified sediment sources in the LWL and the Canal System, as well as any future research needs, shall be provided.

A detailed Final Report will be the final deliverable. A draft report will be completed by May 2009, allowing the County and the South Florida Water Management District four (4) weeks to reply with comments. The Final Report will be due no later than July 2009. The Final Report shall identify the dominant turbidity and muck sediment constituents contributing to light attenuation in central LWL, their source(s) and spatial extent, quantitative relationships between turbidity/SS and light attenuation.

Task 7 Deliverable: Interpretative Final Report.

6.0 PAYMENT

Invoices shall be submitted on a quarterly basis for each sub-task completed. CONSULTANT shall perform a sufficient amount of work as described in sub-tasks equaling no less than Eighty Thousand Dollars (\$80,000) and invoiced by September 22, 2008. If all sub-tasks are completed as provided herein, the total amount for which the, the CONSULTANT shall be compensated shall not exceed a total contract amount of One Hundred Forty Thousand Dollars (\$140,000).

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7.0 BUDGET

Task	Task Description	Cost
1	Reconnaissance and station selection (1 day)	\$1,000
2	Bottom Sediment Analysis (LWL and C-51) Part 1 of 2. (Includes samples from LWL and upstream – mix of numbers of each type of sample to be determined)	\$51,040
2.1	Collection of surface sediments & sediment cores (3 days)	
2.2	Sediment and/or soil composition and elemental analyses (70 lab samples)	
2.3	Sediment SEM-EDX analyses (10 SEM-EDX)	
2.4	Stable carbon isotope analysis (40 samples)	
3	Suspended Sediment (SS) Analyses Part 1 of 2. (Includes LWL and upstream samples)	\$30,780
3.1	Sample collection (2 collection periods each 2 days)	
3.2	SS composition and elemental analyses (40 lab samples)	
3.3	SS SEM-EDX analyses (4 SEM-EDX samples)	
3.4	Stable C isotope (30 samples)	
3.5	Spectral Absorbance/light attenuation measurements (30 samples)	
4	Project Meeting	\$ 2,000
5	Bottom Sediment Analysis (LWL, C-51 and upland) Part 2 of 2.	\$18,400
5.1	Sediment composition & elemental analyses (25 lab samples)	
5.2	Sediment SEM-EDX analyses (4 SEM-EDX samples)	
5.3	Stable carbon isotope analysis(10 samples)	
5.4	Age date two cores w/ total Cs-137 & excess Pb-210 (2 cores)	
6	Suspended Sediment Analyses Part 2 of 2.	\$22,540
6.1	Sample collection (2 collection periods each 2 days)	
6.2	SS composition and elemental analyses (24 lab samples)	
6.3	SS SEM-EDX analyses (4 SEM-EDX samples)	
6.4	Stable C isotope (20 samples)	
6.5	Spectral Absorbance/light attenuation measurements (24 samples)	
7	Final Report	\$ 14,240
	TOTAL	\$140,000

Minor changes to sample number and methods may be made upon written request by the Contractor and written approval by the County.




25

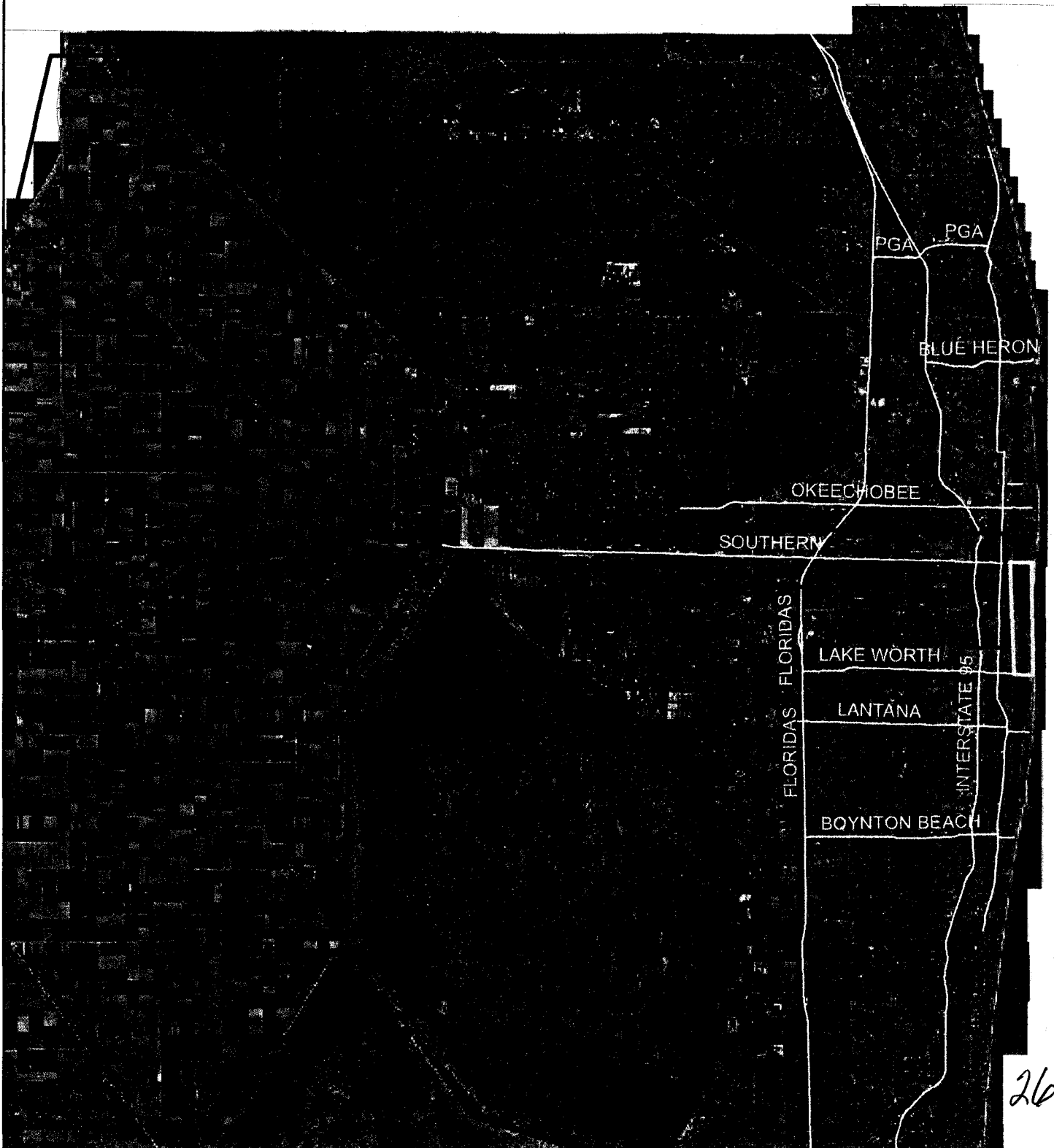
**PALM BEACH COUNTY SEDIMENT SOURCING STUDY
LAKE WORTH LAGOON AND C-51 & L-8 BASIN**

**EXHIBIT 1
PROJECT AREA**

Palm Beach County Board of County Commissioners, Department of Environmental Resources Management,
2300 N. Jog Rd, West Palm Beach, FL 33411 561-233-2400

Legend

- LWL
-  CANAL SYSTEM
-  CANALS
- 5  Miles



**CERTIFICATE
(Corporation)**

The undersigned hereby certifies that the following are true and correct statements:

1. That he/she is the Secretary of Florida Institute of Technology, a corporation organized and existing in good standing under the laws of the State of Florida hereinafter referred to as the "Corporation", and that the following Resolutions are true and correct copies of certain Resolutions adopted by the Board of Directors of the Corporate as the May 16, 2008 day of May, 2008, in accordance with the laws of the State of the state of incorporation of the Corporation, the Articles of Incorporation and the By-laws of the Corporation.

RESOLVED, that the Corporation shall enter into that certain Agreement between Palm Beach County, a political subdivision of the State of Florida and the Corporation, a copy of which is attached hereto, and be it

FURTHER RESOLVED, that John P. Politano Jr, the Director of Sponsored Research of the Corporation, is hereby authorized and instructed to execute such Agreement and such other instruments as may be necessary and appropriate for the Corporation to fulfill its obligations under the Agreement.

2. That the foregoing resolutions have not been modified, amended, rescinded, revoked or otherwise changed and remain in full force and effect as of the date hereof.

3. That the Corporation is in good standing under the laws of the State of Florida or its state of incorporation, if other, and has qualified, if legally required, to do business in the State of Florida and has the full power and authority to enter into such Agreement.

IN WITNESS WHEREOF, the undersigned has set his hand and affixed the Corporate Seal of the Corporation the 16th day of May 2008.



(Signature)

(CORPORATE SEAL)

T. Dwayne McCay, Provost and Executive Vice President

(Print Signatory's name & title)

SWORN TO AND SUBSCRIBED before me this 16th day of May, 2008, by the Secretary of the aforesaid Corporation, who is personally known to me OR who produced T. Dwayne McCay as identification and who did take an oath.

Wanda Jean Givens

(Notary Signature)

WANDA JEAN GIVENS

(Print Notary's Name)

NOTARY PUBLIC
State of Florida at Large
My Commission Expires:



Wanda Jean Givens
My Commission CC 833504
Expires June 17, 2008

Attachment 2

ACORD™ CERTIFICATE OF LIABILITY INSURANCE						DATE(MM/DD/YYYY) 05/15/2008			
PRODUCER Aon Risk Services, Inc of Florida 7650 Courtney Campbell Causeway Suite 800 Tampa FL 33607 USA PHONE - (866) 283-7122 FAX - (847) 953-5390				THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.					
INSURED Florida Institute of Technology, Inc. 150 West University Blvd Melbourne FL 32901 USA				INSURERS AFFORDING COVERAGE		NAIC #			
				INSURER A: Princeton Excess & Surplus Lines Ins.		10786			
				INSURER B: Safety National Casualty Corp		15105			
				INSURER C:					
				INSURER D:					
				INSURER E:					
COVERAGES SIR May Apply									
THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.									
INSR LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE(MMDDYY)	POLICY EXPIRATION DATE(MMDDYY)	LIMITS			
A		GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY CLAIMS MADE: <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC	N3-A3-FF-0000007-01 XS General Liab	12/01/07	12/01/08	EACH OCCURRENCE	\$9,000,000		
						DAMAGE TO RENTED PREMISES (Ea occurrence)			
						MED EXP (Any one person)			
						PERSONAL & ADV INJURY			
						GENERAL AGGREGATE	\$9,000,000		
						PRODUCTS - COMP/OP AGG			
						SIR	\$1,000,000		
A		AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON OWNED AUTOS <input checked="" type="checkbox"/> SIR \$1,000,000 <input checked="" type="checkbox"/> Self Insured Phys. Damage	N3-A3-FF-0000007-01 XS Auto	12/01/07	12/01/08	COMBINED SINGLE LIMIT (Ea accident)	\$9,000,000		
						BODILY INJURY (Per person)			
						BODILY INJURY (Per accident)			
						PROPERTY DAMAGE (Per accident)			
		GARAGE LIABILITY <input type="checkbox"/> ANY AUTO				AUTO ONLY - EA ACCIDENT			
						OTHER THAN AUTO ONLY: EA ACC			
						AGG			
		EXCESS / UMBRELLA LIABILITY <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> DEDUCTIBLE <input type="checkbox"/> RETENTION				EACH OCCURRENCE			
						AGGREGATE			
B		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below	SPIY10FL XS WC - \$750,000 SIR	12/01/07	12/01/08	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER			
						E.L. EACH ACCIDENT	\$1,000,000		
						E.L. DISEASE-EA EMPLOYEE	\$1,000,000		
						E.L. DISEASE-POLICY LIMIT	\$1,000,000		
		OTHER							
DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS Property includes coverage for watercraft under 51 feet in length. CGL includes watercraft liability for watercraft under 51 feet in length. Certificate Holder is added as an Additional Insured excluding Workers' Compensation and Employers' Liability as required by written contract but limited to the operations of the Insured									
CERTIFICATE HOLDER				CANCELLATION					
Palm Beach County Attn: ERM Director 2300 North Jog Rd. 4th Floor West Palm Beach FL 33411-2743 USA				SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.					
				AUTHORIZED REPRESENTATIVE <i>Aon Risk Services, Inc. of Florida</i>					
				28					

Holder Identifier :

Certificate No : 570028458890

Attachment to ACORD Certificate for Florida Institute of Technology, Inc.

The terms, conditions and provisions noted below are hereby attached to the captioned certificate as additional description of the coverage afforded by the insurer(s). This attachment does not contain all terms, conditions, coverages or exclusions contained in the policy.

INSURED

Florida Institute of Technology, Inc.
 150 West University Blvd
 Melbourne FL 32901 USA

INSURER
INSURER
INSURER
INSURER
INSURER

ADDITIONAL POLICIES

If a policy below does not include limit information, refer to the corresponding policy on the ACORD certificate form for policy limits.

INSR LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER POLICY DESCRIPTION	POLICY EFFECTIVE DATE	POLICY EXPIRATION DATE	LIMITS	

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS
 under said contract, and always subject to the policy terms, conditions and exclusions.
 Cancellation Provision shown herein is subject to shorter or longer time periods depending on the jurisdiction of, and reason for, the cancellation.

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South Florida Water Management District
 P.O. Box 24680
 West Palm Beach, FL 33416-4680
 Telephone (561) 686-8800, Ext. 6391
 Toll Free Line 1-800-432-2045

PURCHASE ORDER

FLORIDA SALES TAX EXEMPTION #85-8013149859C-9
 FEDERAL TAX EXEMPT #59-74-0072K

ALL ITEMS ARE SHIPPED F.O.B DESTINATION UNLESS FREIGHT CHARGES ARE ITEMIZED BELOW.

THIS NUMBER MUST APPEAR ON ALL PACKAGES, PACKING LISTS, INVOICES, AND CORRESPONDENCE.		PAYMENT TERMS	
4500024531		PAY WITHIN 30 DAYS NET	
PAGE NO.	DATE OF ORDER	EST. DELIVERY DATE	
1 of 1	05/14/2008	07/01/2009	
VENDOR NO.	PURCHASING AGENT	F.O.B.	CONFIRMING
112609	HARRIS-FITZROY, J.	DESTINATION	NO

VENDOR
 PALM BEACH CNTY DEPT OF ENVIRON
 RESOURCE MGMT
 2300 N JOG RD 4TH FL
 WEST PALM BEACH FL 33411-2743
 Tel: 561-233-2400 Fax: 561-233-2414

SHIP TO
 SOUTH FLORIDA WATER MANAGEMENT DISTRICT
 SFWMD: HEADQUARTERS B-2 BUILDING
 3301 GUN CLUB ROAD
 WEST PALM BEACH FL 33406

LINE ITEMS OF YOUR INVOICE MUST MATCH LINE ITEM NUMBERS ON THIS DOCUMENT

Line	Quantity	Unit	Part Number and Description	Unit Price	Total Amount
1	1	AU	SEDIMENT STUDY	80,000.00	80,000.00
10	80,000	EA	C-51 SEDIMENT SOURCING STUDY	1.00	80,000.00
<p>THE ITEM COVERS THE FOLLOWING SERVICES:</p> <p>VENDOR SHALL PROVIDE SEDIMENT SOURCING STUDY OF LAKE WORTH LAGOON AND C-51 BASIN IN ACCORDANCE WITH ATTACHMENT "A" STATEMENT OF WORK INCORPORATED BY REFERENCE HEREIN AND MADE A PART IF THIS PURCHASE ORDER.</p> <p>PRICING PER ABOVE REFERENCED STATEMENT OF WORK FOR DISTRICT'S SHARE OF EXPENDITURES WHICH SHALL NOT EXCEED \$80,000 WITHOUT BUYER'S WRITTEN AUTHORIZATION.</p> <p>SFWMD CONTACT: KIMBERLY KOPTAK AT 561629-6973</p> <p>ATTENTION: ALESSANDRA MEDRI EMAIL: AMEDRI@CO.PALM-BEACH.FL.US</p> <p>PLEASE ACKNOWLEDGE RECEIPT AND ACCEPTANCE OF THIS PURCHASE ORDER BY SIGNING AND RETURNING A COPY VIA FAX TO THE PURCHASING AGENT AT 561 682-5754.</p> <p>ACKNOWLEDGEMENT: <i>[Signature]</i></p> <p>BY (PRINT OR TYPE): <u>Daniel Bates</u></p>					

NOTE: . Prices displayed govern the purchase order transaction.
 . Early payment discount invoices receive priority handling.
 . The attached Purchase Order terms & conditions, pages 1 through 2 apply

Page Total	80,000.00
Grand Total	80,000.00

SEND ALL INVOICES TO:
 South Florida Water Management District
 P.O. Box 24682
 West Palm Beach, FL 33416-4682

[Signature]
 Authorized Agent
 SOUTH FLORIDA WATER MANAGEMENT DISTRICT
 An Equal Opportunity Employer - M/F/H/V

PURCHASE ORDER TERMS AND CONDITIONS

This PURCHASE ORDER constitutes a binding contract between the South Florida Water Management District (DISTRICT) and the VENDOR as named on the PURCHASE ORDER when accepted by the VENDOR either by express acknowledgment or by commencement of shipment without reservations.

INVOICES AND PAYMENTS. The VENDOR shall submit a separate invoice for each purchase order or purchase release after each delivery. Invoices for other than lump sum payments shall be substantiated by adequate supporting documentation, including an itemization of the date, hours expended, description of the deliverable, and, if applicable, transportation charges, the bill of lading and the freight waybill. The VENDOR's invoices shall reference the DISTRICT's PURCHASE ORDER number and shall be mailed to ACCOUNTS PAYABLE, South Florida Water Management District, Box 24682, West Palm Beach, FL 33416-4680. It is the policy of the DISTRICT that payment for all goods and services shall be made in a timely manner and that interest payments are made on late payments. In accordance with Florida Statutes, Section 218.70, Florida Prompt Payment Act, a "proper" invoice is defined as an invoice that conforms to all statutory requirements and all DISTRICT requirements as specified in the PURCHASE ORDER for invoice submission. The time at which payment shall be due from the DISTRICT shall be forty-five (45) days from receipt of a proper invoice and acceptance of deliverables, based on compliance with the statutory requirements set forth in Section 218.70, F.S. and upon satisfaction of the DISTRICT conditions that are detailed herein. If all conditions are met and payment is not made by the DISTRICT in this timeframe, interest shall accrue after 30 days at the rate of 1% per month on the unpaid balance. The VENDOR must invoice the DISTRICT for any accrued unpaid interest.

INDEMNIFICATION. For value received, the VENDOR shall indemnify and hold the DISTRICT, its officers, directors, board members, agents, assigns, and employees harmless from liabilities, damages, losses and costs, including, but not limited to reasonable attorneys' fees, to the extent caused by the negligence, recklessness or intentionally wrongful conduct of the VENDOR and other persons employed or utilized by the VENDOR in the performance of the PURCHASE ORDER. The VENDOR further acknowledges that it is solely responsible for ensuring its compliance and the compliance of its subcontractors, suppliers, agents, assigns, invitees and employees with the terms of this PURCHASE ORDER. This paragraph shall survive the expiration or termination of this PURCHASE ORDER.

TERMINATION FOR DEFAULT. In accordance with DISTRICT Rule 40E-7, Part II, F.A.C., "material breach" is defined as any substantial, unexcused non-performance by failing to perform an act that is an important part of the transaction or performing an act inconsistent with the terms and conditions of the PURCHASE ORDER. If the VENDOR materially fails to fulfill its obligations under this PURCHASE ORDER, the DISTRICT will provide written notice of the deficiency by forwarding a Cure Notice citing the specific nature of the material breach. The VENDOR shall have thirty (30) days to cure the breach. If the VENDOR fails to cure the breach within the thirty (30) day period, the DISTRICT shall issue a Termination for Default Notice. Once the DISTRICT has notified the VENDOR that it has materially breached its PURCHASE ORDER with the DISTRICT, the DISTRICT's Governing Board shall determine whether the VENDOR should be suspended from doing future work with the DISTRICT, and if so, for what period of time. Should the DISTRICT terminate in accordance with this provision, the DISTRICT shall be entitled to recover procurement costs in addition to all other remedies under law and/or equity.

TERMINATION FOR CONVENIENCE. The DISTRICT may terminate this PO with or without cause at any time for convenience upon 30 calendar days prior written notice to the VENDOR. In the event of termination for convenience, the DISTRICT shall compensate the VENDOR for all authorized and accepted deliverables and/or services completed through the date of termination in accordance with the Statement of Work. The DISTRICT shall be relieved of any and all future obligations hereunder, including but not limited to lost profits and consequential damages, under this PURCHASE ORDER. The DISTRICT may withhold all payments to the VENDOR for such work until such time as the DISTRICT determines the exact amount due to the VENDOR. In the event a dispute arises which the project managers cannot resolve between themselves, the parties shall have the option to submit to nonbinding mediation.

RECORDS RETENTION/AUDIT. The VENDOR shall maintain all records, books and documents pertinent to the performance of this PURCHASE ORDER in accordance with generally accepted accounting principles consistently applied. The DISTRICT shall have inspection and audit rights to such records for a period of 5 years from final payment under this PURCHASE ORDER. Records relating to any legal disputes arising from performance under this PURCHASE ORDER shall be made available until final disposition.

NONDISCRIMINATION. The VENDOR hereby assures 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 otherwise be subjected to discrimination in any activity hereunder. The VENDOR shall take all measures necessary to effectuate these assurances.

PUBLIC ENTITY CRIMES/SDN LIST. The VENDOR, by its execution of this PURCHASE ORDER or by commencement of shipment with reservations, acknowledges and attests that neither it, nor any of its suppliers, subcontractors or consultants who shall perform work which is intended to benefit the DISTRICT is included on the U.S. Department of Treasury's List of Specially Designated Nationals and Blocked Persons, is a State of Florida convicted vendor or is included on State of Florida's discriminatory vendor list, and if the VENDOR or any affiliate of the VENDOR has been convicted of a public entity crime or has been placed on the discriminatory vendor list, a period longer than 36 months has passed since placement on one of either of these lists. The VENDOR further understands and accepts that this PURCHASE ORDER shall be either void or subject to immediate termination by the DISTRICT, in the event there is any misrepresentation or lack of compliance with the laws and regulations of the U.S. Department of Treasury and/or the mandates of Section 287.133 or Section 287.134, respectively, Florida Statutes. The DISTRICT, in the event of such termination, shall not incur any liability to the VENDOR for any work or materials furnished.

PUBLIC ACCESS. The VENDOR shall allow public access to all project documents and materials in accordance with the provisions of Chapter 119, Florida Statutes. Should the VENDOR 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 VENDOR.

DISTRICT'S TAX EXEMPTION. The VENDOR shall not utilize the DISTRICT's exemption certificate number issued pursuant to Sales and Use Tax Law, Chapter 212, Florida Statutes, when purchasing materials used to fulfill its contractual obligations with the DISTRICT. The VENDOR shall be responsible and liable for the payment of all applicable FICA/Social Security and other taxes resulting from this PURCHASE ORDER.

ASSIGNMENT/GUARANTOR. The VENDOR shall not assign, delegate or otherwise transfer its rights and obligations as set forth in this PURCHASE ORDER without the prior written consent of the DISTRICT. Any attempted assignment in violation of this provision shall be null and void. The VENDOR shall not pledge the DISTRICT's credit or make the DISTRICT a guarantor of payment or surety for any contract, debt, obligation, judgment, lien, or any form of indebtedness.

FORCE MAJEURE. Notwithstanding any provisions of this PURCHASE ORDER to the contrary, the parties shall not be held liable for any failure or delay in the performance of this PURCHASE ORDER that arises from fires, floods, strikes, embargoes, acts of the public enemy, unusually severe weather, outbreak of war, restraint of Government, riots, civil commotion, force majeure, act of God, or for any other cause of the same character which is unavoidable through the exercise of due care and beyond the control of the parties. Failure to perform shall be excused during the continuance of such circumstances, but this PURCHASE ORDER shall otherwise remain in effect.

AMENDMENTS. This Purchase Order may be amended or rescinded only with the written approval of the parties hereto.

ORDER OF PRECEDENCE. Any inconsistency in this PURCHASE ORDER shall be resolved by giving precedence in the following order: (1) PURCHASE ORDER terms and conditions; (2) Specifications; (3) all other documents, including, but not limited to, drawings, descriptions, sample(s).

ENTIRE AGREEMENT. This PURCHASE ORDER states the entire understanding and agreement between the parties and no course or prior dealing, usage of the trade or extrinsic or parol evidence shall be relevant to supplement, vary or explain any term used with respect to this PURCHASE ORDER. The Florida Uniform Commercial Code (Chapters 671-679, Florida Statutes) shall control definitions. The acceptance or acquiescence of any course of performance rendered under this PURCHASE ORDER shall not be construed as a waiver nor shall it be relevant to define or vary any term stated herein. This PURCHASE ORDER shall inure to the benefit of and shall be binding upon the parties, their respective assigns, and successors in interest.

Additional Terms and Conditions for Commodities:

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

APPLICABLE LAW/VENUE. The laws of the State of Florida shall govern all aspects of the PURCHASE ORDER, including but not limited to the provisions of the Florida Uniform Commercial Code, Chapters 671-679, Florida Statutes, for any terms and conditions not specifically stated in this PURCHASE ORDER. In the event it is necessary for either party to initiate legal action regarding the PURCHASE ORDER, venue shall be in the Fifteenth Judicial Circuit for claims under state law and in the Southern District of Florida for any claims which are justiciable in federal court.

DISTRICT'S TITLE TO MATERIALS, DOCUMENTS & PACKAGING. All materials, drawings or other items provided by the DISTRICT to the VENDOR remain the property of the DISTRICT and will be returned to the DISTRICT upon demand. All containers, reels or pallets shipped with goods by the VENDOR are to remain the property of the DISTRICT unless otherwise agreed to in writing.

SHIPMENT UNDER RESERVATION PROHIBITED. VENDOR is not authorized to ship the goods with any reservations and no tender of a bill of lading will substitute as a tender of the goods.

DELIVERY TERMS & TRANSPORTATION CHARGES. Delivery is "F.O.B. Destination" unless delivery terms are otherwise specified in the PURCHASE ORDER. If the DISTRICT agrees in writing to reimburse the VENDOR for transportation costs, the DISTRICT shall have the right to designate the method of shipment. In either case, the title and all risk of loss of the goods shall remain with the VENDOR until the goods are received and accepted by the DISTRICT. Rejected materials will be returned to the VENDOR at the VENDOR's risk and expense.

VENDOR TO PACKAGE GOODS. VENDOR will package goods in accordance with good commercial practice. Each shipping container shall be clearly and permanently marked as follows: (1) VENDOR's name and address, (2) consignee's name, address and Purchase Order or Purchase Release number, (3) container number and total number of containers, e.g., box 1 of 4 boxes, and (4) the number of the container bearing the packing slip. VENDOR shall bear the cost of packaging unless otherwise specified in the PURCHASE ORDER.

PRICES QUOTED. The VENDOR's price will be the lowest prevailing market price and under no circumstances will the price be higher than specified, without the express written authorization of the parties, as evidence by an amendment to the PURCHASE ORDER.

DISTRICT'S RIGHT TO CANCEL. The DISTRICT reserves the right to cancel all or part of this PURCHASE ORDER, without obligation, if acceptance is not expressed by the VENDOR either through written notice or by delivery of items ordered, within the specified time(s) and date(s).

VENDOR NOT TO LIMIT WARRANTY. The Vendor shall not limit or exclude any express or implied warranties and any attempt to do so shall render this PURCHASE ORDER void, at the option of the DISTRICT. The VENDOR warrants that the goods furnished will conform to the specifications, drawings and descriptions listed in the offering document or to the sample(s) furnished.

TERMS/PROVISIONS. Should any term or provision of this PURCHASE ORDER 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 PURCHASE ORDER, that the PURCHASE ORDER shall remain operable, enforceable and in full force and effect to the extent permitted by law.

Additional Terms and Conditions for Services:

STATEMENT OF SERVICES. The CONTRACTOR shall, to the satisfaction of the DISTRICT, fully and timely perform all work items described in the "Statement of Work", attached to this PO and incorporated herein. As part of the services to be provided by the CONTRACTOR under this PO, the CONTRACTOR shall substantiate, in whatever forum reasonably requested by the DISTRICT, the methodology, lab analyses, scientific theories, data, reference materials and research notes to formulate its opinions and testimony. This paragraph shall survive the expiration or termination of this PO. The parties agree that time is of the essence in the performance of each and every obligation hereunder. In the event CONTRACTOR

employees or hired workers are authorized by the Statement of Work to perform services on-site at DISTRICT facilities, the CONTRACTOR hereby agrees to be bound by the DISTRICT policies and standards of conduct listed in the attached "Contractor Policy Code Acknowledgement" and shall require each individual performing such on-site work to execute the form.

COMPENSATION/CONSIDERATION. The total consideration for all work required by the DISTRICT pursuant to the PO shall not exceed the amount indicated on the PO. Such amount includes all expenses the CONTRACTOR may incur and therefore no additional compensation shall be authorized. The CONTRACTOR, by executing the PO or by commencement of work without reservations, certifies to truth-in-negotiation, specifically, that wage rates and other factual unit costs supporting the consideration are accurate, complete and current at the time of contracting. If the total consideration for this PO is subject to multi-year funding allocations, funding for each applicable fiscal year of this PO will be subject to DISTRICT Governing Board budgetary appropriation. In the event the DISTRICT does not approve funding for any subsequent fiscal year, this PO shall terminate upon expenditure of the current funding, notwithstanding other provisions in this PO to the contrary. The DISTRICT will notify the CONTRACTOR in writing after the adoption of the final DISTRICT budget for each subsequent fiscal year if funding is not approved for this PO.

INSURANCE. The CONTRACTOR shall procure and maintain, through the term of this PO, insurance coverage reflecting, at a minimum, general liability and automobile liability each with a limit of not less than \$300,000.00, and all Florida statutory workers' compensation insurance. The coverage required shall extend to all employees and subcontractors of the CONTRACTOR. The attached Certificate of Insurance shall be completed in full, indicating the producer, insured, carrier's name, and BEST rating, policy numbers and effective and expiration dates of each type of coverage required. The Certificate of Insurance shall be signed by an authorized representative and shall identify the DISTRICT as added insured as required.

OWNERSHIP. The DISTRICT shall retain exclusive title, copyright and other proprietary rights in 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 CONTRACTOR under this PO. The CONTRACTOR shall grant to the DISTRICT a perpetual, non-transferable, non-exclusive right to use any proprietary software, if any. Any equipment purchased by the CONTRACTOR with DISTRICT funding shall be returned and title transferred from the CONTRACTOR to the DISTRICT upon expiration or termination of the PO.

COMPLIANCE/LICENSES. The CONTRACTOR, its employees, subcontractors or assigns, shall obtain, at its own expense, all licenses, permits and other authorizations necessary to comply with all applicable federal, state and local laws and regulations relating to the performance of the PO. The DISTRICT undertakes no duty to ensure such compliance but will attempt to advise the CONTRACTOR, upon request, as to any such laws of which it has present knowledge.

APPLICABLE LAW/VENUE. The laws of the State of Florida shall govern all aspects of the PO. In the event it is necessary for either party to initiate legal action regarding the PO, venue shall be in the Fifteenth Judicial Circuit for claims under state law and in the Southern District of Florida for any claims which are justiciable in federal court.

INDEPENDENT CONTRACTOR. The CONTRACTOR shall be considered an independent contractor and nothing in this PO shall be interpreted to establish any relationship other than that of an independent CONTRACTOR between the parties and their respective employees, agents, subcontractors or assigns, during or after the term of the PO. Both parties are free to enter into contracts with other parties for similar services. The DISTRICT assumes no duty with regard to the supervision of the CONTRACTOR and the CONTRACTOR shall remain solely responsible for compliance with all safety requirements and for the safety of all persons and property at the site of performance under the PO.

SEVERABILITY. Should any term or provision of this PO 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 PO, to the extent that the PO shall remain operable, enforceable and in full force and effect to the extent permitted by law. Instructions for all notices are set forth on the PO.

DISPUTES. In the event a dispute arises which the project managers cannot resolve between themselves, the parties shall have the option to submit to nonbinding mediation. The mediator or mediators shall be impartial, shall be selected by the parties and the cost of the mediation shall be borne equally by the parties. The mediation process shall be confidential to the extent permitted by law.

IMMIGRATION. The CONTRACTOR shall be responsible for verifying employee authorization to work in the U.S. and certifying that a good faith effort has been made to properly identify employees by timely reviewing and completing appropriate documentation, including but not limited to, USCIS Form I-9. Written verification shall be kept by the CONTRACTOR and made available for inspection on demand by the District. The hourly rate of pay for each employee shall comply with State law and industry standards for similar work performed under the CONTRACT. The CONTRACTOR shall maintain records verifying the rate of pay for each employee working on this CONTRACT and make such records available for inspection on demand by the District. Failure to comply with these provisions shall be a material breach of the CONTRACT and cause for termination of the CONTRACTOR.

CHANGE IN PERSONNEL. The District may at any time and at its sole discretion request that the CONTRACTOR replace any CONTRACTOR personnel provided by the CONTRACTOR to work on this CONTRACT if the District believes that it is in the best interest of the District to do so. The District may, but will not be required to provide a reason for requesting the replacement of personnel. Such change in personnel shall be made immediately upon the District's written request for a change of personnel. The CONTRACTOR will place the above language in any CONTRACT that it has with subcontractors. The CONTRACTOR will enforce the replacement of subcontractor personnel upon a request by the District.

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**ATTACHMENT A
STATEMENT OF WORK
SEDIMENT SOURCING STUDY OF LAKE WORTH LAGOON
AND C-51 BASIN
PALM BEACH COUNTY**

1.0 Introduction/Background

Seagrass is a critical habitat in Lake Worth Lagoon (LWL) and the LWL Management Plan recognizes the importance of this resource and the factors responsible for its decline. The decline of seagrass in LWL is partly explained by decreased light penetration due to elevated concentrations of total suspended solids (TSS). Little is currently known about the relative importance of the different components of TSS in attenuating light. The C-51 Canal contributes approximately half of the freshwater inflow to LWL and it is expected that it contributes greater than half of the suspended sediment load to the lagoon. In addition to TSS, large areas of submerged bottom are covered with fine-grained, organic-rich ("muck") sediments that prohibit seagrass from growing and recruiting.

To help protect and restore seagrass and water quality, the goal of this study is to obtain data that can be used to develop strategies to reduce sediment loading to LWL where it attenuates light and causes muck sediments to blanket the lagoon bottom. Likely sources for the various light-attenuating components of TSS will be investigated as well as the likely sources for the components of muck sediments in LWL, the C-51 and the L-8 basin. Potential sources of TSS and muck sediments will be characterized in addition to evaluating the relative importance of these sources to light attenuation.

Once significant contributors to water quality degradation have been identified, strategies can be developed and implemented. This project will allow for the identification, location, and prioritization of stormwater treatment projects with the greatest impact to LWL.

The proposed project area, shown in Exhibit 1, includes the central segment of the LWL and the Canal System within the C-51 and L-8 Basins (Canal System) connecting to Lake Okeechobee. The proposed project will include the following: (1) bottom sediment sampling in LWL and the Canal System with subsequent chemical characterization, (2) measurements of water-column turbidity, TSS, and the chemical composition of suspended particles from LWL and the Canal System, and (3) determination of the spatial extent of turbidity-induced light limitation in the central segment of LWL. The central segment of LWL is included in the North Palm Beach County CERP.

2.0 OBJECTIVES

The objective for this project is to improve the water quality and habitat of the Lake Worth Lagoon estuary by determining sources of muck sediments entering the C-51

Canal and Lake Worth Lagoon. Light attenuating suspended solids, muck sediments and their sources will be identified.

3.0 POINT OF CONTACT

All communication associated with this work order shall be through Palm Beach County Environmental Resources Management Department (ERM) **Contract Manager, Richard Walesky telephone: (561) 233-2400, Email: rwalesky@co.palm-beach.fl.us**.

All communication between ERM and the Consultant shall be done through the contract manager unless directed otherwise by the contract manager for project specific issues. The role of the contract manager is to ensure that communication between ERM and the Consultant is frequent, consistent, and documented. This includes gathering and disseminating documentation and deliverables, schedule review, and invoice review and approval.

4.0 SCOPE OF WORK

To meet the objectives of this project, the Contractor will need to complete the following overall tasks:

1. Collect sediment samples from the central segment of LWL and the Canal System.
2. LWL and Canal System bottom sediment analyses [Total Organic Matter (TOM), grain size, CaCO₃, major and trace elements, SEM-EDX (Scanning Electron Microscopy-Energy Dispersive X-ray Analysis), carbon isotopes].
3. Suspended solids analyses (Total Suspended Solids (TSS), Volatile Suspended Solids (VSS) or Total Organic Carbon (TOC), major and trace elements, SEM-EDX analyses, stable carbon isotopes) and spectral absorbance analyses, with derivation of light attenuation coefficients.
4. Meeting and Final Report (Mid-project meeting, Executive Summary, and final report).

Tasks B and C have been separated into two phases, as described below in the text and budget, to allow the County and the Contractor to evaluate results and conclusions before carrying out the final set of analyses and preparing the Final Report. Task D also will be divided into a mid-project data report and Executive Summary and a final report at the end of the project.

5.0 WORK BREAKDOWN

Task 1. Sediment Survey and Collection of Sediment Samples

Task 1.1. Site Reconnaissance and Station Selection

Contractor will meet with the County to carry out a 1-day reconnaissance of the study area in LWL and the Canal System using a County boat operated by

County staff. At the same time, the Contractor and the County will identify likely sampling sites for bottom and suspended sediments.

Task 1 Deliverable: Meeting summary and revised sample plan as necessary.

Task 2. Bottom Sediment Analyses (Part 1 of 2, see also Task 5).

Task 2.1. Collection of sediments.

Surface sediments will be collected from LWL and the Canal System locations based on results and discussion during the reconnaissance survey. Two sediment cores will be collected from a depositional site in LWL.

Task 2.2. Sediment Composition and Elemental Analyses.

Surface grab samples from LWL and the Canal System will be analyzed for TOM, grain size, CaCO₃ and pertinent geochemical indicator major and trace elements (Al, Si, Fe, K, Ca, Mg, Mn, Cu, Pb, Hg, Zn and other trace elements such as Ag that are determined to be good source of geochemical indicators).

A total of no less than 70 samples (sediments and soils) collected in LWL and the Canal System will be analyzed for the components listed above prior to the Mid-Project meeting. Basic geochemical tools will be used to characterize source samples from the Canal System and apply these fingerprints to sediments from LWL.

Task 2.3. Scanning Electron Microscopy with Energy Dispersion X-ray analysis (SEM-EDX)

A subset of samples taken from the Canal System and the LWL will be analyzed by SEM (at least 10). Samples for SEM will be sieved at 62.5 µm and the fine fraction will be used for SEM. The SEM will be equipped with energy-dispersive x-ray analysis to facilitate point by point resolution of key elements and their ratios to Al and Si (i.e., Mg/Al, K/Al). This data can be used to support the chemical data used for source characterization and subsequent identification of possible sources in LWL.

Task 2.4. Stable Carbon Isotopes

A subset of samples (at least 40) will be analyzed for stable C isotopes. The stable C isotope data will be used to obtain a reasonable characterization of the terrestrial organic matter (e.g., grass cuttings) in the Canal System and in the muck sediments of LWL relative to lagoonal organic matter (e.g., plankton).

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Task 2 Deliverables: Data in Excel format plus metal versus Al graphs and other graphs as needed to show sediment composition.

Task 3. Suspended Solids Analyses (Part 1 of 2, see also Task 6).

Task 3.1. Sample Collection for Suspended Sediments.

Water samples will be collected at selected sites in LWL and in the Canal System on 2 occasions during the first portion of the project. In the LWL, samples will be collected at depth 0.5 m below water surface and 0.5 m above lagoon bottom. Sampling in the Canal System will occur when flow through the S-155 structure is >800 CFS (a flow that coincides with measurable suspended sediment transport). In the Canal System, depth and width-integrated samples representative of the water-quality in the cross-section will be collected by the use of the equal-width-increment method. About 20 samples will be collected during each sampling trip for a total of 40 samples. If appropriate, additional samples from the Canal System will be collected with assistance of staff from Palm Beach County at a time other than when the Contractor is able to sample.

Task 3.2. Chemical Analysis of Suspended Sediments.

Water samples will be analyzed for TSS, VSS, and major and trace elements (Al, Si, Fe, K, Mg, Ca, Mn, Cu, Pb, Zn and possibly other trace metals). A total of no less than 40 samples of suspended sediment will be analyzed from LWL and the Canal System.

Task 3.3. SEM-EDX analysis.

A subset of the sample of suspended sediment from the Canal System and the LWL will be analyzed by SEM (at least 4). The SEM will be equipped with energy-dispersive x-ray analysis to facilitate point by point resolution of key elements and their ratios to Al and Si (i.e., Mg/Al, K/Al). This data can be used to support the chemical data used for source characterization and subsequent identification of possible sources in LWL.

Task 3.4. Stable Carbon Isotopes

A subset of samples (at least 30) will be analyzed for stable C isotopes. The stable C isotope data will be used to obtain a reasonable characterization of the terrestrial organic matter (e.g., grass cuttings) in the Canal System and in the muck sediments of LWL relative to lagoonal organic matter (e.g., plankton).

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Task 3.5. Spectral Absorbance/light attenuation and relationships with SS/turbidity.

Spectral absorbance and turbidity measurements will be made for all water samples. UV-visible spectrometric absorbance and turbidity of filtered and unfiltered water samples shall be determined in the laboratory on the samples, using a spectrometer and a turbidimeter, respectively. Light attenuation coefficients (K) shall be derived from the absorbance measurements, and statistical relationships of K to TSS components and to turbidity (individually and/or combined) shall be developed. Additionally, statistical relationships between K_{unfilt} shall be derived for each study site separately (should between-site differences in regression lines be significant) or for the sites combined. Turbidity measurements reported by the USGS and provided by the County shall be compared to the findings in this project.

Task 3 Deliverables: Data in Excel format plus metal versus Al graphs and other graphs as needed to show composition of suspended sediment.

Note: Task 6 is Part 2 of the Suspended Sediment portion of the study. The County and the Contractor may determine that it is in the best interests of the project to proceed with the Task 6 sampling of suspended sediment prior to the mid-project meeting due to high water flow that favors timely collection of water samples. However, analysis of these samples, if considered to be in the best interests of the project, can wait until after the mid-project meeting in case some other task is determined to be more pressing at that time.

Task 4. Project Meeting

When sufficient data are available from Tasks 1-3, a meeting will take place between the Contractor and the County. The Contractor will make a presentation and provide copies of the presentation to the County and a brief written Executive Summary including work progress, key findings to date, and recommendations. A copy of the presentation and the Executive Summary shall be provided by September 22, 2008. Then, the Contractor and the County Staff will discuss the best use of the remaining funds to successfully complete the project. The meeting would probably take place during September or October, 2008; however, if work is accelerated for any reason, an earlier meeting date may be arranged.

Task 4 Deliverables: Presentation and Executive Summary.

Task 5. Bottom Sediment Analyses (Part 2 of 2, see also Task 2).

Task 5.1. Sediment Composition and Elemental Analyses.

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Surface sediment samples (and possibly soils or samples from sediment cores) from LWL and the Canal System will be analyzed for TOM, grain size, CaCO₃ and pertinent geochemical indicator major and trace elements (Al, Si, Fe, K, Ca, Mg, Mn, Cu, Pb, Hg, Zn and other trace elements such as Ag that are determined to be good source or geochemical indicators).

A total of no less than 25 samples from the complete sample set of sediments (and soils) collected in LWL and the Canal System will be analyzed for the components listed above based on discussion at the Mid-Project meeting. Basic geochemical tools will be used to characterize source samples from the Canal System and apply these fingerprints to sediments from LWL.

Task 5.2. Scanning Electron Microscopy with Energy Dispersion X-ray analysis (SEM-EDX)

A subset of samples from the LWL and Canal System will be analyzed by SEM (at least 4). Samples for SEM will be sieved at 62.5 µm and the fine fraction will be used for SEM. The SEM will be equipped with energy-dispersive x-ray analysis to facilitate point by point resolution of key elements and their ratios to Al and Si (i.e., Mg/Al, K/Al). This data can be used to support the chemical data used for source characterization and subsequent identification of possible sources in LWL.

Task 5.3. Stable Carbon Isotopes

A subset of samples (at least 10) will be analyzed for stable C isotopes. The stable C isotope data will be used to obtain a reasonable characterization of the terrestrial organic matter in the Canal System and in the muck sediments of LWL.

Task 5.4. Age-Dating Sediments

Sediments from two cores will be age-dated using total ¹³⁷Cs and excess ²¹⁰Pb isotopes. At least 12 layers in each core will be analyzed for geochronology. Sediments from this core also will be analyzed for the various major and trace elements listed above. The core will be collected during the first part of the project; however, because the dating process is time consuming, the task has been listed and budgeted for second part of the project.

Task 5 Deliverables: Data in Excel format plus metal versus Al graphs and other graphs as needed to show sediment composition and ages.

Task 6. Suspended Solids Analyses (Part 2 of 2, see also Task 3).

Task 6.1. Sample Collection for Suspended Sediments.

Water samples will be collected at selected sites in LWL and in the Canal System on 2 occasions during the first portion of the project. In the LWL, samples will be collected at depth 0.5 m below water surface and 0.5 m above lagoon bottom. Sampling in the Canal System will occur when flow through the S-155 structure >800 CFS (a flow that coincides with suspended sediment transport). In the Canal System, depth and width-integrated samples representative of the water-quality in the cross-section will be collected by the use of the equal-width-increment method. About 12 samples will be collected during each sampling trip for a total of 24 samples. If appropriate, additional samples from the Canal System will be collected with assistance of staff from Palm Beach County.

Task 6.2. Chemical Analysis of Suspended Sediments

Water samples shall be analyzed for TSS, VSS, and major and trace elements (Al, Si, Fe, K, Mg, Ca, Mn, Cu, Pb, Zn and possibly other trace metals). A total of no less than 24 samples of suspended sediment will be analyzed from LWL and the Canal System.

Task 6.3. SEM-EDX analysis.

A subset of the sample of suspended sediment from the LWL and the Canal System will be analyzed by SEM (at least 4). The SEM will be equipped with energy-dispersive x-ray analysis to facilitate point by point resolution of key elements and their ratios to Al and Si (i.e., Mg/Al, K/Al). This data can be used to support the chemical data used for source characterization and subsequent identification of possible sources in the LWL.

Task 6.4. Stable Carbon Isotopes

A subset of samples (at least 20) will be analyzed for stable C isotopes. The stable C isotope data will be used to obtain a reasonable characterization of the terrestrial organic matter (e.g., grass cuttings) in the Canal System and in the muck sediments of LWL relative to lagoonal organic matter (e.g., plankton).

Task 6.5. Spectral Absorbance/light attenuation and relationships with SS/turbidity.

Spectral absorbance and turbidity measurements will be made for all water samples. UV-visible spectrometric absorbance and turbidity of filtered and unfiltered water samples shall be determined in the laboratory on the samples, using a spectrometer and a turbidimeter, respectively. Light attenuation coefficients (K) shall be derived from the absorbance measurements, and statistical relationships of K to TSS components and to turbidity (individually and/or combined) shall be developed. Additionally, statistical relationships between K_{unfilt} shall be derived for each study site separately (should between-site

differences in regression lines be significant) or for the sites combined. Turbidity measurements reported by the USGS and provided by the County shall be compared to the findings in this project.

Task 6 Deliverables: Data in Excel format plus metal versus Al graphs and other graphs as needed to show composition of suspended sediment.

Task 7. Interpretation and Reporting

Geochemical Fingerprinting of possible sources of particles to LWL

A variety of approaches will be used to fingerprint upland soils/sediments so that identification of sources of fine-grained, organic-rich (muck) sediments can be determined. These approaches include, but are not limited to, element/element ratios, ternary diagrams and multivariate statistical techniques (e.g., factor analysis). Stable carbon isotope data can be used to determine the relative contribution of terrestrial versus lagoon sources of organic matter to muck sediments. The process of developing and refining geochemical fingerprinting will be ongoing throughout the project and will be a primary focus area of the final report. Written recommendations for reduction strategies and BMP's for the management of identified sediment sources in the LWL and the Canal System, as well as any future research needs, shall be provided.

A detailed Final Report will be the final deliverable. A draft report will be completed by May 2009, allowing the County and the South Florida Water Management District four (4) weeks to reply with comments. The Final Report will be due no later than July 2009. The Final Report shall identify the dominant turbidity and muck sediment constituents contributing to light attenuation in central LWL, their source(s) and spatial extent, quantitative relationships between turbidity/SS and light attenuation.

Task 7 Deliverable: Interpretative Final Report.

6.0 PAYMENT

Invoices shall be submitted on a quarterly basis for each sub-task completed. CONSULTANT shall perform a sufficient amount of work as described in sub-tasks equaling no less than Eighty Thousand Dollars (\$80,000) and invoiced by September 22, 2008. If all sub-tasks are completed as provided herein, the total amount for which the, the CONSULTANT shall be compensated shall not exceed a total contract amount of One Hundred Forty Thousand Dollars (\$140,000).

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BGRV - 380-051308000000000593

BOARD OF COUNTY COMMISSIONERS
PALM BEACH COUNTY, FLORIDA

BUDGET AMENDMENT

Fund 1229 FDEP Lake Worth Lagoon Fund

ACCOUNT NAME AND NUMBER	ORIGINAL	CURRENT	INCREASE	DECREASE	ADJUSTED ENCUMBERED	REMAINING
	BUDGET	BUDGET			BUDGET / Expended	
					5/13/2008	
<u>REVENUES</u>						
380-3057 LWL Monitoring 4399-Oth Physical Environment Rev	0	0	80,000	0	80,000	
TOTAL RECEIPTS & BALANCES	2,925,367	6,194,218	80,000	0	6,274,218	
<u>EXPENDITURES</u>						
380-3057 LWL Monitoring 3401-Other Contractual Services *	200,000	492,428	80,000	0	572,428	455,477
TOTAL APPROPRIATIONS & EXPENDITURES	2,925,367	6,194,218	80,000	0	6,274,218	

Environmental Resources
Management

INITIATING DEPARTMENT/DIVISION
Administration/Budget Department Approval
OFMB Department - Posted

Signatures & Dates

Rubad E. Wabaly 5/19/08
A. White 5/23/08

Dr
5/22/08

BY BOARD OF COUNTY COMMISSIONERS

AT MEETING OF

June 3, 2008

Deputy Clerk to the
Board of County Commissioners