
**SEMINOLE COUNTY GOVERNMENT
AGENDA MEMORANDUM**

SUBJECT: Florida Department of Environmental Protection (FDEP) Agreement No. S0341 for Efficiency Monitoring of Stormwater Facilities

DEPARTMENT: Public Works

DIVISION: Roads-Stormwater

AUTHORIZED BY: Gary Johnson

CONTACT: Kim Ornberg

EXT: 5738

MOTION/RECOMMENDATION:

Approve and authorize the Chairman to execute DEP Agreement No. S0341 between the State of Florida Department of Environmental Protection and the Seminole County Board of County Commissioners to provide funding for efficiency monitoring of three regional stormwater facilities (RSF's).

District 5 Brenda Carey

Kim Ornberg

BACKGROUND:

This agreement will provide funding for 100% of the costs associated with efficiency monitoring of the following three recently-constructed RSF's: Elder Creek, Navy Canal, and Cameron Ditch. The efficiency monitoring projects utilize the DEP preferred consultant (ERD, Inc.), currently under contract with Seminole County, to conduct efficiency monitoring on RSF's. DEP has previously provided funding for efficiency monitoring of two other RSF's (Club II and Lockhart-Smith).

The objective of these projects is to monitor the level of pollutants that enter and are subsequently discharged from an RSF to determine the amount of pollution captured by the facility, and thereby not released into the downstream receiving waterbody. All three of these projects discharge into the following impaired waterbodies: Lake Jesup (Navy Canal and Cameron Ditch) and Lake Monroe (Elder Creek). Determining the amount of pollutants captured by these facilities will provide TMDL (Total Maximum Daily Load) credits to the County for restoration activities on each of the lakes listed above. Additionally, if the removal efficiencies are not adequate, the consultant will identify structural and non-structural ways to improve/optimize the efficiency of each system, and thereby maximize the pollutant load removal and TMDL credits.

This funding agreement will provide a total of \$255,701.44 to complete a one-year study on each of the three facilities and will require no cost share by the County or increase in the capital project costs. These funds were offered to the County without the requirement of pre-application, based on successful implementation performance by Seminole County in stormwater/water quality initiatives over the last decade. The revenue and expenditure accounts necessary for implementation in FY 2007/08 will be incorporated into the proposed budget for County Commission adoption in September.

STAFF RECOMMENDATION:

Staff recommends the Board approve and authorize the Chairman to execute DEP Agreement No. S0341 between the State of Florida Department of Environmental Protection (FDEP) and the Seminole County Board of County Commissioners to provide funding for efficiency monitoring of three regional stormwater facilities (RSF's).

ATTACHMENTS:

1. Agreement
2. Attachment A - Grant Work Plan
3. Attachment B - Payment Summary Request Form
4. Attachment C - Progress Report Form
5. Attachment D - Special Audit Requirements
6. Attachment E - Quality Assurance Requirements

Additionally Reviewed By:

- Budget Review (Fredrik Coulter, Lisa Spriggs)
- County Attorney Review (Matthew Minter)
- Grant Review (Jennifer Bero, Lisa Spriggs)

DEP AGREEMENT NO. S0341

**STATE OF FLORIDA
GRANT ASSISTANCE
PURSUANT TO LINE ITEM 1822 OF THE 2006-2007 GENERAL APPROPRIATIONS ACT**

THIS AGREEMENT is entered into between the STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, whose address is 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000 (hereinafter referred to as the "Department") and the SEMINOLE COUNTY BOARD OF COUNTY COMMISSIONERS, whose address is Public Works-Stormwater Division, 520 West Lake Mary Boulevard, Suite 200, Sanford, Florida 32773 (hereinafter referred to as "Grantee" or "Recipient"), local government, to provide financial assistance for the Monitoring the Effectiveness of Stormwater Retrofit BMPs.

In consideration of the mutual benefits to be derived herefrom, the Department and the Grantee do hereby agree as follows:

1. The Grantee does hereby agree to perform in accordance with the terms and conditions set forth in this Agreement, **Attachment A, Grant Work Plan**, and all attachments and exhibits named herein which are attached hereto and incorporated by reference. For purposes of this Agreement, the terms "Contract" and "Agreement" and the terms "Grantee", "Recipient" and "Contractor", are used interchangeably.
2. This Agreement shall begin upon execution by both parties and end no later than sixty (60) months, inclusive. The Grantee shall not be eligible for reimbursement for work performed prior to the execution date of this Agreement. This Agreement may be amended to provide for additional services if additional funding is made available by the Legislature.
3.
 - A. As consideration for the services rendered by the Grantee under the terms of this Agreement, the Department shall pay the Grantee on a cost reimbursement basis in an amount not to exceed \$255,701.44 as identified in Attachment A, Grant Work Plan. The parties hereto understand and agree that this Agreement does not require a cost sharing or match on the part of the Grantee. If the Grantee finds, after receipt of competitive bids, that the work described in **Attachment A** cannot be accomplished for the current estimated project cost, the parties hereto agree to modify the Grant Work Plan described in **Attachment A** to provide for the work that can be accomplished for the funding identified above.
 - B. The Grantee shall be reimbursed on a cost reimbursement basis for all eligible project costs upon receipt and acceptance of a properly completed **Attachment B, Payment Request Summary Form**. In addition to the summary form, the Grantee must provide from its accounting system, a listing of expenditures made under this Agreement. The listing shall include, at a minimum, a description of the goods or services purchased, date of the transaction, voucher number, amount paid, and vendor name. All requests for reimbursement of travel expenses shall be in accordance with the travel requirements established in Section 112.061, Florida Statutes.
 - C. In addition to the invoicing requirements contained in paragraph 3.B. above, the Department will periodically request proof of a transaction (invoice, payroll register, etc.) to evaluate the appropriateness of costs to the Agreement pursuant to State and Federal guidelines (including cost allocation guidelines), as appropriate. When requested, this information must be provided within 30 calendar days of such request. The Grantee may also be required to submit a cost allocation plan to the Department in support of its multipliers (overhead, indirect, general administrative costs, and fringe benefits). All bills for amounts due under this Agreement shall be submitted in detail sufficient for a proper pre-audit and post-audit thereof. State guidelines for allowable costs can be found in the Department of Financial Services' Reference Guide for State Expenditures at <http://www.fldfs.com/aadir/reference%5Fguide>.

4. The State of Florida's performance and obligation to pay under this Agreement is contingent upon an annual appropriation by the Legislature. The parties hereto understand that this Agreement is not a commitment of future appropriations.
5. The Grantee shall submit **Attachment B, Payment Request Summary Form**, in conjunction with quarterly progress reports. The Grantee shall utilize **Attachment C, Progress Report Form**, to describe the work performed, problems encountered, problem resolution, schedule updates and proposed work for the next reporting period. Quarterly reports shall be submitted to the Department's Grant Manager no later than twenty (20) days following the completion of the quarterly reporting period. It is hereby understood and agreed by the parties that the term "quarterly" shall reflect the calendar quarters ending March 31, June 30, September 30 and December 31. The Department's Grant Manager shall have ten (10) calendar days to review deliverables submitted by the Grantee.
6. Each party hereto agrees that it shall be solely responsible for the negligent or wrongful acts of its employees and agents. However, nothing contained herein shall constitute a waiver by either party of its sovereign immunity or the provisions of Section 768.28, Florida Statutes.
7.
 - A. The Department may terminate this Agreement at any time in the event of the failure of the Grantee to fulfill any of its obligations under this Agreement. Prior to termination, the Department shall provide thirty (30) calendar days written notice of its intent to terminate and shall provide the Grantee an opportunity to consult with the Department regarding the reason(s) for termination.
 - B. The Department may terminate this Agreement for convenience by providing the Grantee with thirty (30) calendar days written notice.
8. This Agreement may be unilaterally canceled by the Department for refusal by the Grantee to allow public access to all documents, papers, letters, or other material made or received by the Grantee in conjunction with this Agreement, unless the records are exempt from Section 24(a) of Article I of the State Constitution and Section 119.07(1), Florida Statutes.
9. The Grantee shall maintain books, records and documents directly pertinent to performance under this Agreement in accordance with generally accepted accounting principles consistently applied. The Department, the State, or their authorized representatives shall have access to such records for audit purposes during the term of this Agreement and for five years following Agreement completion. In the event any work is subcontracted, the Grantee shall similarly require each subcontractor to maintain and allow access to such records for audit purposes.
10.
 - A. In addition to the requirements of the preceding paragraph, the Grantee shall comply with the applicable provisions contained in **Attachment D, Special Audit Requirements**, attached hereto and made a part hereof. **Exhibit 1 to Attachment D** summarizes the funding sources supporting the Agreement for purposes of assisting the Grantee in complying with the requirements of **Attachment D**. A revised copy of **Exhibit 1** must be provided to the Grantee for each amendment which authorizes a funding increase or decrease. If the Grantee fails to receive a revised copy of **Exhibit 1**, the Grantee shall notify the Department's Grants Development and Review Manager at 850/245-2361 to request a copy of the updated information.
 - B. The Grantee is hereby advised that the Federal and/or Florida Single Audit Act Requirements may further apply to lower tier transactions that may be a result of this Agreement. The Grantee shall consider the type of financial assistance (federal and/or state) identified in **Attachment D, Exhibit 1** when making its determination. For federal financial assistance, the Grantee shall utilize the guidance provided under OMB Circular A-133, Subpart B, Section __.210 for determining whether the relationship represents that of a subrecipient or vendor. For state

financial assistance, the Grantee shall utilize the form entitled “Checklist for Nonstate Organizations Recipient/Subrecipient vs. Vendor Determination” (form number DFS-A2-NS) that can be found under the “Links/Forms” section appearing at the following website:

<https://apps.fldfs.com/fsaa>

The Grantee should confer with its chief financial officer, audit director or contact the Department for assistance with questions pertaining to the applicability of these requirements.

- 11. A. The Grantee may subcontract work under this Agreement without the prior written consent of the Department's Grant Manager. The Grantee agrees to be responsible for the fulfillment of all work elements included in any subcontract and agrees to be responsible for the payment of all monies due under any subcontract. It is understood and agreed by the Grantee that the Department shall not be liable to any subcontractor for any expenses or liabilities incurred under the subcontract and that the Grantee shall be solely liable to the subcontractor for all expenses and liabilities incurred under the subcontract.
- B. The Department of Environmental Protection supports diversity in its procurement program and requests that all subcontracting opportunities afforded by this Agreement embrace diversity enthusiastically. The award of subcontracts should reflect the full diversity of the citizens of the State of Florida. A list of Minority Owned firms that could be offered subcontracting opportunities may be obtained by contacting the Office of Supplier Diversity at (850) 487-0915.
- 12. In accordance with Section 216.347, Florida Statutes, the Grantee is hereby prohibited from using funds provided by this Agreement for the purpose of lobbying the Legislature, the judicial branch or a state agency.
- 13. The Grantee shall comply with all applicable federal, state and local rules and regulations in providing services to the Department under this Agreement. The Grantee acknowledges that this requirement includes compliance with all applicable federal, state and local health and safety rules and regulations. The Grantee further agrees to include this provision in all subcontracts issued as a result of this Agreement.
- 14. The Department's Grant Manager for this Agreement is identified below.

Eric Livingston	
Florida Department of Environmental Protection	
Bureau of Watershed Management	
2600 Blair Stone Road, MS#3510	
Tallahassee, Florida 32399-2400	
Telephone No.:	(850) 245-8430
SunCom No.:	205-8430
Fax No.:	(850) 245-8434
SunCom Fax No.:	205-8430
E-mail Address:	Eric.livingston@dep.state.fl.us

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15. The Grantee's Grant Manager for this Agreement is identified below.

Ms. Kim Ornberg	
Seminole County	
Public Works – Stormwater Division	
520 W. Lake Mary Boulevard, Suite 200	
Sanford, Florida 32773	
Telephone No.:	(407) 665-5738
Fax No.:	(407) 665-5742
E-mail Address:	Kornberg@seminolecountyfl.gov

16. To the extent required by law, the Grantee will be self-insured against, or will secure and maintain during the life of this Agreement, Workers' Compensation Insurance for all of his employees connected with the work of this project and, in case any work is subcontracted, the Grantee shall require the subcontractor similarly to provide Workers' Compensation Insurance for all of the latter's employees unless such employees are covered by the protection afforded by the Grantee. Such self-insurance program or insurance coverage shall comply fully with the Florida Workers' Compensation law. In case any class of employees engaged in hazardous work under this Agreement is not protected under Workers' Compensation statutes, the Grantee shall provide, and cause each subcontractor to provide, adequate insurance satisfactory to the Department, for the protection of his employees not otherwise protected.
17. The Grantee, as an independent contractor and not an agent, representative, or employee of the Department, agrees to carry adequate liability and other appropriate forms of insurance. The Department shall have no liability except as specifically provided in this Agreement.
18. The Grantee covenants that it presently has no interest and shall not acquire any interest which would conflict in any manner or degree with the performance of services required.
19. The purchase of non-expendable personal property or equipment costing \$1,000 or more is not authorized under the terms of this Agreement.
20. The Department may at any time, by written order designated to be a change order, make any change in the work within the general scope of this Agreement (e.g., specifications, task timeline within current authorized Agreement period, method or manner of performance, requirements, etc.). All change orders are subject to the mutual agreement of both parties as evidenced in writing. Any change, which causes an increase or decrease in the Grantee's cost or time, shall require formal amendment to this Agreement.
21. If the Grantee's project involves environmentally related measurements or data generation, the Grantee shall develop and implement quality assurance practices consisting of policies, procedures, specifications, standards, and documentation sufficient to produce data of quality adequate to meet project objectives and to minimize loss of data due to out-of-control conditions or malfunctions. All sampling and analyses performed under this Agreement must conform to the requirements set forth in Chapter 62-160, Florida Administrative Code, and the Quality Assurance Requirements for Department Agreements, attached hereto and made part hereof as **Attachment E, Quality Assurance Requirements**.
22. A. No person, on the grounds of race, creed, color, national origin, age, sex, or disability, shall be excluded from participation in; be denied the proceeds or benefits of; or be otherwise subjected to discrimination in performance of this Agreement.
- B. An entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid on a contract to provide goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not award or perform work as a

contractor, supplier, subcontractor, or consultant under contract with any public entity, and may not transact business with any public entity. The Florida Department of Management Services is responsible for maintaining the discriminatory vendor list and intends to post the list on its website. Questions regarding the discriminatory vendor list may be directed to the Florida Department of Management Services, Office of Supplier Diversity, at 850/487-0915.

23. Land acquisition is not authorized under the terms of this Agreement.
24. This Agreement represents the entire agreement of the parties. Any alterations, variations, changes, modifications or waivers of provisions of this Agreement shall only be valid when they have been reduced to writing, duly signed by each of the parties hereto, and attached to the original of this Agreement, unless otherwise provided herein.

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IN WITNESS WHEREOF, the parties have caused this Agreement to be duly executed, the day and year last written below.

SEMINOLE COUNTY BOARD
OF COUNTY COMMISSIONERS

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

By: _____
Title: *

By: _____
Secretary or designee

Date: _____

Date: _____

Eric Livingston, DEP Grant Manager

DEP Contracts Administrator

Approved as to form and legality:

DEP Attorney

FEID No.: 59-6000856

*For Agreements with governmental boards/commissions: If someone other than the Chairman signs this Agreement, a resolution, statement or other document authorizing that person to sign the Agreement on behalf of the Grantee must accompany the Agreement.

List of attachments/exhibits included as part of this Agreement:

Specify Type	Letter/ Number	Description (include number of pages)
<u>Attachment</u>	<u>A</u>	<u>Grant Work Plan (10 Pages)</u>
<u>Attachment</u>	<u>B</u>	<u>Payment Request Summary Form (2 Pages)</u>
<u>Attachment</u>	<u>C</u>	<u>Progress Report Form (2 Pages)</u>
<u>Attachment</u>	<u>D</u>	<u>Special Audit Requirements (5 Pages)</u>
<u>Attachment</u>	<u>E</u>	<u>Quality Assurance Requirements (8 Pages)</u>

ATTACHMENT A GRANT WORK PLAN

This Grant Work Plan will cover the work of the initial three (3) projects under this Agreement for a total amount of \$255,701.44.

Project Title: Elder Creek Stormwater Facility Performance Efficiency Evaluation

Project Location: Seminole County

Project Background:

The Elder Creek stormwater project was constructed as a regional wet detention pond to provide retrofit water quality treatment and flood attenuation. This facility provides treatment for both Elder Ditch and Elder Creek (230 acre drainage basin) as well as a portion of the CR-15 improvement project (5 acre drainage basin). Design criteria for the stormwater facility are summarized below (CDM, 2002):

Parameter	Information
Treatment System Type	Shallow wet detention pond
Pond Area	12 acres at NWL
Drainage Basin	235 acres
Drainage Basin Land Use	Commercial, medium density residential, light industrial
Basin Impervious Area	188 acres (80%)
Treatment Volume	1" over basin area 1.2" over impervious area
Permanent Pool Volume	79.2 ac-ft below NWL
Pond Depth	
a. Maximum	a. 8 ft.
b. Mean	b. 6.6 ft. (79.2 ac-ft/12 ac)
Treatment Volume Recovery	50% of treatment volume released in 24-30 hours
Pond Residence Time	23 days (wet season conditions)
Littoral Zone	Approximately 30% of pond area

Introduction

This document outlines work efforts to be performed by Environmental Research & Design, Inc. (ERD) for Seminole County (County) to conduct a performance efficiency evaluation of the Elder Creek Stormwater Facility. This facility has been recently constructed by the County to reduce pollutant loadings discharging through the Elder Creek watershed. Hydrologic and water quality monitoring equipment will be installed at this site by ERD, and field monitoring will be conducted over a period of 12 months to evaluate system efficiencies. Collection of field data and water quality samples will be conducted on a weekly basis. At the end of the 12-month monitoring program, a complete hydrologic and pollutant budget will be developed for the facility, and the overall performance efficiency of the system will be calculated for the evaluated parameters. Draft and Final Reports will be prepared and submitted to the County.

Project Description:

ERD proposes to perform the specific work efforts outlined below to conduct the performance efficiency evaluation for the Elder Creek Stormwater Facility. Details of specific work efforts proposed for this project are summarized below.

Tasks/Deliverables/Timeline

1. **Project Kick-off Meeting/Site Visit:** The ERD Project Director will perform a project kick-off meeting with representatives of the County to discuss details of the proposed work efforts to be performed, project schedule, appropriate contact personnel for ERD and the County, contract management details, and issues related to site access and security. A site visit will be conducted to discuss proposed field activities and identify specific monitoring locations. It is the responsibility of the County to obtain any necessary permits

or authorizations for use of the site for the proposed monitoring activities.

Deliverables: Meeting agenda, summary and sign in sheet.

Timeline: Month 1 (Sept 2007)

2. **Prepare/Submit TMDL Water Quality Cost Share Information Package:** ERD will prepare and submit a TMDL Water Quality Cost Share Information Package to cover the costs associated with the monitoring program. A draft Cost Share Application will be prepared by ERD and submitted to the County for review and comment. A final Cost Share Application will be prepared based upon the review comments and submitted to FDEP for consideration.

Deliverable: TMDL Water Quality Cost Share Package.

Timeline: Month 1(Sept 2007)

3. **Prepare/Submit Project QA Plan:** Development of a detailed Project QA Plan is a requirement for all projects receiving TMDL Water Quality Cost Share funding. This plan provides a description of the proposed field and laboratory activities and outlines specific Quality Assurance procedures for all anticipated field and laboratory activities. This plan will be prepared by ERD prior to initiation of the field monitoring activities. If the TMDL Water Quality Cost Share Application is approved, the Project QA Plan can be provided to FDEP to satisfy their requirement, along with a certification that the monitoring conducted to date has adhered to the QA Plan.

Deliverable: QA Plan.

Timeline: Month 1 to Month 2 (Sept – Oct 2007)

4. **Select/Install/Calibrate Field Monitoring Equipment:** ERD will evaluate the proposed monitoring site and appropriate field monitoring equipment will be selected to perform the performance efficiency evaluation. It is anticipated that flow monitoring and sample collection activities will occur at three separate sites at the Elder Creek facility. The first monitoring site will occur at the primary inflow culvert for Elder Creek. The second flow monitoring and stormwater collection site will be located at the outfall structure. A third monitoring site will be installed at one of the secondary inflows on the west side of the pond. This site may be rotated among the inflows during the monitoring period.

A sensitive digital water level recorder will also be installed within the pond to assist in development of a hydrologic budget and to allow quantification of the magnitude of discharges through the primary outfall weir structure. A digital rainfall gauge will also be installed at the site along with a pan evaporation station. The autosamplers and flow monitoring equipment will be housed inside aluminum equipment shelters for security. After installation, each of the components will be calibrated according to manufacturer's instructions prior to initiation of the monitoring program.

Deliverable: Installed and calibrated field monitoring equipment

Timeline: Month 1 to Month 4 (Sept – December 2007)

5. **Perform Routine Monitoring:** ERD field personnel will visit the site once each week to retrieve stored hydrologic data and collect composite inflow and outflow samples. The operation of all on-site equipment will be evaluated during each visit. Activities performed at the site will be recorded on field notes. The monitoring program will last for a period of 12 months, with a minimum of 52 weekly monitoring visits conducted during this study.

Continuous flow-weighted composite samples will be collected at both the inflow and outflow from the pond, and flow-weighted runoff samples will be collected at the secondary monitoring sites along the west side of the pond. Each of the composite inflow, outflow, and runoff samples will be returned to the ERD Laboratory and analyzed for the following parameters:

- | | | | |
|----|----------------------|----|------------------------|
| a. | pH | g. | Total Nitrogen |
| b. | Alkalinity | h. | SRP |
| c. | Conductivity | i. | Particulate Phosphorus |
| d. | NH ₃ | j. | Total Phosphorus |
| e. | NO _x | k. | Turbidity |
| f. | Particulate Nitrogen | l. | TSS |

For budget purposes, it is assumed that an average of 3 samples per month will be collected at each of the three sites, for a total of 108 stormwater/baseflow samples collected during this project (3 samples/month/site x 12 months x 3 sites).

In addition, a bulk precipitation collector will be installed adjacent to the pond, and wet/ dry fallout bulk precipitation will be collected on a continuous basis. For budget purposes, it is assumed that approximately 3 composite bulk precipitation samples will be collected each month, for a total of 36 samples during this project (3 samples/month x 12 months).

Deliverable: Monitoring results in Final Project Report, QA reports per QAPP

Timeline: Month 4 to Month 16 (Dec 2007 to Dec 2008)

6. **Routine/Final Data Compilation:** All data retrieved during the weekly site visits will be compiled into a common database on a continuing basis. The weekly field data will be reviewed and evaluated with respect to accuracy and precision of the data. At the end of the monitoring program, all of the compiled data will be summarized in both tabular and graphic formats for use in the Final Report.
Deliverable: Compiled data summarized in tabular and graphic formats for incorporation in Final Report.
Timeline: Month 4 to Month 18 (Dec 2007 to Feb 2009)
7. **Prepare Draft Final Report:** A Draft Final Report will be prepared by ERD which summarizes all field and laboratory activities and provides an analysis of the performance efficiency of the system.
Deliverable: Two copies of the Draft Final Report will be provided to Seminole County and FDEP for review and comments.
Timeline: Month 18 to Month 19 (Feb 2009 to March 2009)
8. **Attend Review Meeting with County:** The ERD Project Director will attend a review meeting with the County to discuss comments on the Draft Final Report.
Deliverables: Meeting agenda, summary and sign in sheet.
Timeline: Month 19 to Month 20 (March 2009 to April 2009)
9. **Prepare Final Report:** A Final Report will be prepared for this project which incorporates the review comments provided by the County. Two hard copies and one digital copy of the Final Report will be provided to the County.
Deliverable: Final Report.
Timeline: Month 21 (May 2009)

Project Budget:

Project Funding Activity	DEP Funding	Matching Funds and Source	
		Funding	Source of Funds
Salaries:			
Fringe Benefits:			
Travel:			
Equipment:			
Supplies/Other Expenses:			
Contractual:	\$92,756.38		
Indirect:			
Total:	\$92,756.38		\$0
Total Project Cost:		\$92,756.38	
% Match:		N/A	

Project Budget Narrative:

Contractual: Subcontractor will be hired to complete the monitoring and evaluation under this Agreement.

Total Budget by Task:

Task		DEP Funding	Matching Funds and Source	
			Matching Funds	Source of Funds
1	Kick-off mtg.	651.00		
2	TMDL Pkg.	3,236.60		
3	QA Plan	3,567.36		
4	Field Monitoring Equip.	8,865.32		
5	Routine Monitoring	54,609.16		
6	Data Compilation	8,810.64		
7	Draft Final Report	9,807.56		
8	Review Meeting	794.00		
9	Final Report	2,414.74		
Total:		\$92,756.38	0	
Project Total:		\$92,756.38		

Project Title: Navy Canal Stormwater Facility Performance Efficiency Evaluation**Project Location:** Seminole County**Project Background:**

The Navy Canal stormwater project was constructed as an off-line wet detention pond along the historical flow path of Navy Canal to provide retrofit water quality treatment. This facility provides treatment for the 820 acre Navy Canal Sub-basin 05 along the north shore of Lake Jessup. Although the drainage basin area for the pond is 820 acres, 633 acres are associated with future development that will have stormwater treatment systems. Therefore, this system provides water quality treatment only for the 187 acres of existing development which is to be retrofitted. Design criteria for the stormwater facility are summarized below (CDM, 2003):

Parameter	Information
Treatment System Type	Off-line wet detention pond
Pond Area	4.7 acres at NWL
Drainage Basin Area to Pond	820 acres, only 187 acres included in water quality calculations
Drainage Basin Land Use	Transportation and wetlands
Basin Soil Hydrologic Groups	Mostly B/D and D, some A and C
Basin Impervious Area	112.1 acres (60%), based on a retrofit basin area of 187 acres
Treatment Volume (based on 187 acre retrofit area)	0.6" over basin area 1.1" over impervious area
Permanent Pool Volume	46.0 ac-ft below NWL
Pond Depth	
a. Maximum	a. 12 ft.
b. Mean	b. 9.8 ft. (46.0 ac-ft/4.7 ac)
Treatment Volume Recovery	50% of treatment volume released in 24-30 hours
Pond Residence Time	22 days (wet season conditions)
Littoral Zone	Approximately 30% of pond area

Introduction

This document outlines work efforts to be performed by Environmental Research & Design, Inc. (ERD) for Seminole County (County) to conduct a performance efficiency evaluation of the Navy Canal Stormwater Facility. This facility has been recently constructed by the County to reduce pollutant loadings discharging through the Navy Canal watershed. Hydrologic and water quality monitoring equipment will be installed at this site by ERD, and field monitoring will be conducted over a period of 12 months to evaluate system efficiencies. Collection of field data

and water quality samples will be conducted on a weekly basis. At the end of the 12-month monitoring program, a complete hydrologic and pollutant budget will be developed for the facility, and the overall performance efficiency of the system will be calculated for the evaluated parameters. Draft and Final Reports will be prepared and submitted to the County.

Project Description:

ERD proposes to perform the specific work efforts outlined below to conduct the performance efficiency evaluation for the Navy Canal Stormwater Facility. Details of specific work efforts proposed for this project are summarized below.

Tasks/Deliverables

1. **Project Kick-off Meeting/Site Visit:** The ERD Project Director will perform a project kick-off meeting with representatives of the County to discuss details of the proposed work efforts to be performed, project schedule, appropriate contact personnel for ERD and the County, contract management details, and issues related to site access and security. A site visit will be conducted to discuss proposed field activities and identify specific monitoring locations. It is the responsibility of the County to obtain any necessary permits or authorizations for use of the site for the proposed monitoring activities.
Deliverables: Meeting agenda, summary and sign in sheet.
Timeline: Month 1(Sept 2007)
2. **Prepare/Submit TMDL Water Quality Cost Share Information Package:** ERD will prepare and submit a TMDL Water Quality Cost Share Information Package to cover the costs associated with the monitoring program. A draft Cost Share Application will be prepared by ERD and submitted to the County for review and comment. A final Cost Share Application will be prepared based upon the review comments and submitted to FDEP for consideration.
Deliverable: TMDL Water Quality Cost Share Package.
Timeline: Month 1 (Sept 2007)
3. **Prepare/Submit Project QA Plan:** Development of a detailed Project QA Plan is a requirement for all projects receiving TMDL Water Quality Cost Share funding. This plan provides a description of the proposed field and laboratory activities and outlines specific Quality Assurance procedures for all anticipated field and laboratory activities. This plan will be prepared by ERD prior to initiation of the field monitoring activities. If the TMDL Water Quality Cost Share Application is approved, the Project QA Plan can be provided to FDEP to satisfy their requirement, along with a certification that the monitoring conducted to date has adhered to the QA Plan.
Deliverable: QA Plan.
Timeline: Month 1 (Sept 2007)
4. **Select/Install/Calibrate Field Monitoring Equipment:** ERD will evaluate the proposed monitoring site and appropriate field monitoring equipment will be selected to perform the performance efficiency evaluation. It is anticipated that flow monitoring and sample collection activities will occur at two separate sites at the Navy Canal facility. The first monitoring site will occur at the inflow culvert for the pond. The second flow monitoring and stormwater collection site will be located downstream from the outfall structure. A sensitive digital water level recorder will also be installed within the pond to assist in development of a hydrologic budget and to allow quantification of the magnitude of discharges through the primary outfall weir structure. A digital rainfall gauge will also be installed at the site along with a pan evaporation station. The autosamplers and flow monitoring equipment will be housed inside aluminum equipment shelters for security. After installation, each of the components will be calibrated according to manufacturer's instructions prior to initiation of the monitoring program.
Deliverable: Installed and calibrated field monitoring equipment
Timeline: Month 1 to Month 4 (Sept – December 2007)
5. **Perform Routine Monitoring:** ERD field personnel will visit the site once each week to retrieve stored hydrologic data and collect composite inflow and outflow samples. The operation of all on-site equipment will be evaluated during each visit. Activities performed at the site will be recorded on field notes. The monitoring program will last for a period of 12 months, with a minimum of 52 weekly monitoring visits

conducted during this study.

Continuous flow-weighted composite samples will be collected at both the inflow and outflow from the pond. Each of the composite inflow and outflow samples will be returned to the ERD Laboratory and analyzed for the following parameters:

- | | | | |
|----|----------------------|----|------------------------|
| a. | pH | g. | Total Nitrogen |
| b. | Alkalinity | h. | SRP |
| c. | Conductivity | i. | Particulate Phosphorus |
| d. | NH ₃ | j. | Total Phosphorus |
| e. | NO _x | k. | Turbidity |
| f. | Particulate Nitrogen | l. | TSS |

For budget purposes, it is assumed that an average of 3 samples per month will be collected at each of the two sites, for a total of 72 stormwater/baseflow samples collected during this project (3 samples/month/site x 12 months x 2 sites).

In addition, a bulk precipitation collector will be installed adjacent to the pond, and wet/ dry fallout bulk precipitation will be collected on a continuous basis. For budget purposes, it is assumed that approximately 3 composite bulk precipitation samples will be collected each month, for a total of 36 samples during this project (3 samples/month x 12 months).

Deliverable: Monitoring results in Final Project Report, QA reports per QAPP

Timeline: Month 4 to Month 16 (Dec 2007 to Dec 2008)

6. **Routine/Final Data Compilation:** All data retrieved during the weekly site visits will be compiled into a common database on a continuing basis. The weekly field data will be reviewed and evaluated with respect to accuracy and precision of the data. At the end of the monitoring program, all of the compiled data will be summarized in both tabular and graphic formats for use in the Final Report.
Deliverable: Compiled data summarized in tabular and graphic formats for incorporation in Final Report.
Timeline: Month 4 to Month 18 (Dec 2007 to Feb 2009)
7. **Prepare Draft Final Report:** A Draft Final Report will be prepared by ERD which summarizes all field and laboratory activities and provides an analysis of the performance efficiency of the system.
Deliverable: Two copies of the Draft Final Report will be provided to Seminole County and FDEP for review and comments.
Timeline: Month 18 to Month 19 (Feb 2009 to March 2009)
8. **Attend Review Meeting with County:** The ERD Project Director will attend a review meeting with the County to discuss comments on the Draft Final Report.
Deliverables: Meeting agenda, summary and sign in sheet.
Timeline: Month 19 to Month 20 (March 2009 to April 2009)
9. **Prepare Final Report:** A Final Report will be prepared for this project which incorporates the review comments provided by the County. Two hard copies and one digital copy of the Final Report will be provided to the County.
Deliverable: Final Report.
Timeline: Timeline: Month 21 (May 2009)

Project Budget:			
Project Funding Activity	DEP Funding	Matching Funds and Source	
		Funding	Source of Funds
Salaries:			
Fringe Benefits:			
Travel:			
Equipment:			
Supplies/Other Expenses:			
Contractual:	\$70,188.68	0	
Indirect:			
Total:	\$70,188.68		
Total Project Cost:		\$70,188.68	
% Match:		0%	

Project Budget Narrative:
Contractual: Subcontractor will be hired to complete the monitoring and evaluation under this Agreement.

Total Budget by Task:				
	Task	DEP Funding	Matching Funds and Source	
			Matching Funds	Source of Funds
1	Kick-off mtg.	651.00		
2	TMDL Pkg.	3,236.60		
3	QA Plan	3,567.36		
4	Field Monitoring Equip.	7,904.36		
5	Routine Monitoring	35,024.44		
6	Data Compilation	7,360.62		
7	Draft Final Report	9,236.56		
8	Review Meeting	794.00		
9	Final Report	2,413.74		
	Total:	\$70,188.68	0	
	Project Total:	\$70,188.68		

Project Title: Cameron Ditch Stormwater Facility Performance Efficiency Evaluation

Project Location: Seminole County

Project Background:
 The Cameron Ditch stormwater project was constructed as a regional stormwater detention pond to reduce pollutant loadings to Lake Jessup. This facility provides treatment for approximately 344 acres located within the Cameron Ditch sub-basin along the north shore of Lake Jessup. The projects consists of two interconnected wet detention ponds which discharge to a plunge pool, herbaceous wetland, and ultimately into Lake Jessup. Design criteria for the stormwater facility are summarized below (CDM, 2002):

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Parameter	Information
Treatment System Type	Wet detention ponds/wetland
Pond Area	5.0 acres at NWL, divided into two interconnected treatment areas
Drainage Basin Area	344 acres (includes 315 acres of existing areas to be retrofitted plus 29 acres to be developed with BMPs)
Basin Soil Hydrologic Groups	B/D, D
Basin Impervious Area	189 acres (60%); assumed future development
Treatment Volume (both ponds combined)	0.3" over basin area (315 acres); 0.5" over impervious area
Permanent Pool Volume	45.6 ac-ft below NWL (both ponds)
Pond Depth	
a. Maximum	a. 12 ft.
b. Mean	b. 9.1 ft. (45.6 ac-ft/5.0 ac)
Treatment Volume Recovery	50% of treatment volume released in 24-30 hours
Pond Residence Time	14 days (wet season conditions)
Littoral Zone	Approximately 30% of pond area

Introduction

This document outlines work efforts to be performed by Environmental Research & Design, Inc. (ERD) for Seminole County (County) to conduct a performance efficiency evaluation of the Cameron Ditch Stormwater Facility. This facility has been recently constructed by the County to reduce pollutant loadings discharging through the Cameron Ditch watershed. Hydrologic and water quality monitoring equipment will be installed at this site by ERD, and field monitoring will be conducted over a period of 12 months to evaluate system efficiencies. Collection of field data and water quality samples will be conducted on a weekly basis. At the end of the 12-month monitoring program, a complete hydrologic and pollutant budget will be developed for the facility, and the overall performance efficiency of the system will be calculated for the evaluated parameters. Draft and Final Reports will be prepared and submitted to the County.

Project Description:

ERD proposes to perform the specific work efforts outlined below to conduct the performance efficiency evaluation for the Cameron Ditch Stormwater Facility. Details of specific work efforts proposed for this project are summarized below.

Tasks/Deliverables

1. **Project Kick-off Meeting/Site Visit:** The ERD Project Director will perform a project kick-off meeting with representatives of the County to discuss details of the proposed work efforts to be performed, project schedule, appropriate contact personnel for ERD and the County, contract management details, and issues related to site access and security. A site visit will be conducted to discuss proposed field activities and identify specific monitoring locations. It is the responsibility of the County to obtain any necessary permits or authorizations for use of the site for the proposed monitoring activities.
Deliverables: Meeting agenda, summary and sign in sheet.
Timeline: Month 1 (Sept 2007)
2. **Prepare/Submit TMDL Water Quality Cost Share Information Package:** ERD will prepare and submit a TMDL Water Quality Cost Share Information Package to cover the costs associated with the monitoring program. A draft Cost Share Application will be prepared by ERD and submitted to the County for review and comment. A final Cost Share Application will be prepared based upon the review comments and submitted to FDEP for consideration.
Deliverable: TMDL Water Quality Cost Share Package.
Timeline: Month 1 (Sept 2007)
3. **Prepare/Submit Project QA Plan:** Development of a detailed Project QA Plan is a requirement for all projects receiving TMDL Water Quality Cost Share funding. This plan provides a description of the proposed field and laboratory activities and outlines specific Quality Assurance procedures for all

anticipated field and laboratory activities. This plan will be prepared by ERD prior to initiation of the field monitoring activities. If the TMDL Water Quality Cost Share Application is approved, the Project QA Plan can be provided to FDEP to satisfy their requirement, along with a certification that the monitoring conducted to date has adhered to the QA Plan.

Deliverable: QA Plan.

Timeline: Month 1 (Sept 2007)

4. **Select/Install/Calibrate Field Monitoring Equipment:** ERD will evaluate the proposed monitoring site and appropriate field monitoring equipment will be selected to perform the performance efficiency evaluation. It is anticipated that flow monitoring and sample collection activities will occur at four separate sites at the Cameron Ditch facility. The first monitoring site will occur at the inflow culvert for the system. The second flow monitoring and stormwater collection site will be located downstream from the plunge pool structure. Two additional autosamplers will be installed at the site to monitor additional inflows to the system. Specific locations of the monitoring sites will be selected jointly by ERD and the County.

Sensitive digital water level recorders will also be installed in each of the three pond segments to assist in development of a hydrologic budget and to allow quantification of the magnitude of discharges through the system. A digital rainfall gauge will also be installed at the site along with a pan evaporation station. The autosamplers and flow monitoring equipment will be housed inside aluminum equipment shelters for security. After installation, each of the components will be calibrated according to manufacturer's instructions prior to initiation of the monitoring program.

Deliverable: Installed and calibrated field monitoring equipment

Timeline: Month 1 to Month 4 (Sept – December 2007)

5. **Perform Routine Monitoring:** ERD field personnel will visit the site once each week to retrieve stored hydrologic data and collect composite inflow and outflow samples. The operation of all on-site equipment will be evaluated during each visit. Activities performed at the site will be recorded on field notes. The monitoring program will last for a period of 12 months, with a minimum of 52 weekly monitoring visits conducted during this study.

Continuous flow-weighted composite samples will be collected at each of the four inflow and outflow monitoring sites. Each of the composite inflow and outflow samples will be returned to the ERD Laboratory and analyzed for the following parameters:

- | | | | |
|----|----------------------|----|------------------------|
| a. | pH | g. | Total Nitrogen |
| b. | Alkalinity | h. | SRP |
| c. | Conductivity | i. | Particulate Phosphorus |
| d. | NH ₃ | j. | Total Phosphorus |
| e. | NO _x | k. | Turbidity |
| f. | Particulate Nitrogen | l. | TSS |

For budget purposes, it is assumed that an average of 3 samples per month will be collected at each of the four sites, for a total of 144 stormwater/baseflow samples collected during this project (3 samples/month/site x 12 months x 4 sites).

In addition, a bulk precipitation collector will be installed adjacent to the pond, and wet/ dry fallout bulk precipitation will be collected on a continuous basis. For budget purposes, it is assumed that approximately 3 composite bulk precipitation samples will be collected each month, for a total of 36 samples during this project (3 samples/month x 12 months).

Deliverable: Monitoring results in Final Project Report, QA reports per QAPP

Timeline: Month 4 to Month 16 (Dec 2007 to Dec 2008)

6. **Routine/Final Data Compilation:** All data retrieved during the weekly site visits will be compiled into a common database on a continuing basis. The weekly field data will be reviewed and evaluated with respect to accuracy and precision of the data. At the end of the monitoring program, all of the compiled data will be summarized in both tabular and graphic formats for use in the Final Report.

Deliverable: Compiled data summarized in tabular and graphic formats for incorporation in Final Report.
 Timeline: Month 4 to Month 18 (Dec 2007 to Feb 2009)

7. **Prepare Draft Final Report:** A Draft Final Report will be prepared by ERD which summarizes all field and laboratory activities and provides an analysis of the performance efficiency of the system.
 Deliverable: Two copies of the Draft Final Report will be provided to Seminole County for review and comments.
 Timeline: Start January 2009 and to be completed by March 2009
8. **Attend Review Meeting with County:** The ERD Project Director will attend a review meeting with the County to discuss comments on the Draft Final Report.
 Deliverables: Meeting agenda, summary and sign in sheet.
 Timeline: Month 19 to Month 20 (March 2009 to April 2009)
9. **Prepare Final Report:** A Final Report will be prepared for this project which incorporates the review comments provided by the County. Two hard copies and one digital copy of the Final Report will be provided to the County.
 Deliverable: Final Report.
 Timeline: Timeline: Month 21 (May 2009)

Project Budget:

Project Funding Activity	DEP Funding	Matching Funds and Source	
		Funding	Source of Funds
Salaries:			
Fringe Benefits:			
Travel:			
Equipment:			
Supplies/Other Expenses:			
Contractual:	\$92,756.38		
Indirect:			
Total:	\$92,756.38		0
Total Project Cost:		\$92,756.38	
% Match:			0%

Project Budget Narrative:

Contractual: Subcontractor will be hired to complete the monitoring and evaluation under this Agreement.

Total Budget by Task:

Task	DEP Funding	Matching Funds and Source	
		Matching Funds	Source of Funds
1 Kick-off mtg.	651.00		
2 TMDL Pkg.	3,236.60		
3 QA Plan	3,567.36		
4 Field Monitoring Equip.	8,865.32		
5 Routine Monitoring	54,609.16		
6 Data Compilation	8,810.64		
7 Draft Final Report	9,807.56		
8 Review Meeting	794.00		
9 Final Report	2,414.74		
Total:	\$92,756.38		0
Project Total:	\$92,756.38		

**ATTACHMENT B
PAYMENT REQUEST SUMMARY FORM**

Grantee: _____
Mailing Address: _____

Grantee's Grant Manager: _____
Payment Request No.: _____

DEP Agreement No.: S0341
Date Of Request: _____

Performance Period: _____
Percent Matching Required: _____

Amount Requested: \$ _____

GRANT EXPENDITURES SUMMARY SECTION

[Effective Date of Grant through End-of-Grant Period]

CATEGORY OF EXPENDITURE	AMOUNT OF THIS REQUEST	TOTAL CUMULATIVE PAYMENTS	MATCHING FUNDS	TOTAL CUMULATIVE MATCHING FUNDS
Salaries	\$N/A	\$N/A	\$N/A	\$N/A
Fringe Benefits	\$N/A	\$N/A	\$N/A	\$N/A
Travel (if authorized)	\$N/A	\$N/A	\$N/A	\$N/A
Subcontracting:				
Contractual Services	\$	\$	\$N/A	\$N/A
Design	\$N/A	\$N/A	\$N/A	\$N/A
Construction	\$N/A	\$N/A	\$N/A	\$N/A
Equipment Purchases	\$N/A	\$N/A	\$N/A	\$N/A
Supplies/Other Expenses	\$N/A	\$N/A	\$N/A	\$N/A
Land	\$N/A	\$N/A	\$N/A	\$N/A
Indirect	\$N/A	\$N/A	\$N/A	\$N/A
TOTAL AMOUNT	\$	\$	\$	\$
AGREEMENT AMOUNT	\$		\$	
Less Total Cumulative Payments of:	\$		\$	
TOTAL REMAINING IN GRANT	\$		\$	

GRANTEE CERTIFICATION

The undersigned certifies that the amount being requested for reimbursement above was for items that were charged to and utilized only for the above cited grant activities.

_____	_____
Grantee's Grant Manager's Signature	Grantee's Fiscal Agent
_____	_____
Print Name	Print Name
_____	_____
Telephone Number	Telephone Number

**INSTRUCTIONS FOR COMPLETING
PAYMENT REQUEST SUMMARY FORM**

GRANTEE: Enter the name of the grantee's agency.

MAILING ADDRESS: Enter the address that you want the state warrant mailed to.

DEP AGREEMENT NO.: This is the number on your grant agreement.

DATE OF REQUEST: This is the date you are submitting the request.

AMOUNT REQUESTED: This should match the amount on the "*TOTAL AMOUNT*" line for the "*AMOUNT OF THIS REQUEST*" column.

GRANTEE'S GRANT MANAGER: This should be the person identified as grant manager in the grant Agreement.

PAYMENT REQUEST NO.: This is the number of your payment request, not the quarter number.

PERFORMANCE PERIOD: This is the beginning and ending date of the invoice period.

PERCENT MATCHING REQUIRED: Enter your match requirement here.

GRANT EXPENDITURES SUMMARY SECTION:

"AMOUNT OF THIS REQUEST" COLUMN: Enter the amount that was paid out during the invoice period for which you are requesting reimbursement. This must agree with the budget category as in the currently approved budget in the current Grant Work Plan of your grant Agreement. Do not claim expenses in a budget category that does not have an approved budget. Do not claim items that are not specifically identified in the current Budget Narrative section of the current Grant Work Plan. Enter the column total on the "*TOTAL AMOUNT*" line. Enter the amount of the Agreement on the "*AGREEMENT AMOUNT*" line. Enter the total cumulative amount of this request **and** all previous payments on the "*LESS TOTAL CUMULATIVE PAYMENTS OF*" line. Deduct the "*LESS TOTAL CUMULATIVE PAYMENTS OF*" from the "*AGREEMENT AMOUNT*" for the amount to enter on the "*TOTAL REMAINING IN GRANT*" line.

"TOTAL CUMULATIVE PAYMENTS" COLUMN: Enter the cumulative amounts that have been claimed to date for reimbursement by budget category. The final report should show the total of all payments; first through the final payment (this amount cannot exceed the approved budget amount for that budget category). Enter the column total on the "*TOTALS*" line. **Do not enter anything in the shaded areas.**

"MATCHING FUNDS" COLUMN: Enter the amount to be claimed as match for the invoice period. This needs to be shown under specific budget categories according to the currently approved Grant Work Plan. Enter the total on the "*TOTAL AMOUNT*" line for this column. Enter the match budget amount on the "*AGREEMENT AMOUNT*" line for this column. Enter the total cumulative amount of this and any previous match claimed on the "*LESS TOTAL CUMULATIVE PAYMENTS OF*" line for this column. Deduct the "*LESS TOTAL CUMULATIVE PAYMENTS OF*" from the "*AGREEMENT AMOUNT*" for the amount to enter on the "*TOTAL REMAINING IN GRANT*" line.

"TOTAL CUMULATIVE MATCHING FUNDS" COLUMN: Enter the cumulative amount you have claimed to date for match by budget category. Put the total of all on the line titled "*TOTALS.*" The final report should show the total of all claims, first claim through the final claim, etc. **Do not enter anything in the shaded areas.**

GRANTEE CERTIFICATION: Must be signed by both the Grantee's Grant Manager as identified in the grant agreement and the Grantee's Fiscal Agent.

NOTE: If claiming reimbursement for travel, you must include copies of receipts and a copy of the travel reimbursement form approved by the Department of Financial Services, Chief Financial Officer.

ATTACHMENT C
PROGRESS REPORT FORM

DEP Agreement No.:	S0341		
Grantee Name:			
Grantee Address:			
Grantee's Grant Manager:		Telephone No.:	
Quarterly Reporting Period:			
Project Number and Title:			
<p>Provide a summary of project accomplishments to date. (Include a comparison of actual accomplishments to the objectives established for the period. If goals were not met, provide reasons why.)</p>			
<p>Provide an update on the estimated time for completion of the project and an explanation for any anticipated delays.</p>			
<p>Provide any additional pertinent information including, when appropriate, analysis and explanation of cost overruns or high unit costs.</p>			

(continued from page 1)

Identify below, and attach copies of, any relevant work products being submitted for the project for this reporting period (e.g., report data sets, links to on-line photographs, etc.)

Provide a project budget update, comparing the project budget to actual costs to date.

Budget Category	Total Project Budget	Expenditures Prior to this Reporting Period	Expenditures this Reporting Period	Project Funding Balance

This report is submitted in accordance with the reporting requirements of DEP Agreement No. S0341 and accurately reflects the activities and costs associated with the subject project.

Signature of Grantee's Grant Manager

Date

ATTACHMENT D

SPECIAL AUDIT REQUIREMENTS

The administration of resources awarded by the Department of Environmental Protection (*which may be referred to as the "Department", "DEP", "FDEP" or "Grantor", or other name in the contract/agreement*) to the recipient (*which may be referred to as the "Contractor", Grantee" or other name in the contract/agreement*) may be subject to audits and/or monitoring by the Department of Environmental Protection, as described in this attachment.

MONITORING

In addition to reviews of audits conducted in accordance with OMB Circular A-133 and Section 215.97, F.S., as revised (see "AUDITS" below), monitoring procedures may include, but not be limited to, on-site visits by Department staff, limited scope audits as defined by OMB Circular A-133, as revised, and/or other procedures. By entering into this Agreement, the recipient agrees to comply and cooperate with any monitoring procedures/processes deemed appropriate by the Department of Environmental Protection. In the event the Department of Environmental Protection determines that a limited scope audit of the recipient is appropriate, the recipient agrees to comply with any additional instructions provided by the Department to the recipient regarding such audit. The recipient further agrees to comply and cooperate with any inspections, reviews, investigations, or audits deemed necessary by the Chief Financial Officer or Auditor General.

AUDITS

PART I: FEDERALLY FUNDED

This part is applicable if the recipient is a State or local government or a non-profit organization as defined in OMB Circular A-133, as revised.

1. In the event that the recipient expends \$500,000 or more in Federal awards in its fiscal year, the recipient must have a single or program-specific audit conducted in accordance with the provisions of OMB Circular A-133, as revised. EXHIBIT 1 to this Agreement indicates Federal funds awarded through the Department of Environmental Protection by this Agreement. In determining the Federal awards expended in its fiscal year, the recipient shall consider all sources of Federal awards, including Federal resources received from the Department of Environmental Protection. The determination of amounts of Federal awards expended should be in accordance with the guidelines established by OMB Circular A-133, as revised. An audit of the recipient conducted by the Auditor General in accordance with the provisions of OMB Circular A-133, as revised, will meet the requirements of this part.
2. In connection with the audit requirements addressed in Part I, paragraph 1, the recipient shall fulfill the requirements relative to auditee responsibilities as provided in Subpart C of OMB Circular A-133, as revised.
3. If the recipient expends less than \$500,000 in Federal awards in its fiscal year, an audit conducted in accordance with the provisions of OMB Circular A-133, as revised, is not required. In the event that the recipient expends less than \$500,000 in Federal awards in its fiscal year and elects to have an audit conducted in accordance with the provisions of OMB Circular A-133, as revised, the cost of the audit must be paid from non-Federal resources (i.e., the cost of such an audit must be paid from recipient resources obtained from other than Federal entities).
4. The recipient may access information regarding the Catalog of Federal Domestic Assistance (CFDA) via the internet at <http://12.46.245.173/cfda/cfda.html>.

PART II: STATE FUNDED

This part is applicable if the recipient is a nonstate entity as defined by Section 215.97(2)(m), Florida Statutes.

1. In the event that the recipient expends a total amount of state financial assistance equal to or in excess of \$500,000 in any fiscal year of such recipient, the recipient must have a State single or project-specific audit for such fiscal year in accordance with Section 215.97, Florida Statutes; applicable rules of the Department of Financial Services; and Chapters 10.550 (local governmental entities) or 10.650 (nonprofit and for-profit organizations), Rules of the Auditor General. EXHIBIT 1 to this Agreement indicates state financial assistance awarded through the Department of Environmental Protection by this Agreement. In determining the state financial assistance expended in its fiscal year, the recipient shall consider all sources of state financial assistance, including state financial assistance received from the Department of Environmental Protection, other state agencies, and other nonstate entities. State financial assistance does not include Federal direct or pass-through awards and resources received by a nonstate entity for Federal program matching requirements.
2. In connection with the audit requirements addressed in Part II, paragraph 1; the recipient shall ensure that the audit complies with the requirements of Section 215.97(7), Florida Statutes. This includes submission of a financial reporting package as defined by Section 215.97(2), Florida Statutes, and Chapters 10.550 (local governmental entities) or 10.650 (nonprofit and for-profit organizations), Rules of the Auditor General.
3. If the recipient expends less than \$500,000 in state financial assistance in its fiscal year, an audit conducted in accordance with the provisions of Section 215.97, Florida Statutes, is not required. In the event that the recipient expends less than \$500,000 in state financial assistance in its fiscal year, and elects to have an audit conducted in accordance with the provisions of Section 215.97, Florida Statutes, the cost of the audit must be paid from the non-state entity's resources (i.e., the cost of such an audit must be paid from the recipient's resources obtained from other than State entities).
4. For information regarding the Florida Catalog of State Financial Assistance (CSFA), a recipient should access the Florida Single Audit Act website located at <https://apps.fldfs.com/fsaa> for assistance. In addition to the above websites, the following websites may be accessed for information: Legislature's Website at <http://www.leg.state.fl.us/Welcome/index.cfm>, State of Florida's website at <http://www.myflorida.com/>, Department of Financial Services' Website at <http://www.fldfs.com/> and the Auditor General's Website at <http://www.state.fl.us/audgen>.

PART III: OTHER AUDIT REQUIREMENTS

(NOTE: This part would be used to specify any additional audit requirements imposed by the State awarding entity that are solely a matter of that State awarding entity's policy (i.e., the audit is not required by Federal or State laws and is not in conflict with other Federal or State audit requirements). Pursuant to Section 215.97(8), Florida Statutes, State agencies may conduct or arrange for audits of State financial assistance that are in addition to audits conducted in accordance with Section 215.97, Florida Statutes. In such an event, the State awarding agency must arrange for funding the full cost of such additional audits.)

PART IV: REPORT SUBMISSION

1. Copies of reporting packages for audits conducted in accordance with OMB Circular A-133, as revised, and required by PART I of this Attachment shall be submitted, when required by Section .320 (d), OMB Circular A-133, as revised, by or on behalf of the recipient directly to each of the following:

- A. The Department of Environmental Protection at the following address:

Audit Director
Florida Department of Environmental Protection
Office of the Inspector General, MS 40
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

- B. The Federal Audit Clearinghouse designated in OMB Circular A-133, as revised (the number of copies required by Sections .320 (d)(1) and (2), OMB Circular A-133, as revised, should be submitted to the Federal Audit Clearinghouse), at the following address:

Federal Audit Clearinghouse
Bureau of the Census
1201 East 10th Street
Jeffersonville, IN 47132

- C. Other Federal agencies and pass-through entities in accordance with Sections .320 (e) and (f), OMB Circular A-133, as revised.

2. Pursuant to Section .320(f), OMB Circular A-133, as revised, the recipient shall submit a copy of the reporting package described in Section .320(c), OMB Circular A-133, as revised, and any management letters issued by the auditor, to the Department of Environmental Protection at the following address:

Audit Director
Florida Department of Environmental Protection
Office of the Inspector General, MS 40
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

3. Copies of financial reporting packages required by PART II of this Attachment shall be submitted by or on behalf of the recipient directly to each of the following:

- A. The Department of Environmental Protection at the following address:

Audit Director
Florida Department of Environmental Protection
Office of the Inspector General, MS 40
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

- B. The Auditor General's Office at the following address:

State of Florida Auditor General
Room 401, Claude Pepper Building
111 West Madison Street
Tallahassee, Florida 32399-1450

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4. Copies of reports or management letters required by PART III of this Attachment shall be submitted by or on behalf of the recipient directly to the Department of Environmental Protection at the following address:

Audit Director
Florida Department of Environmental Protection
Office of the Inspector General, MS 40
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

5. Any reports, management letters, or other information required to be submitted to the Department of Environmental Protection pursuant to this Agreement shall be submitted timely in accordance with OMB Circular A-133, Florida Statutes, or Chapters 10.550 (local governmental entities) or 10.650 (nonprofit and for-profit organizations), Rules of the Auditor General, as applicable.
6. Recipients, when submitting financial reporting packages to the Department of Environmental Protection for audits done in accordance with OMB Circular A-133, or Chapters 10.550 (local governmental entities) or 10.650 (nonprofit and for-profit organizations), Rules of the Auditor General, should indicate the date that the reporting package was delivered to the recipient in correspondence accompanying the reporting package.

PART V: RECORD RETENTION

The recipient shall retain sufficient records demonstrating its compliance with the terms of this Agreement for a period of **5** years from the date the audit report is issued, and shall allow the Department of Environmental Protection, or its designee, Chief Financial Officer, or Auditor General access to such records upon request. The recipient shall ensure that audit working papers are made available to the Department of Environmental Protection, or its designee, Chief Financial Officer, or Auditor General upon request for a period of **3** years from the date the audit report is issued, unless extended in writing by the Department of Environmental Protection.

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EXHIBIT – 1

FUNDS AWARDED TO THE RECIPIENT PURSUANT TO THIS AGREEMENT CONSIST OF THE FOLLOWING:

Federal Resources Awarded to the Recipient Pursuant to this Agreement Consist of the Following:					
Federal Program Number	Federal Agency	CFDA Number	CFDA Title	Funding Amount	State Appropriation Category

State Resources Awarded to the Recipient Pursuant to this Agreement Consist of the Following Matching Resources for Federal Programs:					
Federal Program Number	Federal Agency	CFDA	CFDA Title	Funding Amount	State Appropriation Category

State Resources Awarded to the Recipient Pursuant to this Agreement Consist of the Following Resources Subject to Section 215.97, F.S.:						
State Program Number	Funding Source	State Fiscal Year	CSFA Number	CSFA Title or Funding Source Description	Funding Amount	State Appropriation Category
Original Agreement	Water Quality Assurance Trust Fund, GAA Line Item 1822	06-07	37.039	Statewide Surface Water Restoration and Wastewater Projects	\$255,701.44	140076

Total Award					\$255,701.44	
--------------------	--	--	--	--	---------------------	--

For each program identified above, the recipient shall comply with the program requirements described in the Catalog of Federal Domestic Assistance (CFDA) [<http://12.46.245.173/cfda/cfda.html>] and/or the Florida Catalog of State Financial Assistance (CSFA) [<https://apps.fldfs.com/fsaa/searchCatalog.aspx>]. The services/purposes for which the funds are to be used are included in the Contract scope of services/work. Any match required by the recipient is clearly indicated in the Contract.

ATTACHMENT E
Quality Assurance Requirements
For State Funded NPS BMP Monitoring Agreements

1. All sampling and analyses performed under this Contract must conform to the requirements set forth in Chapter 62-160, Florida Administrative Code (F.A.C.) and “Requirements for Field and Analytical Work performed for the Department of Environmental Protection under Contract” (DEP-QA-002/02), February 2002.
2. **LABORATORIES**
 - a. The CONTRACTOR shall ensure that all laboratory testing activities are performed by laboratories certified by the Florida Department of Health Environmental Laboratory Certification Program (DoH ELCP) for all applicable matrix/method/analyte combinations to be measured.
 - b. If the laboratory is not certified for some or all of the proposed test measurements, the laboratory shall apply for certification within one month of Contract execution between the laboratory and the CONTRACTOR. Within six months of this Contract execution, the laboratory shall be fully certified for all applicable matrix/method/analyte combinations to be performed. Regardless of when the laboratory receives certification, the laboratory must implement all applicable standards of the National Environmental Laboratory Accreditation Conference (NELAC) upon Contract execution.
 - c. Laboratories shall maintain certification as specified in item 2.a above during the life of the Contract. Should certification for an analyte or test method be lost, all affected tests shall be immediately sub-contracted to a laboratory with current DoH ELCP certification in the appropriate matrix/method/analyte combination(s). The CONTRACTOR shall notify the DEP contract manager in writing before any change to a sub-contracted laboratory is made.
 - d. A copy of the DoH ELCP Certificate and the associated list of specific fields of accreditation for each contracted or sub-contracted laboratory shall be provided to the DEP contract manager upon Contract execution or upon receiving DoH certification (see items 2.a and 2.b above).
 - e. The CONTRACTOR shall ensure that an acceptable initial demonstration of capability (IDOC), as described in Appendix C of Chapter 5 of the NELAC Standards is performed. Each laboratory that performs any of the proposed matrix/method/analyte combination(s) must have the requisite IDOC documentation and supporting laboratory records. IDOCs shall be performed before the test procedure is used to generate data for this Contract. If requested by the Department, documentation that supports the IDOC shall be made available for review.
 - f. When performance test samples are not required by DoH ELCP for certification, the laboratory shall obtain, analyze and evaluate performance test samples, standard reference materials (SRM) or other externally assayed quality control (QC) samples, hereinafter known collectively as quality control check (QCC) samples.
 - (i) The laboratory shall ensure that the selected QCC samples(s) represent all matrix/method/analyte combinations that are not subject to certification requirements.
 - (ii) These samples shall be analyzed at six-month intervals and the results shall be within the acceptable range established by the QCC sample provider.
 - g. Any non-standard laboratory procedures or methods that are proposed for use (i.e., those not approved by DEP for standard environmental analyses) shall be submitted for review and approval in accordance with DEP-QA-001/01, “New and Alternative Analytical Laboratory Methods,” February 1, 2004. These procedures or methods shall be approved by the DEP contract manager before use under this Contract and must be cited or described in the required planning document (see Section 6).
 - h. The CONTRACTOR shall ensure that Practical Quantitation Limits (PQLs) and Method Detection Limits (MDLs) required by the Contract are listed in the planning document (see Section 6).
 - i. The CONTRACTOR shall ensure that the selected laboratory test methods listed in the planning document can provide results that meet the Contract data quality objectives.
 - j. The CONTRACTOR shall ensure that all laboratory testing procedures follow the analytical methods as approved in the planning document (see Section 6).
 - k. The CONTRACTOR shall ensure that the all laboratory quality control measures are consistent with Chapter 5 of the NELAC standards.
 - l. In addition, the CONTRACTOR shall ensure that the quality control requirements specified in the attached addenda are followed.
 - m. The CONTRACTOR shall ensure that all sample results are calculated according to the procedures specified in the analytical methods approved in the planning document.

3. **FIELD ACTIVITIES**

- a. "Sample" refers to samples that have been either collected or analyzed under the terms of this Contract.
- b. The CONTRACTOR shall ensure that all sample collection and field testing activities are performed in accordance with the Department's "Standard Operating Procedures for Field Activities" (DEP-SOP-001/01, February 1, 2004). The specific standard operating procedures (SOPs) to be used for this Contract shall be cited in the planning document (see Section 6).
- c. Any non-standard field procedure shall be submitted for review and approval to the DEP contract manager in accordance with section FA 2000 of DEP-SOP-001/01. All non-standard procedures and methods must be approved by the DEP contract manager before use under this Contract and must be cited or described in the planning document.
- d. Per the quality control measures outlined in the DEP SOPs (FQ 1000 and the calibration requirements of the FT-series for field testing), the CONTRACTOR shall ensure that the following field quality controls (and any additional quality control measures specified in the addenda) are incorporated into the project design:
 - (i) Matrix-Related Quality Controls - The CONTRACTOR shall ensure that the laboratory is provided with sufficient sample volume to analyze at least one set of matrix spikes and either matrix spike duplicates or laboratory duplicates as follows:
 - (1) The first time a sample from a sample collection matrix (see Table FA 1000-1) is collected;
 - (2) The last time samples are collected for the sample collection matrix.
 - (ii) Field-Generated Quality Control (QC) Blanks – Blanks associated with field activities as defined in FQ 1210 of the DEP SOPs shall be collected according to the requirements of FQ 1230.
 - (1) If an analyte detected in the sample is also found in any field-generated QC blank that is associated with the sample, the CONTRACTOR shall investigate and attempt to determine the cause of the QC blank contamination. The outcome of this investigation shall be reported and shall include a discussion of the corrective measures taken to minimize future occurrences of QC blank contamination.
 - (2) If an analyte detected in the sample is also found in any field-generated QC blank that is associated with the sample, the CONTRACTOR shall ensure that the analyte in the affected sample is reported as estimated ("J" with a narrative explanation) unless the analyte concentration in the affected sample is at least 10 times the reported QC blank value concentration.

4. **REPORTING, DOCUMENTATION AND RECORDS RETENTION**

- a. The CONTRACTOR shall ensure that all laboratory and field records as outlined in Rules 62-160.240 and .340, F.A.C. are retained for a minimum of five years after the project completion.
- b. All field and laboratory records that are associated with work performed under this Contract shall be organized so that any information can be quickly and easily retrieved for inspection, copying or distribution.
- c. The CONTRACTOR shall ensure that all laboratory reports are issued in accordance with NELAC requirements. These reports shall be submitted to the DEP contract manager as part of Quarterly Progress Reports and shall include the following information:
 - ▶ Laboratory sample identification (ID) and associated Field ID
 - ▶ Analytical/test method
 - ▶ Parameter/analyte name
 - ▶ Analytical result (including dilution factor)
 - ▶ Result unit
 - ▶ Applicable DEP Qualifiers per Table 1 of Chapter 62-160, F.A.C.
 - ▶ Result comment(s) to include corrective/preventive actions taken for any failed QC measure (e.g., QC sample, calibration failure, etc.) or other problem related to the analysis of the samples
 - ▶ Date and time of sample preparation (if applicable)
 - ▶ Date and time of sample analysis
 - ▶ Results of laboratory verification of field preservation
 - ▶ Sample matrix
 - ▶ DoH ELCP certification number for each laboratory (must be associated with the test result(s) generated by the laboratory)
 - ▶ MDL
 - ▶ PQL
 - ▶ Sample type (such as blank type, duplicate type, etc.)
 - ▶ Field and laboratory QC blank results:

- Laboratory QC blank analysis results as required by the method, NELAC Chapter 5 and the planning document (see Section 6 below);
 - Field quality control results including trip blanks, field blanks, equipment blanks, and field duplicates (or replicates) as specified in the planning document (see Section 6)
 - ▶ Results of sample matrix spikes, laboratory duplicates or matrix spike duplicates, as applicable
 - ▶ Results of surrogate spike analyses (if performed)
 - ▶ Results of laboratory control samples (LCS)
 - ▶ Link between each reported quality control measure (e.g., QC blanks, matrix spikes, LCS, duplicates, calibration failure, etc.) and the associated sample result(s)
 - ▶ Acceptance criteria used to evaluate each reported quality control measure
- d. The CONTRACTOR shall ensure that the following field-related information is reported to the DEP contract manager:
- ▶ Site and/or stormwater BMP name
 - ▶ Field ID for each sample container and the associated analytes (test methods) for which the container was collected
 - ▶ Date and time of sample collection
 - ▶ Sample collection depth, if applicable
 - ▶ Sample collection method identified by the DEP SOP number, where applicable
 - ▶ If performed, indicate samples that were filtered
 - ▶ Field test measurement results, if applicable:
 - DEP SOP number (FT-series), where applicable
 - Parameter name
 - Result
 - Result unit
 - Applicable Data Qualifiers per Table 1 of Chapter 62-160, F.A.C.
 - ▶ Narrative comments discussing corrective/preventive actions taken for any failed QC measure (e.g., blank contamination, meter calibration failure, split sample results, etc.), unacceptable field measurement or other problems related to the sampling event.
- e. The CONTRACTOR shall submit the lab and field data above electronically in either Excel or Access format.

5. **AUDITS**

- a. AUDITS BY THE DEPARTMENT – Pursuant to Rule 62-160.650, F.A.C., the Department may conduct audits of field and/or laboratory activities. In addition to allowing Department representatives to conduct onsite audits, the CONTRACTOR, upon request by the Department, must provide all field and laboratory records pertinent to the contracted field and laboratory activities. If an audit by the Department results in a determination that the reported data are not usable for the purpose(s) or do not meet the data quality objectives specified by the Contract, the DEP contract manager shall pursue remedies available to the Department, including those outlined in Section 8 below.
- b. PLANNING REVIEW AUDITS –
- (i) Initial: Within 15 days of completing the first sampling and analysis event, the CONTRACTOR and all associated subcontractors shall review the planning document (see Section 6 below) relative to the completed field and laboratory activities to determine if the data quality objectives are being met, identify any improvements to be made to the process, and refine the sampling and/or analytical design or schedule. Within one month of the review, a summary of the review, including any corrective action plans or amendments to the planning document, shall be sent to the DEP contract manager and a copy shall be maintained with the permanent project records.
 - (ii) Ongoing: Planning reviews as described in item (i) above shall occur annually.
- c. QUALITY SYSTEMS AUDITS – The CONTRACTOR and all subcontractors shall ensure that any required laboratory and field quality system and management systems audits are performed according to the respective Quality Manuals for each contracted and sub-contracted entity. These audits shall be documented in the CONTRACTOR’s and subcontractors’ records.
- d. STATEMENTS OF USABILITY – As a part of the audit process and the final report, the CONTRACTOR shall provide statements about data usability relative to the Contract Data Quality Objectives and Data Quality Indicators specified in the planning document, this attachment and the addenda.
- (i) The CONTRACTOR shall ensure that all acceptance and usability criteria required by this Contract not specified above are listed in the planning document.

- (ii) The CONTRACTOR shall ensure that the results of all quality control measures described above are evaluated according to the acceptance criteria listed in this attachment, the addenda and the planning document.
- (iii) The CONTRACTOR shall ensure that all sample results are evaluated according to the additional usability criteria specified in the planning document.

6. **PLANNING DOCUMENT**

- a. The CONTRACTOR shall submit the planning document identified below to the DEP contract manager no later than 120 days prior to the commencement of field and laboratory activities. Failure to submit the planning document in this required timeframe shall result in a delay of approval to begin work until the document has been submitted to the Department and approved by the DEP contract manager. The document shall be submitted as a *Sampling and Analysis Plan or, if desired, as the final monitoring plan submitted to the DEP contract manager*. In either case, the plan shall include/discuss the information contained in the document "Requirements for Field and Analytical Work Performed for the Department of Environmental Protection Under Contract", DEP-QA-002/02.
- b. The CONTRACTOR and subcontractors may submit a version of the planning document to the Department for approval no more than three times. If the CONTRACTOR fails to obtain approval for the planning document after the third (final) submission to the Department, the DEP contract manager may suspend or terminate the Contract.
- c. The DEP Contract number shall appear on the title page of the submitted planning document. Within forty-five (45) days of receipt of the properly identified planning document by the Department, the Department shall review and either approve the planning document or provide comments to the CONTRACTOR and affected subcontractors as to why the planning document is not approved. If further revisions are needed, the CONTRACTOR shall then have fifteen (15) days from the receipt of review comments to respond. The Department shall respond to all revisions to the planning document within thirty (30) days of receipt of any revisions.
- d. If the review of the planning document by the Department is delayed, through no fault of the CONTRACTOR, beyond sixty (60) days after the planning document is received by the Department, the CONTRACTOR shall have the option, after the planning document is approved, of requesting and receiving an extension in the term of the Contract for a time period not to exceed the period of delayed review and approval. This option must be exercised at least sixty (60) days prior to the current termination date of the Contract.
- e. Sampling and analysis for the Contract may not begin until the planning document has been approved.
- f. Once approved, the CONTRACTOR shall follow the protocols specified in the approved planning document including, but not limited to:
 - ▶ Ensuring that all stated quality control measures are collected, analyzed and evaluated for acceptability;
 - ▶ Using only the protocols approved in the planning document; and
 - ▶ Using only the equipment approved in the planning document.
- g. If any significant changes in procedures or test methods, changes in equipment, changes in subcontractor organizations or changes in key personnel occur, the CONTRACTOR shall submit appropriate revisions of the planning document to the DEP contract manager for review. The proposed revisions may not be implemented until they have been approved by the DEP contract manager. If the CONTRACTOR fails to submit the required revisions, the DEP contract manager may suspend or terminate the Contract.
- h. When the approved planning document requires modification, the amendments shall be
 - (i) Provided in a new planning document, or
 - (ii) Provided as amended sections of the current planning document, or
 - (iii) Documented through written or electronic correspondence with the DEP contract manager and incorporated into the approved planning document.

7. **DELIVERABLES**

- a. The following lists the expected schedule for the deliverables that are associated with the Quality Assurance requirements of this Contract:
 - (i) Copy of DoH ELCP Certificate(s) and the associated list(s) of specific fields of accreditation, per item 2.d above.
 - (ii) Non-standard laboratory or field procedures – The CONTRACTOR shall submit to the DEP contract manager all required information necessary for review of non-standard procedures per items 2.h. and 3.b. above.

- (iii) Reports of planning review audits as specified in item 5.b. above.
- (iv) Statements of Usability as specified in item 5.d. above.
- (v) Planning document per Section 6, above.

8. **CONSEQUENCES**

- a. Failure to comply with any requirement of this attachment may result in:
 - (i) Immediate termination of the Contract.
 - (ii) Withheld payment for the affected activities.
 - (iii) Contract suspension until the requirement(s) has been met.
 - (iv) A request to refund already disbursed payments.
 - (v) A request to redo work affected by the non-compliant activity.
 - (vi) Other remedies available to the Department.

Addendum 1

Quality Control Requirements for Laboratories Performing Chemical Analysis

In addition to the quality control requirements outlined in Chapter 5 of the NELAC Standards, the following quality control measures shall be implemented for this Contract. Note: "Sample" refers to samples that have been either collected or analyzed under the terms of this Contract.

1. Matrix-Related Quality Control Samples - The CONTRACTOR shall ensure that samples associated with this Contract are used for matrix spikes, and either laboratory duplicates or matrix spike duplicates. The laboratory shall analyze these samples:
 - a. The first time samples from a sample collection matrix (see Table FA 1000-1) are submitted to the laboratory under this Contract for analysis. The laboratory shall select one or more of the received samples for use in composition of the matrix spike and duplicates.
 - b. The last time samples from the sample collection matrix are received and analyzed. The laboratory shall select one or more of the received samples for use in composition of the matrix spike and duplicates.
 - c. Spike levels must be at the concentrations specified in item 3 below.
 - d. If the selected sample concentration is expected to be below the Contract-specified practical quantitation limit (PQL) listed in the planning document, then matrix spike duplicates must be used.
2. Per NELAC Chapter 5 requirements, as least one Laboratory Control Sample (LCS; also known as Laboratory Fortified Blank) shall be prepared, analyzed and evaluated with each batch of 20 samples or less.
 - a. The acceptance criteria for the LCS shall be specified in the planning document.
 - b. If the LCS is unacceptable, the samples associated with the LCS shall be reprocessed with a new LCS. If the samples cannot be reprocessed, the data must be appropriately qualified.
3. For applicable analytes denoted in the planning document, a QC check sample, standard reference material (SRM) or other quality control sample, hereinafter identified collectively as quality control check samples (QCCS), shall be processed with each sample preparation batch and analyzed for evaluation according to the acceptance limits established for the QCCS.
 - a. Analysis of a QCCS is required for but not limited to the following analyses:
 - (i) Chlorophyll – the assay for the QCCS or its original formulation shall have been determined by an organization external to the laboratory ;
 - (ii) Biochemical oxygen demand (BOD) or carbonaceous BOD (CBOD) – the method-specified glucose/glutamic acid check solution shall be used; and,
 - b. If the QCCS is unacceptable, the samples associated with the QCCS shall be reprocessed with a new QCCS. If the samples cannot be reprocessed, the data must be appropriately qualified for all contracted samples in the preparation batch.
4. Spiking/Fortification Requirements - All spike fortifications must take place prior to any required sample preparation steps (e.g., sample extraction, sample digestion, pH adjustment, etc.). The final concentration of any spike fortification shall be at the applicable level identified below.
 - a. If any of the samples in the preparation batch are non-detect (i.e., below the MDL specified in the planning document), the spiking level must not be greater than 2 times the Contract-specified PQL.
 - b. The concentration of a spiked sample cannot exceed 5 times the highest concentration of any contracted sample in the preparation batch.
5. Evaluation of Matrix Spikes - The results of matrix spikes must meet the acceptance criteria specified by the Contract and listed in the planning document or the data must be appropriately qualified.
 - a. If the failure is reported to be due to *sample* matrix interference, the laboratory shall document the process by which this conclusion is determined.
6. Evaluation of Laboratory Duplicate/Replicate Samples – All replicate samples (sample duplicates, matrix spike duplicates, LCS duplicates or other replicates) must be evaluated for a precision criterion not to exceed 20 % RPD. This criterion shall be listed in the planning document.
 - a. In the event that laboratory replicate agreement is not observed, the laboratory must investigate the poor precision and report the results with appropriate qualifiers and/or comments.
7. Instrument Calibration – In addition to calibration procedures specified in the analytical methods listed in the planning document, the CONTRACTOR shall ensure that the following requirements are met:
 - a. All sample results shall be chronologically bracketed between acceptable calibration verifications.
 - b. Initial Calibration Requirements
 - (i) The minimum number of calibration standards required to calibrate each instrument used for the contracted analyses shall conform to the analytical method approved in the planning document. If the

- minimum number of calibration standards is not specified in the method, the number must be specified in the planning document and shall be consistent with the NELAC Chapter 5 standards.
- (ii) Unless otherwise specified by the method, all sample results shall be based on the initial calibration curve responses.
 - (iii) If linear regressions are used, the correlation coefficient shall be equal to or greater than 0.995 for all regressions.
 - (iv) Immediately after performing an initial calibration, the accuracy of the calibration shall be verified using a second source. A second source may be a standard, a Standard Reference Material (SRM), or other sample type with a verified concentration such as a QC Check Sample. Standards must have been prepared from a different lot or vendor.
 - (v) The acceptance criteria for second-source verifications shall be specified in the planning document.
 - (vi) Sample analysis cannot proceed if an initial calibration is unacceptable.
- c. Continuing Calibration Requirements:
- (i) When an initial calibration is not performed on the day of analysis, a continuing calibration standard shall be analyzed, evaluated and determined to be acceptable prior to analyzing samples.
 - (ii) A continuing calibration standard shall be analyzed and evaluated at the end of the analytical run.
 - (iii) The acceptance criteria for continuing calibration verifications shall be specified in the planning document.
 - (iv) For each analytical run, the analytical sensitivity must be evaluated using a continuing calibration standard prepared at the Contract-specified PQL. The analyzed value of this standard must be within 70% – 130% of the expected value. If this PQL check fails, the blank and associated sample results must be reported as “estimated” per Chapter 62-160, F.A.C. unless the affected results are at least 10 times the absolute value of the observed bias of the PQL check.
 - (v) If a continuing calibration verification fails, samples not chronologically bracketed by acceptable calibration verifications must be reanalyzed or appropriately qualified.
- d. Sample results below the Contract-specified PQL and above the highest calibration standard shall be appropriately qualified.
8. Quality Control Blanks
- a. If a Contracted analyte is detected in any analytical QC blank, the sample results that are associated with the blank must be reported with the appropriate qualifier from Chapter 62-160, F.A.C., unless the affected sample concentrations are at least 10 times higher than the calculated QC blank concentration.
 - b. Sample results must be chronologically bracketed with acceptable beginning and ending analytical QC blanks.
 - c. If a Contracted analyte is detected in the field blank, equipment blank or trip blank, the result must be confirmed by reanalyzing a new aliquot of the blank unless the sample concentration results associated with the blank are at least 10 times the calculated blank concentration. The laboratory must investigate the blank contamination to determine that positive blank results are not due to a laboratory error and report the affected samples and field-generated blank results with appropriate qualifiers and/or comments.
9. If any quality control measure or calibration verification fails (including those specified above), samples that are associated with the failure must be reanalyzed, if possible. Sample data that are associated with a failed quality control measure or calibration must be appropriately qualified as specified in Chapter 62-160, F.A.C. An explanatory comment must be attached to the final report for each result that has a qualifier code other than U, I, or A. Any additional qualifier codes used but not explicitly listed in Chapter 62-160, F.A.C. must be identified and defined in the report.
10. The reported MDL and PQL for each sample must be adjusted for dilution factors and any relevant preparation weights and volumes.

Addendum 2

Quality Control Requirements for Laboratories Performing Microbiological Testing

In addition to the quality control requirements outlined in Chapter 5 of the NELAC Standards, the following quality control measures shall be implemented for this Contract. Note: "Sample" refers to samples that have been either collected or analyzed under the terms of this Contract.

1. All microbiological analyses must conform to the requirements for facilities, personnel qualifications, equipment specifications and quality control measures discussed in *AWWA Standard Methods 20th edition, section 9020*.
2. Quality Control Blanks
 - a. If the membrane filter technique is used, the sample set(s) shall be associated with a beginning and ending filtration blank.
 - b. The results of any blank must be < 1 CFU/100 mL or the associated sample results must be reported with the appropriate qualifier from Chapter 62-160, F.A.C.
3. Laboratory Quality Control Duplicates
 - a. At least 10% of the samples (or one per test run) shall be duplicated.
 - b. All duplicate results shall be evaluated per method specifications using the precision criterion. The range of the transformed duplicates shall not exceed the precision criterion established by the laboratory. In the event that laboratory duplicate agreement is not observed, the laboratory must investigate the poor precision and report the results with appropriate qualifiers and/or comments.
 - c. Field Quality Control Duplicates or Replicates - In the event that agreement (less than or equal the laboratory established precision criterion) is not observed between results from field-generated replicate samples, the laboratory must investigate the replicate analyses to determine that poor precision is not due to a laboratory error and report the results with appropriate qualifiers and/or comments. The laboratory shall use the analytical method specifications for precision control as a guide to evaluation of the field-generated replicate results.
4. Colony Counts
 - a. In addition to the requirements listed below, all analytical results shall be calculated by the procedures established in the microbiological method(s) approved for the Contract and listed in the planning document.
 - b. The laboratory shall make every attempt to ensure that colony counts are in the ideal range of 20 – 60 colonies per plate. Reported values from colony plate counts outside this range shall be qualified with a "B" (unless the reported value is from a 100 mL sample and the count is less than 20).
 - c. If all counts are above 60, the result shall be calculated and reported from the highest dilution. This result must be reported as "estimated".
 - d. The laboratory shall follow the reporting requirements specified in the method for other results that are outside the ideal range (item 5.b. above)
 - e. If the sample result is "too numerous to count (TNTC)" the laboratory shall report the filtration volume with the data qualifier "Z".
 - f. Colony counts from samples that have been verified shall be adjusted based on the verification results as specified in the analytical method approved for this Contract and listed in the planning document.