



VILLAGE OF KEY BISCAYNE

Village Council

Michael W. Davey, Mayor

Brett G. Moss, Vice Mayor

Franklin H. Caplan

Luis Lauredo

Edward London

Allison McCormick

Ignacio J. Segurola

SPECIAL COUNCIL MEETING TUESDAY, JUNE 28, 2022 5:30 PM

1. CALL TO ORDER/ROLL CALL OF MEMBERS

2. PLEDGE OF ALLEGIANCE

3. PUBLIC COMMENT:

There is a (3) minute time limit for each speaker during public comments. Your cooperation is appreciated in observing the (3) minute rule. If you have a matter you would like to discuss during public comments, a request form is available at the entrance of the Council Chamber, please fill-it in and return it to the Village Clerk prior to the start of the meeting. When your name is called, please come forward to the podium. Or if you are joining the meeting remotely, please dial any of the following Zoom numbers, US: +1 (312) 626-6799 or +1 (929) 205-6099 or +1 (301) 715-8592 , and enter the Zoom Meeting ID: 231 627 8415, followed by #. There is no participant ID. Press # again. Please press *9 to "raise your hand" which places you in a queue to speak. You will be called upon by the last three digits of your telephone number when it is your turn to speak. When called upon, please press *6 to unmute yourself. PLEASE STATE YOUR NAME, ADDRESS, IF YOU ARE A HIRED CONSULTANT OR VILLAGE EMPLOYEE AND/OR IF ENGAGED IN LOBBYING ACTIVITIES AND/OR REPRESENTING AN ORGANIZATION FOR THE RECORD.

4. RESOLUTIONS:

- 4.A. A RESOLUTION OF THE VILLAGE COUNCIL OF THE VILLAGE OF KEY BISCAYNE, FLORIDA, ACCEPTING A CORAL PROTECTION AND RESTORATION (CPR) MATCHING GRANT IN AN AMOUNT OF \$159,537 FROM THE FLORIDA DEPARTMENT

OF ENVIRONMENTAL PROTECT (FDEP) FOR A STORMWATER SUSTAINABILITY PILOT PROJECT AND APPROVING AN AGREEMENT RELATED TO THE SAME; PROVIDING FOR AUTHORIZATION; AND PROVIDING FOR AN EFFECTIVE DATE (CHIEF RESILIENCY OFFICER ROLAND SAMIMY)

RECOMMENDATION - Approval

TAB 1

5. ADJOURNMENT

I. ANY PERSON WISHING TO ADDRESS THE VILLAGE COUNCIL ON AN ITEM ON THIS AGENDA IS ASKED TO REGISTER WITH THE VILLAGE CLERK PRIOR TO THAT ITEM BEING HEARD. PRIOR TO MAKING A STATEMENT, PLEASE STATE YOUR NAME, ADDRESS, IF YOU ARE A HIRED CONSULTANT OR VILLAGE EMPLOYEE/FORMER VILLAGE EMPLOYEE AND/OR IF ENGAGED IN LOBBYING ACTIVITIES FOR THE RECORD.

II. IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT OF 1990, ALL PERSONS WHO ARE DISABLED AND WHO NEED SPECIAL ACCOMMODATIONS TO PARTICIPATE IN THIS PROCEEDING BECAUSE OF THAT DISABILITY SHOULD CONTACT THE OFFICE OF THE VILLAGE CLERK, 88 WEST MCINTYRE STREET, KEY BISCAINE, FLORIDA 33149, TELEPHONE NUMBER (305) 365-5506, NOT LATER THAN TWO BUSINESS DAYS PRIOR TO SUCH PROCEEDINGS.

III. IF A PERSON DECIDES TO APPEAL ANY DECISION MADE BY THE VILLAGE COUNCIL WITH RESPECT TO ANY MATTER CONSIDERED AT A MEETING OR HEARING, THAT PERSON WILL NEED A RECORD OF THE PROCEEDINGS AND, FOR SUCH PURPOSE, MAY NEED TO ENSURE THAT A VERBATIM RECORD OF THE PROCEEDINGS IS MADE, WHICH RECORD INCLUDES THE TESTIMONY AND EVIDENCE UPON WHICH THE APPEAL IS TO BE BASED (F.S.286.0105).

IV. IN ACCORDANCE WITH VILLAGE CODE SECTION 2-161, ADOPTING SECTION 2-11.1(s) OF THE MIAMI-DADE COUNTY CODE, ANY PERSON ENGAGING IN LOBBYING ACTIVITIES, AS DEFINED THEREIN, MUST REGISTER AT THE VILLAGE CLERK'S OFFICE BEFORE ADDRESSING THE COUNCIL ON THE ABOVE MATTERS OR ENGAGING IN LOBBYING ACTIVITIES.

THE ABOVE MEETINGS ARE HELD IN THE COUNCIL CHAMBER, 560 CRANDON BOULEVARD AND ARE SUBJECT TO CHANGE. ZONING MEETINGS AND SPECIAL COUNCIL MEETINGS WILL BE SCHEDULED ON AN AS NEEDED BASIS. PLEASE VISIT www.keybiscayne.fl.gov TO VIEW THE MEETING SCHEDULE.



VILLAGE OF KEY BISCAIYNE

Village Council

Michael W. Davey, Mayor

Brett Moss, Vice Mayor

Frank Caplan

Luis Lauredo

Allison McCormick

Edward London

Ignacio J. Seguro

Village Manager

Steven C. Williamson

MEMORANDUM

DATE: June 28, 2022

TO: Honorable Mayor and Councilmembers

FROM: Steven C. Williamson, Village Manager

RE: Authorize the Village Manager to accept Florida Department of Environmental Protection (FDEP) Coral Protection and Restoration (CPR) Grant in the amount of \$159,537 in support of stormwater quality pilot project

RECOMMENDATION

I recommend that the Village Council authorize the Village Manager to accept the Florida Department of Environmental Protection (FDEP) Coral Protection and Restoration (CPR) Grant in the amount of \$159,537 in support of stormwater quality pilot project.

Given the high level of concern over Biscayne Bay water quality and the impact stormwater discharges can have on water quality in the nearshore where outfalls discharge, as well as the fact the the Village is poised to redesign its stormwater system to include Best Management Practice (BMP) treatment trains, it is a timely and effective way to test out a variety of treatment approaches that could be deployed more broadly across the system should they prove effective.

BACKGROUND

Currently, Biscayne Bay is showing signs of poor water quality and habitat degradation as a result of polluted freshwater inflows to the bay. Significant attention is being given to the various sources of pollution such as contaminants that are transported by stormwater and solutions to reduce or eliminate these contaminants. The project is a pilot initiative to demonstrate the effectiveness and benefits of capturing stormwater run-off pollutants at the source before they reach the bay using two different technological approaches.

The proposed scope of work consists of two pilot Best Management Practice (BMP) technologies, including the installation and monitoring of AbTech Inc. Ultra-Urban® Filters (UUFs), SOP Technologies under-grate filter units, and SOP Technologies curb inlet screens within the K-8 School Basin. It is anticipated that the innovative filters and screens will maximize pollutant capture with minimal maintenance and no disruption during peak rain events. Through the capture of pollutants at the source rather than a late stage of the drainage process, the filtration practices can provide a high level of treatment early on and minimize impacts from peak rain events, while decreasing the impact debris and associated pollutants have on Biscayne Bay. This pilot proposes to install 10 Ultra-Urban® filters (UUFs) supplied by AbTech Industries (described below) into drains in the area described as K-8. The intent is to demonstrate capture and adsorption of stormwater run-off pollutants at the source and potential benefit for utilization as a Village-wide



VILLAGE OF KEY BISCAINE

strategy for sustainably purifying stormwater to benefit the environmental and ecological vitality of Biscayne Bay. These filters are “workhorse” BMP’s, used to act as the first line of defense, capturing trash, debris, sediment and absorption of dissolved pollutants from runoff from impervious surfaces used for parking and streets, and to maximize pollutant capture with minimal maintenance and no hindrance during peak rain events that result in street flooding. The pilot project will also include SOP Technologies furnishing and installing up to 45 of its patented under-grate filter baskets and up to 13 SOP Technologies patented curb inlet filters. The under-grate filter baskets and curb inlet filters will be used to prevent leaves, trash and debris from entering the stormwater drainage systems.

The pilot project will test how effective both versions of the filters are at keeping debris at the street to facilitate debris removal and prevent debris and litter from entering the K-8 elementary school portion of the stormwater drainage system. Additionally the pilot project will assess the operational impacts on the stormwater system and the additional challenges and costs for maintaining the treatment approaches.

Reviewed by Mr. Chad Friedman from Weiss Serota Helfman Cole & Bierman as to form and legal sufficiency.

RESOLUTION NO. 2022-_____

A RESOLUTION OF THE VILLAGE COUNCIL OF THE VILLAGE OF KEY BISCAYNE, FLORIDA, ACCEPTING A CORAL PROTECTION AND RESTORATION (CPR) MATCHING GRANT IN AN AMOUNT OF \$159,537 FROM THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) FOR A STORMWATER SUSTAINABILITY PILOT PROJECT AND APPROVING AN AGREEMENT RELATED TO THE SAME; PROVIDING FOR AUTHORIZATION; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the Village of Key Biscayne (“Village”) desires to implement a stormwater sustainability pilot project (the “Program”); and

WHEREAS, the Program consists of installing under-grate filter units within the K-8 School Basin to screen and capture stormwater run-off pollutants; and

WHEREAS, the Florida Department of Environmental Protection (“FDEP”) has awarded the Village a Coral Protection and Restoration (CPR) Matching Grant (the “Grant”) in the amount of \$159,537 for the Program, which the Village will match with \$55,679 of stormwater enterprise funds; and

WHEREAS, the Village desires to accept the Grant and enter into the Grant Agreement, in substantially the form attached hereto as Exhibit “A” (the “Agreement”); and

WHEREAS, the Village Council finds that this Resolution is in the best interest and welfare of the residents of the Village.

NOW, THEREFORE, BE IT RESOLVED BY THE VILLAGE COUNCIL OF THE VILLAGE OF KEY BISCAYNE, FLORIDA, AS FOLLOWS:

Section 1. Recitals. That each of the above-stated recitals are hereby adopted, confirmed, and incorporated herein.

Section 2. **Acceptance and Approval.** That the Village Council hereby accepts the Grant in an amount of \$159,537 from FDEP and approves the Agreement in substantially the form attached hereto as Exhibit "A."

Section 3. **Authorization.** That the Village Council hereby authorizes the Village Manager to execute the Agreement, in substantially the form attached hereto as Exhibit "A," subject to the Village Attorney's approval as to form, content, and legal sufficiency.

Section 4. **Effective Date.** That this Resolution shall be effective immediately upon adoption.

PASSED and ADOPTED this _____ day of _____, 2022.

MICHAEL W. DAVEY, MAYOR

ATTEST:

JOCELYN B. KOCH
VILLAGE CLERK

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:

WEISS SEROTA HELFMAN COLE & BIERMAN, P.L.
VILLAGE ATTORNEY

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Standard Grant Agreement**

This Agreement is entered into between the Parties named below, pursuant to Section 215.971, Florida Statutes:

1. Project Title (Project): Stormwater Sustainability Pilot Project	Agreement Number: C2105
2. Parties State of Florida Department of Environmental Protection, 3900 Commonwealth Boulevard Tallahassee, Florida 32399-3000 (Department)	
Grantee Name: Village of Key Biscayne	Entity Type: Local Government
Grantee Address: 88 W McIntyre Street, Suite 210 Key Biscayne, FL 33149	FEID: 65-0291811 (Grantee)

3. Agreement Begin Date: Upon Execution	Date of Expiration: 12/31/2023
---	--

4. Project Number: N/A <i>(If different from Agreement Number)</i>	Project Location(s): 25.69084, -80.164848
---	---

Project Description: The project is a pilot initiative to demonstrate the effectiveness and benefits of capturing stormwater run-off pollutants at the source before they reach Biscayne Bay using different technological approaches: AbTech Inc. Ultra-Urban® Filters, SOP Technologies under-grate filter units, and SOP Technologies curb inlet screens. The Village of Key Biscayne is initiating a Village-wide upgrade of its stormwater system and intends to incorporate stormwater treatment technologies as appropriate to improve the stormwater quality and reduce potentially harmful impacts to the bay.

5. Total Amount of Funding: \$159,537.00	Funding Source? ☒ State ☐ Federal ☐ State ☐ Federal ☒ Grantee Match	Award #s or Line Item Appropriations: GAA Line Item 1708A, FY21-22	Amount per Source(s): \$159,537.00 \$55,679.00
Total Amount of Funding + Grantee Match, if any:			\$215,216.00

6. Department's Grant Manager Name: Joanna Walczak or successor Address: Nova Southeastern University 8000 N. Ocean Dr. Dania Beach, FL 33004 Phone: 786-798-4516 Email: joanna.walczak@floridadep.gov	Grantee's Grant Manager Name: Roland Samimy or successor Address: 88 W McIntyre St. Suite 250 Key Biscayne, FL 33149 Phone: 305-365-8908 Email: rsamimy@keybiscayne.fl.gov
---	---

7. The Parties agree to comply with the terms and conditions of the following attachments and exhibits which are hereby incorporated by reference:

☒ Attachment 1: Standard Terms and Conditions Applicable to All Grants Agreements
☒ Attachment 2: Special Terms and Conditions
☒ Attachment 3: Grant Work Plan
☒ Attachment 4: Public Records Requirements
☒ Attachment 5: Special Audit Requirements
☐ Attachment 6: Program-Specific Requirements
☐ Attachment 7: Grant Award Terms (Federal) *Copy available at https://facts.fldfs.com , in accordance with §215.985, F.S.
☐ Attachment 8: Federal Regulations and Terms (Federal)
☐ Additional Attachments (if necessary):
☒ Exhibit A: Progress Report Form
☒ Exhibit B: Property Reporting Form
☒ Exhibit C: Payment Request Summary Form
☒ Exhibit D: Quality Assurance Requirements for Grants
☐ Exhibit E: Advance Payment Terms and Interest Earned Memo
☒ Additional Exhibits (if necessary): Appendix A: City of Aventura Pilot Study, Appendix B: AbTech Smart Sponge Technical Specifications

8. The following information applies to Federal Grants only and is identified in accordance with 2 CFR 200.331(a)(1):

Federal Award Identification Number(s) (FAIN):	
Federal Award Date to Department:	
Total Federal Funds Obligated by this Agreement:	
Federal Awarding Agency:	
Award R&D?	☐ Yes ☐ N/A

IN WITNESS WHEREOF, this Agreement shall be effective on the date indicated by the Agreement Begin Date above or the last date signed below, whichever is later.

Village of Key Biscayne

GRANTEE

Grantee Name

By

(Authorized Signature)

Date Signed

Authorized Representatives Name and Title

Print Name and Title of Person Signing

State of Florida Department of Environmental Protection

DEPARTMENT

By

Secretary or Designee

Date Signed

Print Name and Title of Person Signing

☐ Additional signatures attached on separate page.

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STANDARD TERMS AND CONDITIONS
APPLICABLE TO GRANT AGREEMENTS**

ATTACHMENT 1

1. Entire Agreement.

This Grant Agreement, including any Attachments and Exhibits referred to herein and/or attached hereto (Agreement), constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter. Any terms and conditions included on Grantee's forms or invoices shall be null and void.

2. Grant Administration.

- a. Order of Precedence. If there are conflicting provisions among the documents that make up the Agreement, the order of precedence for interpretation of the Agreement is as follows:
 - i. Standard Grant Agreement
 - ii. Attachments other than Attachment 1, in numerical order as designated in the Standard Grant Agreement
 - iii. Attachment 1, Standard Terms and Conditions
 - iv. The Exhibits in the order designated in the Standard Grant Agreement
- b. All approvals, written or verbal, and other written communication among the parties, including all notices, shall be obtained by or sent to the parties' Grant Managers. All written communication shall be by electronic mail, U.S. Mail, a courier delivery service, or delivered in person. Notices shall be considered delivered when reflected by an electronic mail read receipt, a courier service delivery receipt, other mail service delivery receipt, or when receipt is acknowledged by recipient. If the notice is delivered in multiple ways, the notice will be considered delivered at the earliest delivery time.
- c. If a different Grant Manager is designated by either party after execution of this Agreement, notice of the name and contact information of the new Grant Manager will be submitted in writing to the other party and maintained in the respective parties' records. A change of Grant Manager does not require a formal amendment or change order to the Agreement.
- d. This Agreement may be amended, through a formal amendment or a change order, only by a written agreement between both parties. A formal amendment to this Agreement is required for changes which cause any of the following: (1) an increase or decrease in the Agreement funding amount; (2) a change in Grantee's match requirements; (3) a change in the expiration date of the Agreement; and/or (4) changes to the cumulative amount of funding transfers between approved budget categories, as defined in Attachment 3, Grant Work Plan, that exceeds or is expected to exceed twenty percent (20%) of the total budget as last approved by Department. A change order to this Agreement may be used when: (1) task timelines within the current authorized Agreement period change; (2) the cumulative transfer of funds between approved budget categories, as defined in Attachment 3, Grant Work Plan, are less than twenty percent (20%) of the total budget as last approved by Department; (3) changing the current funding source as stated in the Standard Grant Agreement; and/or (4) fund transfers between budget categories for the purposes of meeting match requirements. This Agreement may be amended to provide for additional services if additional funding is made available by the Legislature.
- e. All days in this Agreement are calendar days unless otherwise specified.

3. Agreement Duration.

The term of the Agreement shall begin and end on the dates indicated in the Standard Grant Agreement, unless extended or terminated earlier in accordance with the applicable terms and conditions. The Grantee shall be eligible for reimbursement for work performed on or after the date of execution through the expiration date of this Agreement, unless otherwise specified in Attachment 2, Special Terms and Conditions. However, work performed prior to the execution of this Agreement may be reimbursable or used for match purposes if permitted by the Special Terms and Conditions.

4. Deliverables.

The Grantee agrees to render the services or other units of deliverables as set forth in Attachment 3, Grant Work Plan. The services or other units of deliverables shall be delivered in accordance with the schedule and at the pricing outlined in the Grant Work Plan. Deliverables may be comprised of activities that must be completed prior to Department making payment on that deliverable. The Grantee agrees to perform in accordance with the terms and conditions set forth in this Agreement and all attachments and exhibits incorporated by the Standard Grant Agreement.

Attachment 1

1 of 11

5. Performance Measures.

The Grantee warrants that: (1) the services will be performed by qualified personnel; (2) the services will be of the kind and quality described in the Grant Work Plan; (3) the services will be performed in a professional and workmanlike manner in accordance with industry standards and practices; (4) the services shall not and do not knowingly infringe upon the intellectual property rights, or any other proprietary rights, of any third party; and (5) its employees, subcontractors, and/or subgrantees shall comply with any security and safety requirements and processes, if provided by Department, for work done at the Project Location(s). The Department reserves the right to investigate or inspect at any time to determine whether the services or qualifications offered by Grantee meet the Agreement requirements. Notwithstanding any provisions herein to the contrary, written acceptance of a particular deliverable does not foreclose Department's remedies in the event deficiencies in the deliverable cannot be readily measured at the time of delivery.

6. Acceptance of Deliverables.

- a. Acceptance Process. All deliverables must be received and accepted in writing by Department's Grant Manager before payment. The Grantee shall work diligently to correct all deficiencies in the deliverable that remain outstanding, within a reasonable time at Grantee's expense. If Department's Grant Manager does not accept the deliverables within 30 days of receipt, they will be deemed rejected.
- b. Rejection of Deliverables. The Department reserves the right to reject deliverables, as outlined in the Grant Work Plan, as incomplete, inadequate, or unacceptable due, in whole or in part, to Grantee's lack of satisfactory performance under the terms of this Agreement. The Grantee's efforts to correct the rejected deliverables will be at Grantee's sole expense. Failure to fulfill the applicable technical requirements or complete all tasks or activities in accordance with the Grant Work Plan will result in rejection of the deliverable and the associated invoice. Payment for the rejected deliverable will not be issued unless the rejected deliverable is made acceptable to Department in accordance with the Agreement requirements. The Department, at its option, may allow additional time within which Grantee may remedy the objections noted by Department. The Grantee's failure to make adequate or acceptable deliverables after a reasonable opportunity to do so shall constitute an event of default.

7. Financial Consequences for Nonperformance.

- a. Withholding Payment. In addition to the specific consequences explained in the Grant Work Plan and/or Special Terms and Conditions, the State of Florida (State) reserves the right to withhold payment when the Grantee has failed to perform/comply with provisions of this Agreement. None of the financial consequences for nonperformance in this Agreement as more fully described in the Grant Work Plan shall be considered penalties.
- b. Corrective Action Plan. If Grantee fails to correct all the deficiencies in a rejected deliverable within the specified timeframe, Department may, in its sole discretion, request that a proposed Corrective Action Plan (CAP) be submitted by Grantee to Department. The Department requests that Grantee specify the outstanding deficiencies in the CAP. All CAPs must be able to be implemented and performed in no more than sixty (60) calendar days.
 - i. The Grantee shall submit a CAP within ten (10) days of the date of the written request from Department. The CAP shall be sent to the Department's Grant Manager for review and approval. Within ten (10) days of receipt of a CAP, Department shall notify Grantee in writing whether the CAP proposed has been accepted. If the CAP is not accepted, Grantee shall have ten (10) days from receipt of Department letter rejecting the proposal to submit a revised proposed CAP. Failure to obtain Department approval of a CAP as specified above may result in Department's termination of this Agreement for cause as authorized in this Agreement.
 - ii. Upon Department's notice of acceptance of a proposed CAP, Grantee shall have ten (10) days to commence implementation of the accepted plan. Acceptance of the proposed CAP by Department does not relieve Grantee of any of its obligations under the Agreement. In the event the CAP fails to correct or eliminate performance deficiencies by Grantee, Department shall retain the right to require additional or further remedial steps, or to terminate this Agreement for failure to perform. No actions approved by Department or steps taken by Grantee shall preclude Department from subsequently asserting any deficiencies in performance. The Grantee shall continue to implement the CAP until all deficiencies are corrected. Reports on the progress of the CAP will be made to Department as requested by Department's Grant Manager.
 - iii. Failure to respond to a Department request for a CAP or failure to correct a deficiency in the performance of the Agreement as specified by Department may result in termination of the Agreement.

8. Payment.

- a. Payment Process. Subject to the terms and conditions established by the Agreement, the pricing per deliverable established by the Grant Work Plan, and the billing procedures established by Department, Department agrees to pay Grantee for services rendered in accordance with Section 215.422, Florida Statutes (F.S.).
- b. Taxes. The Department is exempted from payment of State sales, use taxes and Federal excise taxes. The Grantee, however, shall not be exempted from paying any taxes that it is subject to, including State sales and use taxes, or for payment by Grantee to suppliers for taxes on materials used to fulfill its contractual obligations with Department. The Grantee shall not use Department's exemption number in securing such materials. The Grantee shall be responsible and liable for the payment of all its FICA/Social Security and other taxes resulting from this Agreement.
- c. Maximum Amount of Agreement. The maximum amount of compensation under this Agreement, without an amendment, is described in the Standard Grant Agreement. Any additional funds necessary for the completion of this Project are the responsibility of Grantee.
- d. Reimbursement for Costs. The Grantee shall be paid on a cost reimbursement basis for all eligible Project costs upon the completion, submittal, and approval of each deliverable identified in the Grant Work Plan. Reimbursement shall be requested on Exhibit C, Payment Request Summary Form. To be eligible for reimbursement, costs must be in compliance with laws, rules, and regulations applicable to expenditures of State funds, including, but not limited to, the Reference Guide for State Expenditures, which can be accessed at the following web address:
<https://www.myfloridacfo.com/Division/AA/Manuals/documents/ReferenceGuideforStateExpenditures.pdf>.
- e. Invoice Detail. All charges for services rendered or for reimbursement of expenses authorized by Department pursuant to the Grant Work Plan shall be submitted to Department in sufficient detail for a proper pre-audit and post-audit to be performed. The Grantee shall only invoice Department for deliverables that are completed in accordance with the Grant Work Plan.
- f. Interim Payments. Interim payments may be made by Department, at its discretion, if the completion of deliverables to date have first been accepted in writing by Department's Grant Manager.
- g. Final Payment Request. A final payment request should be submitted to Department no later than sixty (60) days following the expiration date of the Agreement to ensure the availability of funds for payment. However, all work performed pursuant to the Grant Work Plan must be performed on or before the expiration date of the Agreement.
- h. Annual Appropriation Contingency. The State's performance and obligation to pay under this Agreement is contingent upon an annual appropriation by the Legislature. This Agreement is not a commitment of future appropriations. Authorization for continuation and completion of work and any associated payments may be rescinded, with proper notice, at the discretion of Department if the Legislature reduces or eliminates appropriations.
- i. Interest Rates. All interest rates charged under the Agreement shall be calculated on the prevailing rate used by the State Board of Administration. To obtain the applicable interest rate, please refer to:
www.myfloridacfo.com/Division/AA/Vendors/default.htm.
- j. Refund of Payments to the Department. Any balance of unobligated funds that have been advanced or paid must be refunded to Department. Any funds paid in excess of the amount to which Grantee or subgrantee is entitled under the terms of the Agreement must be refunded to Department. If this Agreement is funded with federal funds and the Department is required to refund the federal government, the Grantee shall refund the Department its share of those funds.

9. Documentation Required for Cost Reimbursement Grant Agreements and Match.

If Cost Reimbursement or Match is authorized in Attachment 2, Special Terms and Conditions, the following conditions apply. Supporting documentation must be provided to substantiate cost reimbursement or match requirements for the following budget categories:

- a. Salary/Wages. Grantee shall list personnel involved, position classification, direct salary rates, and hours spent on the Project in accordance with Attachment 3, Grant Work Plan in their documentation for reimbursement or match requirements.
- b. Overhead/Indirect/General and Administrative Costs. If Grantee is being reimbursed for or claiming match for multipliers, all multipliers used (i.e., fringe benefits, overhead, indirect, and/or general and administrative rates) shall be supported by audit. If Department determines that multipliers charged by Grantee exceeded the rates supported by audit, Grantee shall be required to reimburse such funds to Department within thirty (30) days of written notification. Interest shall be charged on the excessive rate.

- c. Contractual Costs (Subcontractors). Match or reimbursement requests for payments to subcontractors must be substantiated by copies of invoices with backup documentation identical to that required from Grantee. Subcontracts which involve payments for direct salaries shall clearly identify the personnel involved, salary rate per hour, and hours spent on the Project. All eligible multipliers used (i.e., fringe benefits, overhead, indirect, and/or general and administrative rates) shall be supported by audit. If Department determines that multipliers charged by any subcontractor exceeded the rates supported by audit, Grantee shall be required to reimburse such funds to Department within thirty (30) days of written notification. Interest shall be charged on the excessive rate. Nonconsumable and/or nonexpendable personal property or equipment costing \$5,000 or more purchased for the Project under a subcontract is subject to the requirements set forth in Chapters 273 and/or 274, F.S., and Chapter 691-72, Florida Administrative Code (F.A.C.) and/or Chapter 691-73, F.A.C., as applicable. The Grantee shall be responsible for maintaining appropriate property records for any subcontracts that include the purchase of equipment as part of the delivery of services. The Grantee shall comply with this requirement and ensure its subcontracts issued under this Agreement, if any, impose this requirement, in writing, on its subcontractors.
 - i. For fixed-price (vendor) subcontracts, the following provisions shall apply: The Grantee may award, on a competitive basis, fixed-price subcontracts to consultants/contractors in performing the work described in Attachment 3, Grant Work Plan. Invoices submitted to Department for fixed-price subcontracted activities shall be supported with a copy of the subcontractor's invoice and a copy of the tabulation form for the competitive procurement process (e.g., Invitation to Bid, Request for Proposals, or other similar competitive procurement document) resulting in the fixed-price subcontract. The Grantee may request approval from Department to award a fixed-price subcontract resulting from procurement methods other than those identified above. In this instance, Grantee shall request the advance written approval from Department's Grant Manager of the fixed price negotiated by Grantee. The letter of request shall be supported by a detailed budget and Scope of Services to be performed by the subcontractor. Upon receipt of Department Grant Manager's approval of the fixed-price amount, Grantee may proceed in finalizing the fixed-price subcontract.
 - ii. If the procurement is subject to the Consultant's Competitive Negotiation Act under section 287.055, F.S. or the Brooks Act, Grantee must provide documentation clearly evidencing it has complied with the statutory or federal requirements.
- d. Travel. All requests for match or reimbursement of travel expenses shall be in accordance with Section 112.061, F.S.
- e. Direct Purchase Equipment. For the purposes of this Agreement, Equipment is defined as capital outlay costing \$5,000 or more. Match or reimbursement for Grantee's direct purchase of equipment is subject to specific approval of Department, and does not include any equipment purchased under the delivery of services to be completed by a subcontractor. Include copies of invoices or receipts to document purchases, and a properly completed Exhibit B, Property Reporting Form.
- f. Rental/Lease of Equipment. Match or reimbursement requests for rental/lease of equipment must include copies of invoices or receipts to document charges.
- g. Miscellaneous/Other Expenses. If miscellaneous or other expenses, such as materials, supplies, non-excluded phone expenses, reproduction, or mailing, are reimbursable or available for match or reimbursement under the terms of this Agreement, the documentation supporting these expenses must be itemized and include copies of receipts or invoices. Additionally, independent of Grantee's contract obligations to its subcontractor, Department shall not reimburse any of the following types of charges: cell phone usage; attorney's fees or court costs; civil or administrative penalties; or handling fees, such as set percent overages associated with purchasing supplies or equipment.
- h. Land Acquisition. Reimbursement for the costs associated with acquiring interest and/or rights to real property (including access rights through ingress/egress easements, leases, license agreements, or other site access agreements; and/or obtaining record title ownership of real property through purchase) must be supported by the following, as applicable: Copies of Property Appraisals, Environmental Site Assessments, Surveys and Legal Descriptions, Boundary Maps, Acreage Certification, Title Search Reports, Title Insurance, Closing Statements/Documents, Deeds, Leases, Easements, License Agreements, or other legal instrument documenting acquired property interest and/or rights. If land acquisition costs are used to meet match requirements, Grantee agrees that those funds shall not be used as match for any other Agreement supported by State or Federal funds.

10. Status Reports.

The Grantee shall submit status reports quarterly, unless otherwise specified in the Attachments, on Exhibit A, Progress Report Form, to Department's Grant Manager describing the work performed during the reporting period, problems encountered, problem resolutions, scheduled updates, and proposed work for the next reporting

period. Quarterly status reports are due no later than twenty (20) days following the completion of the quarterly reporting period. For the purposes of this reporting requirement, the quarterly reporting periods end on March 31, June 30, September 30 and December 31. The Department will review the required reports submitted by Grantee within thirty (30) days.

11. Retainage.

The following provisions apply if Department withholds retainage under this Agreement:

- a. The Department reserves the right to establish the amount and application of retainage on the work performed under this Agreement up to the maximum percentage described in Attachment 2, Special Terms and Conditions. Retainage may be withheld from each payment to Grantee pending satisfactory completion of work and approval of all deliverables.
- b. If Grantee fails to perform the requested work, or fails to perform the work in a satisfactory manner, Grantee shall forfeit its right to payment of the retainage associated with the work. Failure to perform includes, but is not limited to, failure to submit the required deliverables or failure to provide adequate documentation that the work was actually performed. The Department shall provide written notification to Grantee of the failure to perform that shall result in retainage forfeiture. If the Grantee does not correct the failure to perform within the timeframe stated in Department's notice, the retainage will be forfeited to Department.
- c. No retainage shall be released or paid for incomplete work while this Agreement is suspended.
- d. Except as otherwise provided above, Grantee shall be paid the retainage associated with the work, provided Grantee has completed the work and submits an invoice for retainage held in accordance with the invoicing procedures under this Agreement.

12. Insurance.

- a. Insurance Requirements for Sub-Grantees and/or Subcontractors. The Grantee shall require its sub-grantees and/or subcontractors, if any, to maintain insurance coverage of such types and with such terms and limits as described in this Agreement. The Grantee shall require all its sub-grantees and/or subcontractors, if any, to make compliance with the insurance requirements of this Agreement a condition of all contracts that are related to this Agreement. Sub-grantees and/or subcontractors must provide proof of insurance upon request.
- b. Deductibles. The Department shall be exempt from, and in no way liable for, any sums of money representing a deductible in any insurance policy. The payment of such deductible shall be the sole responsibility of the Grantee providing such insurance.
- c. Proof of Insurance. Upon execution of this Agreement, Grantee shall provide Department documentation demonstrating the existence and amount for each type of applicable insurance coverage *prior to* performance of any work under this Agreement. Upon receipt of written request from Department, Grantee shall furnish Department with proof of applicable insurance coverage by standard form certificates of insurance, a self-insured authorization, or other certification of self-insurance.
- d. Duty to Maintain Coverage. In the event that any applicable coverage is cancelled by the insurer for any reason, or if Grantee cannot get adequate coverage, Grantee shall immediately notify Department of such cancellation and shall obtain adequate replacement coverage conforming to the requirements herein and provide proof of such replacement coverage within ten (10) days after the cancellation of coverage.
- e. Insurance Trust. If the Grantee's insurance is provided through an insurance trust, the Grantee shall instead add the Department of Environmental Protection, its employees, and officers as an additional covered party everywhere the Agreement requires them to be added as an additional insured.

13. Termination.

- a. Termination for Convenience. When it is in the State's best interest, Department may, at its sole discretion, terminate the Agreement in whole or in part by giving 30 days' written notice to Grantee. The Department shall notify Grantee of the termination for convenience with instructions as to the effective date of termination or the specific stage of work at which the Agreement is to be terminated. The Grantee must submit all invoices for work to be paid under this Agreement within thirty (30) days of the effective date of termination. The Department shall not pay any invoices received after thirty (30) days of the effective date of termination.
- b. Termination for Cause. The Department may terminate this Agreement if any of the events of default described in the Events of Default provisions below occur or in the event that Grantee fails to fulfill any of its other obligations under this Agreement. If, after termination, it is determined that Grantee was not in default, or that the default was excusable, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of Department. The rights and remedies of Department in this clause are in addition to any other rights and remedies provided by law or under this Agreement.
- c. Grantee Obligations upon Notice of Termination. After receipt of a notice of termination or partial termination unless as otherwise directed by Department, Grantee shall not furnish any service or deliverable on the date, and

to the extent specified, in the notice. However, Grantee shall continue work on any portion of the Agreement not terminated. If the Agreement is terminated before performance is completed, Grantee shall be paid only for that work satisfactorily performed for which costs can be substantiated. The Grantee shall not be entitled to recover any cancellation charges or lost profits.

- d. Continuation of Prepaid Services. If Department has paid for any services prior to the expiration, cancellation, or termination of the Agreement, Grantee shall continue to provide Department with those services for which it has already been paid or, at Department's discretion, Grantee shall provide a refund for services that have been paid for but not rendered.
- e. Transition of Services Upon Termination, Expiration, or Cancellation of the Agreement. If services provided under the Agreement are being transitioned to another provider(s), Grantee shall assist in the smooth transition of Agreement services to the subsequent provider(s). This requirement is at a minimum an affirmative obligation to cooperate with the new provider(s), however additional requirements may be outlined in the Grant Work Plan. The Grantee shall not perform any services after Agreement expiration or termination, except as necessary to complete the transition or continued portion of the Agreement, if any.

14. Notice of Default.

If Grantee defaults in the performance of any covenant or obligation contained in the Agreement, including, any of the events of default, Department shall provide notice to Grantee and an opportunity to cure that is reasonable under the circumstances. This notice shall state the nature of the failure to perform and provide a time certain for correcting the failure. The notice will also provide that, should the Grantee fail to perform within the time provided, Grantee will be found in default, and Department may terminate the Agreement effective as of the date of receipt of the default notice.

15. Events of Default.

Provided such failure is not the fault of Department or outside the reasonable control of Grantee, the following non-exclusive list of events, acts, or omissions, shall constitute events of default:

- a. The commitment of any material breach of this Agreement by Grantee, including failure to timely deliver a material deliverable, failure to perform the minimal level of services required for a deliverable, discontinuance of the performance of the work, failure to resume work that has been discontinued within a reasonable time after notice to do so, or abandonment of the Agreement;
- b. The commitment of any material misrepresentation or omission in any materials, or discovery by the Department of such, made by the Grantee in this Agreement or in its application for funding;
- c. Failure to submit any of the reports required by this Agreement or having submitted any report with incorrect, incomplete, or insufficient information;
- d. Failure to honor any term of the Agreement;
- e. Failure to abide by any statutory, regulatory, or licensing requirement, including an entry of an order revoking the certificate of authority granted to the Grantee by a state or other licensing authority;
- f. Failure to pay any and all entities, individuals, and furnishing labor or materials, or failure to make payment to any other entities as required by this Agreement;
- g. Employment of an unauthorized alien in the performance of the work, in violation of Section 274 (A) of the Immigration and Nationality Act;
- h. Failure to maintain the insurance required by this Agreement;
- i. One or more of the following circumstances, uncorrected for more than thirty (30) days unless, within the specified 30-day period, Grantee (including its receiver or trustee in bankruptcy) provides to Department adequate assurances, reasonably acceptable to Department, of its continuing ability and willingness to fulfill its obligations under the Agreement:
 - i. Entry of an order for relief under Title 11 of the United States Code;
 - ii. The making by Grantee of a general assignment for the benefit of creditors;
 - iii. The appointment of a general receiver or trustee in bankruptcy of Grantee's business or property; and/or
 - iv. An action by Grantee under any state insolvency or similar law for the purpose of its bankruptcy, reorganization, or liquidation.

16. Suspension of Work.

The Department may, in its sole discretion, suspend any or all activities under the Agreement, at any time, when it is in the best interest of the State to do so. The Department shall provide Grantee written notice outlining the particulars of suspension. Examples of reasons for suspension include, but are not limited to, budgetary constraints, declaration of emergency, or other such circumstances. After receiving a suspension notice, Grantee shall comply with the notice. Within 90 days, or any longer period agreed to by the parties, Department shall either: (1) issue a notice authorizing

resumption of work, at which time activity shall resume; or (2) terminate the Agreement. If the Agreement is terminated after 30 days of suspension, the notice of suspension shall be deemed to satisfy the thirty (30) days' notice required for a notice of termination for convenience. Suspension of work shall not entitle Grantee to any additional compensation.

17. Force Majeure.

The Grantee shall not be responsible for delay resulting from its failure to perform if neither the fault nor the negligence of Grantee or its employees or agents contributed to the delay and the delay is due directly to acts of God, wars, acts of public enemies, strikes, fires, floods, or other similar cause wholly beyond Grantee's control, or for any of the foregoing that affect subcontractors or suppliers if no alternate source of supply is available to Grantee. In case of any delay Grantee believes is excusable, Grantee shall notify Department in writing of the delay or potential delay and describe the cause of the delay either (1) within ten days after the cause that creates or will create the delay first arose, if Grantee could reasonably foresee that a delay could occur as a result; or (2) if delay is not reasonably foreseeable, within five days after the date Grantee first had reason to believe that a delay could result. **THE FOREGOING SHALL CONSTITUTE THE GRANTEE'S SOLE REMEDY OR EXCUSE WITH RESPECT TO DELAY.** Providing notice in strict accordance with this paragraph is a condition precedent to such remedy. No claim for damages, other than for an extension of time, shall be asserted against Department. The Grantee shall not be entitled to an increase in the Agreement price or payment of any kind from Department for direct, indirect, consequential, impact or other costs, expenses or damages, including but not limited to costs of acceleration or inefficiency, arising because of delay, disruption, interference, or hindrance from any cause whatsoever. If performance is suspended or delayed, in whole or in part, due to any of the causes described in this paragraph, after the causes have ceased to exist Grantee shall perform at no increased cost, unless Department determines, in its sole discretion, that the delay will significantly impair the value of the Agreement to Department, in which case Department may: (1) accept allocated performance or deliveries from Grantee, provided that Grantee grants preferential treatment to Department with respect to products subjected to allocation; (2) contract with other sources (without recourse to and by Grantee for the related costs and expenses) to replace all or part of the products or services that are the subject of the delay, which purchases may be deducted from the Agreement quantity; or (3) terminate Agreement in whole or in part.

18. Indemnification.

- a. The Grantee shall be fully liable for the actions of its agents, employees, partners, or subcontractors and shall fully indemnify, defend, and hold harmless Department and its officers, agents, and employees, from suits, actions, damages, and costs of every name and description arising from or relating to:
 - i. personal injury and damage to real or personal tangible property alleged to be caused in whole or in part by Grantee, its agents, employees, partners, or subcontractors; provided, however, that Grantee shall not indemnify for that portion of any loss or damages proximately caused by the negligent act or omission of Department;
 - ii. the Grantee's breach of this Agreement or the negligent acts or omissions of Grantee.
- b. The Grantee's obligations under the preceding paragraph with respect to any legal action are contingent upon Department giving Grantee: (1) written notice of any action or threatened action; (2) the opportunity to take over and settle or defend any such action at Grantee's sole expense; and (3) assistance in defending the action at Grantee's sole expense. The Grantee shall not be liable for any cost, expense, or compromise incurred or made by Department in any legal action without Grantee's prior written consent, which shall not be unreasonably withheld.
- c. Notwithstanding sections a. and b. above, the following is the sole indemnification provision that applies to Grantees that are governmental entities: 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, F.S. Further, nothing herein shall be construed as consent by a state agency or subdivision of the State to be sued by third parties in any matter arising out of any contract or this Agreement.
- d. No provision in this Agreement shall require Department to hold harmless or indemnify Grantee, insure or assume liability for Grantee's negligence, waive Department's sovereign immunity under the laws of Florida, or otherwise impose liability on Department for which it would not otherwise be responsible. Any provision, implication or suggestion to the contrary is null and void.

19. Limitation of Liability.

The Department's liability for any claim arising from this Agreement is limited to compensatory damages in an amount no greater than the sum of the unpaid balance of compensation due for goods or services rendered pursuant to and in compliance with the terms of the Agreement. Such liability is further limited to a cap of \$100,000.

20. Remedies.

Nothing in this Agreement shall be construed to make Grantee liable for force majeure events. Nothing in this Agreement, including financial consequences for nonperformance, shall limit Department's right to pursue its remedies for other types of damages under the Agreement, at law or in equity. The Department may, in addition to other remedies available to it, at law or in equity and upon notice to Grantee, retain such monies from amounts due Grantee as may be necessary to satisfy any claim for damages, penalties, costs and the like asserted by or against it.

21. Waiver.

The delay or failure by Department to exercise or enforce any of its rights under this Agreement shall not constitute or be deemed a waiver of Department's right thereafter to enforce those rights, nor shall any single or partial exercise of any such right preclude any other or further exercise thereof or the exercise of any other right.

22. Statutory Notices Relating to Unauthorized Employment and Subcontracts.

- a. The Department shall consider the employment by any Grantee of unauthorized aliens a violation of Section 274A(e) of the Immigration and Nationality Act. If Grantee/subcontractor knowingly employs unauthorized aliens, such violation shall be cause for unilateral cancellation of this Agreement. The Grantee shall be responsible for including this provision in all subcontracts with private organizations issued as a result of this Agreement.
- b. Pursuant to Sections 287.133 and 287.134, F.S., the following restrictions apply to persons placed on the convicted vendor list or the discriminatory vendor list:
 - i. Public Entity Crime. A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a Grantee, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, F.S., for CATEGORY TWO for a period of 36 months following the date of being placed on the convicted vendor list.
 - ii. Discriminatory Vendors. An entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity.
 - iii. Notification. The Grantee shall notify Department if it or any of its suppliers, subcontractors, or consultants have been placed on the convicted vendor list or the discriminatory vendor list during the life of the Agreement. The Florida Department of Management Services is responsible for maintaining the discriminatory vendor list and posts 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. Compliance with Federal, State and Local Laws.

- a. The Grantee and all its agents shall comply with all federal, state and local regulations, including, but not limited to, nondiscrimination, wages, social security, workers' compensation, licenses, and registration requirements. The Grantee shall include this provision in all subcontracts issued as a result of this Agreement.
- b. No person, on the grounds of race, creed, color, religion, national origin, age, gender, 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.
- c. This Agreement shall be governed by and construed in accordance with the laws of the State of Florida.
- d. Any dispute concerning performance of the Agreement shall be processed as described herein. Jurisdiction for any damages arising under the terms of the Agreement will be in the courts of the State, and venue will be in the Second Judicial Circuit, in and for Leon County. Except as otherwise provided by law, the parties agree to be responsible for their own attorney fees incurred in connection with disputes arising under the terms of this Agreement.

24. Scrutinized Companies.

- a. Grantee certifies that it is not on the Scrutinized Companies that Boycott Israel List or engaged in a boycott of Israel. Pursuant to Section 287.135, F.S., the Department may immediately terminate this Agreement at its sole

- option if the Grantee is found to have submitted a false certification; or if the Grantee is placed on the Scrutinized Companies that Boycott Israel List or is engaged in the boycott of Israel during the term of the Agreement.
- b. If this Agreement is for more than one million dollars, the Grantee certifies that it is also not on the Scrutinized Companies with Activities in Sudan, Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or engaged with business operations in Cuba or Syria as identified in Section 287.135, F.S. Pursuant to Section 287.135, F.S., the Department may immediately terminate this Agreement at its sole option if the Grantee is found to have submitted a false certification; or if the Grantee is placed on the Scrutinized Companies with Activities in Sudan List, or Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or engaged with business operations in Cuba or Syria during the term of the Agreement.
 - c. As provided in Subsection 287.135(8), F.S., if federal law ceases to authorize these contracting prohibitions then they shall become inoperative.

25. Lobbying and Integrity.

The Grantee agrees that no funds received by it under this Agreement will be expended for the purpose of lobbying the Legislature or a State agency pursuant to Section 216.347, F.S., except that pursuant to the requirements of Section 287.058(6), F.S., during the term of any executed agreement between Grantee and the State, Grantee may lobby the executive or legislative branch concerning the scope of services, performance, term, or compensation regarding that agreement. The Grantee shall comply with Sections 11.062 and 216.347, F.S.

26. Record Keeping.

The Grantee shall maintain books, records and documents directly pertinent to performance under this Agreement in accordance with United States generally accepted accounting principles (US GAAP) 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 (5) years following the completion date or termination of the Agreement. In the event that any work is subcontracted, Grantee shall similarly require each subcontractor to maintain and allow access to such records for audit purposes. Upon request of Department's Inspector General, or other authorized State official, Grantee shall provide any type of information the Inspector General deems relevant to Grantee's integrity or responsibility. Such information may include, but shall not be limited to, Grantee's business or financial records, documents, or files of any type or form that refer to or relate to Agreement. The Grantee shall retain such records for the longer of: (1) three years after the expiration of the Agreement; or (2) the period required by the General Records Schedules maintained by the Florida Department of State (available at: <http://dos.myflorida.com/library-archives/records-management/general-records-schedules/>).

27. Audits.

- a. Inspector General. The Grantee understands its duty, pursuant to Section 20.055(5), F.S., to cooperate with the inspector general in any investigation, audit, inspection, review, or hearing. The Grantee will comply with this duty and ensure that its sub-grantees and/or subcontractors issued under this Agreement, if any, impose this requirement, in writing, on its sub-grantees and/or subcontractors, respectively.
- b. Physical Access and Inspection. Department personnel shall be given access to and may observe and inspect work being performed under this Agreement, with reasonable notice and during normal business hours, including by any of the following methods:
 - i. Grantee shall provide access to any location or facility on which Grantee is performing work, or storing or staging equipment, materials or documents;
 - ii. Grantee shall permit inspection of any facility, equipment, practices, or operations required in performance of any work pursuant to this Agreement; and,
 - iii. Grantee shall allow and facilitate sampling and monitoring of any substances, soils, materials or parameters at any location reasonable or necessary to assure compliance with any work or legal requirements pursuant to this Agreement.
- c. Special Audit Requirements. The Grantee shall comply with the applicable provisions contained in Attachment 5, Special Audit Requirements. Each amendment that authorizes a funding increase or decrease shall include an updated copy of Exhibit 1, to Attachment 5. If Department fails to provide an updated copy of Exhibit 1 to include in each amendment that authorizes a funding increase or decrease, Grantee shall request one from the Department's Grants Manager. The Grantee shall consider the type of financial assistance (federal and/or state) identified in Attachment 5, Exhibit 1 and determine whether the terms of Federal and/or Florida Single Audit Act Requirements may further apply to lower tier transactions that may be a result of this Agreement. For federal financial assistance, Grantee shall utilize the guidance provided under 2 CFR §200.330 for determining whether the relationship represents that of a subrecipient or vendor. For State financial assistance, 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>.

- d. **Proof of Transactions.** In addition to documentation provided to support cost reimbursement as described herein, Department may periodically request additional proof of a transaction to evaluate the appropriateness of costs to the Agreement pursuant to State guidelines (including cost allocation guidelines) and federal, if applicable. Allowable costs and uniform administrative requirements for federal programs can be found under 2 CFR 200. The Department may also request a cost allocation plan in support of its multipliers (overhead, indirect, general administrative costs, and fringe benefits). The Grantee must provide the additional proof within thirty (30) days of such request.
- e. **No Commingling of Funds.** The accounting systems for all Grantees must ensure that these funds are not commingled with funds from other agencies. Funds from each agency must be accounted for separately. Grantees are prohibited from commingling funds on either a program-by-program or a project-by-project basis. Funds specifically budgeted and/or received for one project may not be used to support another project. Where a Grantee's, or subrecipient's, accounting system cannot comply with this requirement, Grantee, or subrecipient, shall establish a system to provide adequate fund accountability for each project it has been awarded.
 - i. If Department finds that these funds have been commingled, Department shall have the right to demand a refund, either in whole or in part, of the funds provided to Grantee under this Agreement for non-compliance with the material terms of this Agreement. The Grantee, upon such written notification from Department shall refund, and shall forthwith pay to Department, the amount of money demanded by Department. Interest on any refund shall be calculated based on the prevailing rate used by the State Board of Administration. Interest shall be calculated from the date(s) the original payment(s) are received from Department by Grantee to the date repayment is made by Grantee to Department.
 - ii. In the event that the Grantee recovers costs, incurred under this Agreement and reimbursed by Department, from another source(s), Grantee shall reimburse Department for all recovered funds originally provided under this Agreement and interest shall be charged for those recovered costs as calculated on from the date(s) the payment(s) are recovered by Grantee to the date repayment is made to Department.
 - iii. Notwithstanding the requirements of this section, the above restrictions on commingling funds do not apply to agreements where payments are made purely on a cost reimbursement basis.

28. Conflict of Interest.

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.

29. Independent Contractor.

The Grantee is an independent contractor and is not an employee or agent of Department.

30. Subcontracting.

- a. Unless otherwise specified in the Special Terms and Conditions, all services contracted for are to be performed solely by Grantee.
- b. The Department may, for cause, require the replacement of any Grantee employee, subcontractor, or agent. For cause, includes, but is not limited to, technical or training qualifications, quality of work, change in security status, or non-compliance with an applicable Department policy or other requirement.
- c. The Department may, for cause, deny access to Department's secure information or any facility by any Grantee employee, subcontractor, or agent.
- d. The Department's actions under paragraphs b. or c. shall not relieve Grantee of its obligation to perform all work in compliance with the Agreement. The Grantee shall be responsible for the payment of all monies due under any subcontract. The Department shall not be liable to any subcontractor for any expenses or liabilities incurred under any subcontract and Grantee shall be solely liable to the subcontractor for all expenses and liabilities incurred under any subcontract.
- e. The Department will not deny Grantee's employees, subcontractors, or agents access to meetings within the Department's facilities, unless the basis of Department's denial is safety or security considerations.
- f. The Department 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. 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.
- g. The Grantee shall not be liable for any excess costs for a failure to perform, if the failure to perform is caused by the default of a subcontractor at any tier, and if the cause of the default is completely beyond the control of both

Attachment 1

10 of 11

Grantee and the subcontractor(s), and without the fault or negligence of either, unless the subcontracted products or services were obtainable from other sources in sufficient time for Grantee to meet the required delivery schedule.

31. Guarantee of Parent Company.

If Grantee is a subsidiary of another corporation or other business entity, Grantee asserts that its parent company will guarantee all of the obligations of Grantee for purposes of fulfilling the obligations of Agreement. In the event Grantee is sold during the period the Agreement is in effect, Grantee agrees that it will be a requirement of sale that the new parent company guarantee all of the obligations of Grantee.

32. Survival.

The respective obligations of the parties, which by their nature would continue beyond the termination or expiration of this Agreement, including without limitation, the obligations regarding confidentiality, proprietary interests, and public records, shall survive termination, cancellation, or expiration of this Agreement.

33. Third Parties.

The Department shall not be deemed to assume any liability for the acts, failures to act or negligence of Grantee, its agents, servants, and employees, nor shall Grantee disclaim its own negligence to Department or any third party. This Agreement does not and is not intended to confer any rights or remedies upon any person other than the parties. If Department consents to a subcontract, Grantee will specifically disclose that this Agreement does not create any third-party rights. Further, no third parties shall rely upon any of the rights and obligations created under this Agreement.

34. Severability.

If a court of competent jurisdiction deems any term or condition herein void or unenforceable, the other provisions are severable to that void provision, and shall remain in full force and effect.

35. Grantee's Employees, Subcontractors and Agents.

All Grantee employees, subcontractors, or agents performing work under the Agreement shall be properly trained technicians who meet or exceed any specified training qualifications. Upon request, Grantee shall furnish a copy of technical certification or other proof of qualification. All employees, subcontractors, or agents performing work under Agreement must comply with all security and administrative requirements of Department and shall comply with all controlling laws and regulations relevant to the services they are providing under the Agreement.

36. Assignment.

The Grantee shall not sell, assign, or transfer any of its rights, duties, or obligations under the Agreement, or under any purchase order issued pursuant to the Agreement, without the prior written consent of Department. In the event of any assignment, Grantee remains secondarily liable for performance of the Agreement, unless Department expressly waives such secondary liability. The Department may assign the Agreement with prior written notice to Grantee of its intent to do so.

37. Execution in Counterparts and Authority to Sign.

This Agreement, any amendments, and/or change orders related to the Agreement, may be executed in counterparts, each of which shall be an original and all of which shall constitute the same instrument. In accordance with the Electronic Signature Act of 1996, electronic signatures, including facsimile transmissions, may be used and shall have the same force and effect as a written signature. Each person signing this Agreement warrants that he or she is duly authorized to do so and to bind the respective party to the Agreement.

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Special Terms and Conditions
AGREEMENT NO. C2105**

ATTACHMENT 2

These Special Terms and Conditions shall be read together with general terms outlined in the Standard Terms and Conditions, Attachment 1. Where in conflict, these more specific terms shall apply.

1. Scope of Work.

The Project funded under this Agreement is Stormwater Sustainability Pilot Project. The Project is defined in more detail in Attachment 3, Grant Work Plan.

2. Duration.

- a. Reimbursement Period. The reimbursement period for this Agreement is the same as the term of the Agreement.
- b. Extensions. There are extensions available for this Project.
- c. Service Periods. Additional service periods may be added in accordance with 2.a above and are contingent upon proper and satisfactory technical and administrative performance by the Grantee and the availability of funding.

3. Payment Provisions.

- a. Compensation. This is a fixed price Agreement. The Grantee shall be compensated under this Agreement as described in Attachment 3.
- b. Invoicing. Invoicing will occur as indicated in Attachment 3.
- c. Advance Pay. Advance Pay is not authorized under this Agreement.

4. Cost Eligible for Reimbursement or Matching Requirements.

Reimbursement for costs or availability for costs to meet matching requirements shall be limited to the following budget categories, as defined in the Reference Guide for State Expenditures, as indicated:

<u>Reimbursement</u>	<u>Match</u>	<u>Category</u>
☐	☒	Salaries/Wages
		Overhead/Indirect/General and Administrative Costs:
☐	☐	a. Fringe Benefits, N/A.
☐	☐	b. Indirect Costs, N/A.
☒	☒	Contractual (Subcontractors)
☐	☐	Travel, in accordance with Section 112, F.S.
☒	☐	Equipment
☐	☐	Rental/Lease of Equipment
☐	☐	Miscellaneous/Other Expenses
☐	☐	Land Acquisition

5. Equipment Purchase.

The purchase of non-expendable personal property or equipment costing \$5,000 or more purchased for purposes of this Agreement remains the property of the Grantee. Upon satisfactory completion of this Agreement, the Grantee may retain ownership or determine the disposition of the non-expendable personal property or equipment purchased under this Agreement. However, the Grantee is required to account for and report on all nonexpendable and/or nonconsumable personal property or equipment purchased under this Agreement in accordance with the Grantee's financial reporting and inventory control requirements. Based on the report, the Grantee will submit Exhibit B, Property Reporting Form, along with the appropriate invoice(s) to the Department's Grant Manager with any applicable requests for reimbursement. The following terms shall apply:

- a. The Grantee shall have use of the non-expendable personal property or equipment for the authorized purposes of the contractual arrangement as long as the required work is being performed.
- b. The Grantee is responsible for the implementation of adequate maintenance procedures to keep the non-expendable personal property or equipment in good operating condition.

Attachment 2

1 of 3

- c. The Grantee is responsible for any loss, damage, or theft of, and any loss, damage or injury caused by the use of, non-expendable personal property or equipment purchased with state funds and held in Grantee's possession for use in a contractual arrangement with the Department.
- d. The Grantee is responsible for keeping a current and accurate inventory of any nonexpendable and/or nonconsumable personal property or equipment in accordance with its financial reporting and inventory control requirements. The Department may request an annual copy of these inventory records for the life of the Agreement.

6. Land Acquisition.

There will be no Land Acquisitions funded under this Agreement.

7. Match Requirements

There is no match required on the part of the Grantee under this Agreement.

8. Insurance Requirements

Required Coverage. At all times during the Agreement the Grantee, at its sole expense, shall maintain insurance coverage of such types and with such terms and limits described below. The limits of coverage under each policy maintained by the Grantee shall not be interpreted as limiting the Grantee's liability and obligations under the Agreement. All insurance policies shall be through insurers licensed and authorized to issue policies in Florida, or alternatively, Grantee may provide coverage through a self-insurance program established and operating under the laws of Florida. Additional insurance requirements for this Agreement may be required elsewhere in this Agreement, however the minimum insurance requirements applicable to this Agreement are:

- a. Commercial General Liability Insurance.

The Grantee shall provide adequate commercial general liability insurance coverage and hold such liability insurance at all times during the Agreement. The Department, its employees, and officers shall be named as an additional insured on any general liability policies. The minimum limits shall be \$250,000 for each occurrence and \$500,000 policy aggregate.

- b. Commercial Automobile Insurance.

If the Grantee's duties include the use of a commercial vehicle, the Grantee shall maintain automobile liability, bodily injury, and property damage coverage. Insuring clauses for both bodily injury and property damage shall provide coverage on an occurrence basis. The Department, its employees, and officers shall be named as an additional insured on any automobile insurance policy. The minimum limits shall be as follows:

\$200,000/300,000	Automobile Liability for Company-Owned Vehicles, if applicable
\$200,000/300,000	Hired and Non-owned Automobile Liability Coverage

- c. Workers' Compensation and Employer's Liability Coverage.

The Grantee shall provide workers' compensation, in accordance with Chapter 440, F.S. and employer liability coverage with minimum limits of \$100,000 per accident, \$100,000 per person, and \$500,000 policy aggregate. Such policies shall cover all employees engaged in any work under the Grant.

- d. Other Insurance. None.

9. Quality Assurance Requirements.

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 with 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 Exhibit D, Quality Assurance Requirements for Grants.

10. Retainage.

No retainage is required under this Agreement.

11. Subcontracting.

The Grantee may subcontract work under this Agreement with the prior written consent of the Department's Grant Manager. The Grantee shall submit a copy of the executed subcontract to the Department prior to submitting any

invoices for subcontracted work. Regardless of any subcontract, the Grantee is ultimately responsible for all work to be performed under this Agreement.

12. State-owned Land.

The work will not be performed on State-owned land.

13. Office of Policy and Budget Reporting.

There are no special Office of Policy and Budget reporting requirements for this Agreement.

14. Additional Terms.

None.

Any terms added here must be approved by the Office of General Counsel.

ATTACHMENT 3
CPR GRANT WORK PLAN – Village of Key Biscayne, Florida

- I. PROJECT TITLE:** Stormwater Sustainability Pilot Project
- II. PROJECT LOCATION(S):** The Project will be located in the City of Key Biscayne within Miami-Dade County; Lat/Long (25.69084, -80.164848).
- III. PROJECT BACKGROUND:** Currently, Biscayne Bay is showing signs of poor water quality and habitat degradation as a result of polluted freshwater inflows to the bay. Significant attention is being given to the various sources of pollution such as contaminants that are transported by stormwater and solutions to reduce or eliminate these contaminants. The project is a pilot initiative to demonstrate the effectiveness and benefits of capturing stormwater run-off pollutants at the source before they reach the bay using two different technological approaches. The Village of Key Biscayne is initiating a Village-wide upgrade of its stormwater system and intends to incorporate stormwater treatment technologies as appropriate to improve the stormwater quality and reduce potentially harmful impacts to the bay. It is therefore important to test some technologies before including them into the redesign of the system to quantify the environmental and operational effectiveness of a given treatment solution.
- IV. PROJECT DESCRIPTION:** The proposed scope of work consists of two pilot Best Management Practice (BMP) technologies, including the installation and monitoring of AbTech Inc. Ultra-Urban® Filters (UUFs), SOP Technologies under-grate filter units, and SOP Technologies curb inlet screens within the K-8 School Basin. It is anticipated that the innovative filters and screens will maximize pollutant capture with minimal maintenance and no disruption during peak rain events. Through the capture of pollutants at the source rather than a late stage of the drainage process, the filtration practices can provide a high level of treatment early on and minimize impacts from peak rain events, while decreasing the impact debris and associated pollutants have on Biscayne Bay. This pilot proposes to install 10 Ultra-Urban® filters (UUFs) supplied by AbTech Industries (described below) into drains in the area described as K-8. The intent is to demonstrate capture and adsorption of stormwater run-off pollutants at the source and potential benefit for utilization as a Village-wide strategy for sustainably purifying stormwater to benefit the environmental and ecological vitality of Biscayne Bay. These filters are “workhorse” BMP’s, used to act as the first line of defense, capturing trash, debris, sediment and absorption of dissolved pollutants from runoff from impervious surfaces used for parking and streets, and to maximize pollutant capture with minimal maintenance and no hindrance during peak rain events that result in street flooding. The pilot project will also include SOP Technologies furnishing and installing up to 45 of its patented under-grate filter baskets and up to 13 SOP Technologies patented curb inlet filters. The under-grate filter baskets and curb inlet filters will be used to prevent leaves, trash and debris from entering the stormwater drainage systems. This stormwater Best Management Practice (BMP) has been proven effective and implemented in various cities in Florida such as the City of Aventura and the City of Miami (Appendix A). The pilot project will test how effective both versions of the filters are at keeping debris at the street to facilitate debris removal and prevent debris and litter from entering the K-8 elementary school portion of the stormwater drainage system. The three main benefits of the SOP Technologies stormwater filters that will be tested are: 1) Pollution Prevention: With less debris entering stormwater systems, less nutrients and pollutants are discharged to waterways or introduced into groundwater; 2) Cost Savings: Debris is removed during standard street cleaning; 3) Flood Prevention: With less debris entering catch basins and the drainage system, there is a reduction in potential flood risks and duration of floods.

This project will include the creation of a Quality Assurance Project Plan (QAPP) for the scope of work detailing storm event assessment, procedures and processes to monitor, collect samples and conduct analyses to ensure proper quality and accuracy of data.

V. TASKS and DELIVERABLES:

All deliverables will be submitted electronically unless otherwise indicated. All permit(s) will be acquired prior to work starting (if required). All raw data acquired for this project will be submitted to the Florida Department of Environmental Protection (FDEP) at the end of the project. All final deliverable(s) will comply with [Section 508](#) of the U.S. Rehabilitation Act (as amended), Florida Statute [Chapter 282](#), and Florida Administrative Code (FAC) [Rule: 60-8.002](#).

The contractor(s) will notify DEP when data from this project will be presented or published. Any maps, graphics, charts, or other deliverables intended to visually communicate information will include the following: title and/or appropriate explanation of the visual being presented, consistent scale bar, north arrow and key, and clearly labeled county lines (if applicable). When submitting photo deliverables, a consistent naming convention and organizational structure will be used that includes the date, site name, and any other relevant information. A separate folder will also be created with a smaller subset of photos (5-15 total) that highlight the overall project and can be used for communication pieces and/or messaging.

Funding Acknowledgement: All deliverables, presentations, and social media posts will acknowledge the financial assistance provided by the Florida Department of Environmental Protection's Coral Protection and Restoration Program.

Performance Standard For All Tasks: DEP's Grant Manager will review the task deliverable to verify that the deliverable has been completed as described per task section. Upon review and written acceptance by the DEP's Grant Manager, the Grantee will proceed with payment request submittal.

Task 1: Quality Assurance Project Plan – Draft and Final

Description: The grantee will prepare a Quality Assurance Project Plan (QAPP). The QAPP must be approved by the Department prior to commencement of any monitoring or research associated with the project. The QAPP will specify the process for all environmental data collection and analysis. The Grantee will use the format provided by the Department's Grant Manager (see Exhibit D – Quality Assurance Requirements).

Deliverable(s): The grantee will submit a draft Quality Assurance Project Plan in Word format and a Final Quality Assurance Project Plan in Word and PDF format.

Payment Request Schedule: The Grantee will submit a single payment request following approval of the deliverable for Task 1.

Task 2: Reporting

Description: The Grantee will provide a progress and budget report quarterly per Exhibit A. The progress report will summarize the work completed within each task for the reporting period. It will also provide an update on the estimated completion date for each task and an explanation for any anticipated delays or problems encountered.

Deliverable(s): The Grantee will submit: 1) a progress report using Exhibit A in Word format and 2) a budget report in Excel format.

Payment Request Schedule: The Grantee may submit a payment request quarterly following approval of the deliverable.

Task 3: Site Assessment

Description: The Grantee in collaboration with the contractors (AbTech Industries and SOP Technologies) will conduct an assessment of the K-8 elementary school stormwater drainage system in order to identify the most strategic locations for the deployment of the respective technologies. AbTech industries will be responsible for determining which of the many drainage features will be best suited for testing an Ultra-Urban Filters (UUFs), under-grate filter units (Appendix B). Similarly, SOP Technologies will be responsible for the same and the deployment of its patented under-grate filter baskets and curb inlet filter screens. If an acceptable catch basin or curb inlet does not exist in the K-8 stormwater drainage area, a suitable alternate location will be identified, with DEP approval. The contractor(s) will have to conduct this assessment with Village of Key Biscayne Public Works staff taking into consideration the specifications of the existing infrastructure, ensurance of an area that is generally representative of the city's drainage system and the ability to collect water samples or debris samples.

Deliverable(s): The Grantee in collaboration with the contractor(s) will submit a brief technical memorandum describing the results of the site assessment relative to both technologies to be deployed, the varius drainage features investigated in the field, which ones being appropriate for use in the pilot project and an associated map showing the test locations as well as the specifications of the drainage feature. Pictures will be included to document the location and the type of drainage feature to be utilized for the technology testing.

Payment Request Schedule: The Grantee will submit a single payment request following approval of the deliverable for Task 3.

Task 4: Construction / Installation

Description: AbTech Industries drop-In series UUF stormwater treatment units provide street-level access without OSHA confined space entry requirements (Appendix B). Overflow bypass is included to allow for a minimum of 10 times the design flow to prevent localized flooding during peak rain events. UUF do not allow mold or mildew growth, and do not cause localized flooding or standing water. The UUF stormwater treatment units will be installed and maintained by AbTech local service providers with Grantee oversight.

Materials of construction are 100% 304L stainless steel. Sidewalls may be perforated openings less than 5mm in size or solid sheet. For a drop-in UUF, the enclosure shall be configured to suspend from stainless steel chains at a minimum of four points. For a curb opening UUF, the enclosure shall be configured to mount on a horizontal bracket which is attached to the sidewall of a curb inlet catch basin and shall have a side cutout that permits lateral overflow from one of the modular units to an adjacent one. A 500-micron mesh screen shall be manufactured in 100% stainless steel with a conveyance rate not less than the water quality flow rate (as described in technical specifications, see Appendix B). The screen will be made of perforated holes less than 5mm in size and will be used to support the Smart Sponge Pak filtering media. Filter media shall be provided and supplied by AbTech Industries, Inc., and will be a compliant, hydrophobic, oil-absorbent, heavy metals sorbent, phosphorus sorbent, and chemically treated copolymer material with bulk density ranging from 0.27 to 0.40 gr/cm³ and be able to reduce the proliferation of microbial organisms. Filter media must have

passed Method 1131 TCLP, EPA Publication SW-846, tested by an independent applied engineering and/or physical sciences testing organization.

Design of the UUF unit allows for installation in one (1) hour or less without the need for lifting equipment. Standard equipment used for storm drain infrastructure cleaning can be used to remove sediment and debris. UUF stormwater treatment units typically can be serviced in 10 minutes or less in a typical installation.

SOP Technologies' patented under-grate baskets and curb inlet filters will be designed and manufactured to fit existing stormwater infrastructure. SOP Technologies will furnish and install up to 45 SOP Technologies patented under-grate filter baskets and up to 13 SOP Technologies patented curb inlet filters. Photos and videos of sample installation processes are available here <https://soptechint.com/installation-resources>. The 5 process steps for implementing the stormwater filters are the following:

1. Taking measurements of grates and basins (for the under-grate filter baskets) and curb inlets (for the curb filters). This includes maintenance of traffic using flashing yellow lights and cones, mapping of each inlet location, and taking a photo of each inlet.
2. SOP Technologies creates an online map of all the inlets and photos, and it will be made available to the Village of Key Biscayne, DEP and others.
3. Manufacturing the stormwater filters based on the measurements, and shipping.
4. Installing the stormwater filters. For the under-grate baskets, installation involves lifting of the grate, dropping the basket into place on the same frame as the grate, and placing the grate back into place. For the curb filters, the filters are positioned slightly within the curb opening, holes are drilled within the concrete for the placement of anchors, and the filters are secured to the concrete using the anchors. After installation, a photo is taken of the installed product. Similar to when taking inlet measurements, installations require maintenance of traffic using flashing yellow lights and traffic cones.
5. Photos of the installed under-grate baskets and curb filters will be uploaded to the online map SOP Technologies creates when taking basin and inlet measurements.

Deliverable(s): The Grantee in collaboration with the contractor(s) will submit a technical memorandum describing the installation of each treatment device and including pictures of the installation process and installed product, as well as the online map from SOP Technologies.

Payment Request Schedule: The Grantee will submit a single payment request following approval of the deliverable for Task 3.

Task 5: Monitoring and Maintenance

Description: Runoff sampling will be undertaken during the test of the AbTech filtration device to characterize and quantify the pollutants in the runoff in the K-8 area. Sampling will be undertaken consistent with field SOPs. The UUFs will be modified to be able to collect runoff prior to and after the filter. The configuration of the individual UUF's will allow for both grab and composite sample collections. The goal will be to collect composite samples, for each specified storm event from each selected UUF's that are representative of the Village's drainage system. A total of 5 storm events will be sampled for up to 200 composite samples. At the end of each storm event, the composite samples will be transported on ice to a certified laboratory to be analyzed for key pollutants of concern.

Referencing the Washington Department of Ecology Technology Assessment Protocol-Ecology (TAPE), the following standards will be used for selecting qualifying storm events to monitor:

1. Minimum storm depth = 0.15 inches

2. Antecedent dry period or start of a storm = minimum 6 hrs. with less than 0.04 inches of rain since the previous rain event.
3. End of an event – minimal 6 hours with less than 0.04 inches of rain
4. Minimum duration – 1 hour
5. Average storm intensity (inches per hour) – variable so that no two storms have the same average intensities.

Storm monitoring will be used to evenly space the samples by time, so that there are equal samples from both the rising and falling limb of the hydrograph. Rainfall data from a local weather monitoring location, or acceptable local rainfall source, will be used to report the storm event parameters: total rainfall depth, duration, average and peak rainfall intensity, temperature, wind direction and speed. Based on available site plan information, average and peak flow rates will be estimated for each storm event.

By composite sample we mean that for any given storm event we will collect inlet and outlet samples for the first flush – time point T0; and then collect three additional samples at T1, T2, and T3, for a total of 8 discrete samples per site for every event. For 5 sites, this means 40 samples for each storm event for a total of 200 samples for the projected 5 storm events to be analyzed during this pilot project. Additionally, AbTech Industries Smart Sponge media variants will be used in selected UUF units, for instance SmartSponge for Hydrocarbons; another SmartSponge SS Plus for Bacteria reduction, and SmartSponge HM for Metals and Nutrients (Appendix B). Selection of Smart Sponge media type to be used at a specific inlet location will be determined by the anticipated pollutants of concern from the identified drainage area(s). A minimum of 2 media types as described in detail in Appendix B will be applied in each drainage area. This proposal includes the installation of 10 inserts, but will assess removal samples from a minimum of 5 out of 10 inserts based on land use, based upon roadway characteristics and constituent concentrations of in-flowing stormwater. This is to have a holistic view of performance.

Analysis: To characterize and quantify the runoff from the UUF insert drainage areas, composite samples will be analyzed for each of the selected inlet locations. The following table lists pollutants of concern that composite samples will be analyzed for. After the first two storm results, this list will be evaluated and may be modified, with DEP approval, to which analytes to quantify based on concentration levels.

<u>Analyte</u>	<u>Method Number</u>
Particle Size Distribution*	Modified SSC Method D3977-97
Total Suspended Solids	SM 2540D
Volatile Suspended Solids	SM 2540E
Suspended Solids Concentration	SM 3977D
Dissolved Solids	SM 2540C
Turbidity	SM 2130
Total Phosphorus	SM 4500P B
Ortho-Phosphate	SM 4500P E
TKN	EPA Method 351.2

Nitrate-Nitrite	EPA Method 353.2
NWTPH-Dx (Hydrocarbons)	EPA SW-846 Method 8015B
Metals** (Total & Dissolved)	TBD
pH	EPA Method 150.2
Fecal Coliform	SM 9222D
E.coli	SM 9223B

*Note: The recommended PSD analysis method is a modified Suspended Sediment Concentration (SSC) Method according to American Society for Testing and Materials (ASTM) Method D3977-97 (ASTM 2007) using wet sieve filtration (Method C) and glass fiber filtration (Method B). The SSC method uses wet sieve filtration (Method C) to measure the sand concentration by passing the entire sample (minimum volume of 1 liter) through a 62.5 micron (No. 230) sieve, and uses glass fiber filtration (Method B) to measure the fines (silt/clay) concentration by passing the wet sieve filtrate through a 1.5 micron glass fiber filter. A modification of this procedure is necessary to measure the concentration of four size categories: clay less than 3.9 microns, silt between 3.9 to 62.5 microns, very fine to fine sand between 62.5 and 250 microns, and medium to coarse sand greater than 250 microns (No. 60 sieve). The required PSD size fractions and their associated sieve sizes are summarized in the Table below.

Table 12. Required Particle Size Distribution Size Categories for the Modified Suspended Sediment Concentration Method

Size Category (µm) ^{a,b}	Particle Description	Analysis Method ^c
> 250	Medium sand and larger	Retained on No. 60 sieve
62.5 - 250	Very fine to fine sand	Passing No. 60 sieve and retained on No. 230 sieve
3.9 - 62.5	Silt	Passing No. 230 sieve and retained on 4-5 µm glass fiber filter
< 3.9	Clay	Passing 4-5 µm glass fiber filter and retained on 1 µm glass fiber filter

**Metals to analyze for: Al, Mn, Fe, Co, Ni, Cu, Zn, Ag, Cd, Hg, Pb

At the completion of the Pilot program samples of the Smart Sponge Media will be taken from each Ultra Urban Filter and analyzed for total absorption and adsorption capabilities and correlated to the runoff analysis to assess overall potential sustainable stormwater purification value through implementation as Village-wide strategy for Stormwater Management.

Sample Collection and Handling:

To make data gathered during this effort as useful as possible to both state and local management agencies, field and lab practices will be in conformance with requirements in Chapter 62-160, Florida Administrative Code (F.A.C.) including following the Florida Department of Environmental Protection's Standard Operating Procedures (DEP SOPs). Relevant SOPs include FA 1000, FC 1000, FD 1000, FQ 1000, FS 1000, FS 2000. All persons involved in data collection, entry, or analysis will complete relevant QA/QC measures, as stipulated herein and in QA Standards Attachment (Department of Environmental Protection Quality Assurance Requirements for Contracts and Grants). Documentation will be kept including field sheets documenting sampling date, time, conditions and other relevant information, and signed and dated Chain of Command documents for all samples. Further details will be included in a QAPP (Quality Assurance Project Plan) to be supplied prior to commencement of the pilot project.

SOP Technologies Monitoring and Maintenance (Pollution Prevention, Cost and Operational Impacts, Flood Prevention, Sample analysis /collection/ handling)

Description: Monitoring of the SOP Technologies under-grate baskets and curb inlet filtration devices will include qualitative and quantitative analysis for the following areas:

1. Pollution Prevention: Once per month, or at different intervals if needed for improved analytical benefits, debris and litter will be collected from inside the SOP Technologies under-grate basket filters and in front of the SOP Technologies curb inlet filters. This will be done together with volunteer groups from local environmental organizations, when available.
2. Cost and Operational Impacts: To better understand the financial impacts of implementing stormwater filters as part of a village-wide strategy for addressing stormwater pollution, cost data from maintenance activities will also be quantified.
3. Flood Prevention: To better understand the impact that the SOP Technologies stormwater filters have on preventing street flooding due to clogged drainage pipes, data (depth and duration) from flooding incidents will be collected and analyzed.

Analysis: To characterize and quantify the debris captured by the SOP Technologies stormwater filters, and other data relevant to the adoption of the stormwater filters, the following methods will be used:

1. Pollution Prevention: The methodology will resemble similar analysis conducted in the City of Aventura in 2019, ([analysis available for download here](https://static1.squarespace.com/static/53815aa4e4b037295d978dfc/t/5f3b4c452bdfc621561c880b/1597721676014/SOP+Technologies+-+City+of+Aventura+Stormwater+Curb+Filters+Report+2020-06-30_1%281%29.pdf))¹, after consultation with the DEP NPDES Stormwater Program office. The debris captured in the under-grate baskets and in front of curb filters will be logged for each site, and weighed. Per inlet location, the weight of the debris collected will be entered into the the DEP NPDES Stormwater Program's [FSA-MS4 Load Reduction Tool \(updated 2019\)](https://static1.squarespace.com/static/53815aa4e4b037295d978dfc/t/5f3b4c452bdfc621561c880b/1597721676014/SOP+Technologies+-+City+of+Aventura+Stormwater+Curb+Filters+Report+2020-06-30_1%281%29.pdf), in order to quantify the amount of Total Nitrogen (TN) and Total Phosphorus (TP) the baskets and curb filters will prevent from entering stormwater catch basins. Also, the types and quantities of litter (e.g. plastic bags, paper, metal cans) will be quantified and weighed separately and together with the leaves and organic material collected, per site. The screenshots below show data entry and output formats using the Load Reduction Tool. As recommended by University of Florida professor John Sansalone, P.E., PhD, the weight of the debris collected/blocked by the SOP Technologies stormwater filters will be entered into the "Catch Basin Cleanout" section of the tool. To compare with sites that do not use stormwater filters, we will also select 2-5 locations with curb openings that do not have a stormwater filter, and we will collect and quantify debris/pollution in a similar fashion.

¹

https://static1.squarespace.com/static/53815aa4e4b037295d978dfc/t/5f3b4c452bdfc621561c880b/1597721676014/SOP+Technologies+-+City+of+Aventura+Stormwater+Curb+Filters+Report+2020-06-30_1%281%29.pdf

City of Aventura, Stormwater Filters Analysis Report, 2019-2020 Updated June 30, 2020

1 Enter Weight of Solids ⁽¹⁾ Removed - Calculate Equivalent Dry Weight				
2 FSA 2019				
	For Dry Solids by Weight	For Wet Solids by Weight ⁽²⁾		Sum of Calculated Equivalent Dry Weight Collected (Kilograms)
	If Known, Enter Weight of "Dry" Solids ⁽³⁾ (Pounds)	Enter Weight of Wet Solids (Pounds)	Enter Moisture Content ⁽⁴⁾ as decimal i.e., "0.15"	
8 Category of Maintenance Activity				
10 Street Sweepings	0	0	0.04	
12 Catch Basin Cleanout	0	0	0.24	
14 BMP Cleanout	0	0	0.33	
16 GREEN Denotes Cells for DATA ENTRY				
17 BLUE Denotes Calculations Results				
18 NOTES:				
19 1. "Particulate Matter" from the FSA Final Report is defined as "Solids" for use in this spreadsheet.				
20				

- Calculated Nutrient Load Reductions from MS4 Maintenance Practices				
1 FSA 2019				
2 TOTAL PHOSPHORUS	Subtotal TP Removed (Kilograms)	Subtotal TP Removed (Pounds)		
3 Street Sweepings - Dry Mass Collected (kg)				
4 Amount of TP Removed (Kilograms)				
5				
6 Catch Basins - Dry Mass Collected				
7 Amount of TP Removed (Kilograms)				
8				
9 BMP - Dry Mass Collected				
10 Amount of TP Removed (Kilograms)				
11				
12 GRAND TOTAL TP REMOVED (KILOGRAMS) =				
13 GRAND TOTAL TP REMOVED (POUNDS) =				
14				
15				
16 TOTAL NITROGEN	Subtotal TN Removed (Kilograms)	Subtotal TN Removed (Pounds)		
17 Street Sweepings - Dry Mass Collected (kg)				
18 Amount of TN Removed (Kilograms)				
19				
20 Catch Basins - Dry Mass Collected				
21 Amount of TN Removed (Kilograms)				
22				
23 BMP - Dry Mass Collected				
24 Amount of TN Removed (Kilograms)				
25				
26 GRAND TOTAL TN REMOVED (KILOGRAMS) =				
27 GRAND TOTAL TN REMOVED (POUNDS) =				
28				

2. Cost and Operational Impacts: Analysis of costs will include a comparison of the Village of Key Biscayne costs of collecting debris from the inlets that have the SOP Technologies stormwater filters, versus the cost of collecting debris at sites without the stormwater filters. These data generated by the Village of Key Biscayne may be supplemented by other available data on stormwater debris maintenance costs. To determine other operational impacts of implementing stormwater filters, the Village of Key Biscayne Public Works personnel and SOP Technologies will discuss if and how stormwater maintenance practices need to adapt as a result of stormwater filter implementations. SOP Technologies will analyze the time, equipment, skills and other impacts of maintaining a clean stormwater system with and without stormwater filters throughout the village.
3. Flood Prevention: To determine flood-prevention benefits of preventing leaves and other debris from entering stormwater systems, this analysis will include an assessment of the causes of past floods throughout the Village of Key Biscayne, with an emphasis on the floods caused by stormwater drainage pipes or basins that were unable to adequately discharge water due to accumulated leaves and debris in the stormwater system. Data to assess will be the quantity of floods that occurred as a result of stormwater drainage pipes that were clogged with debris, versus floods caused due to other reasons. Also, to capture more data, flooding incidents during the analysis period will be logged and their causes noted. This will help to determine the flood prevention impacts of using the stormwater filters in order to prevent debris from entering/clogging stormwater drainage pipes..

Sample Collection and Handling: For the SOP Technologies stormwater filters, the sample collection, handling and analysis will be detailed in a QAPP (Quality Assurance Project Plan) to be supplied prior to commencement of the pilot project. To compare with sites that do not use stormwater filters, we will also select 2-5 locations with curb openings that do not have a stormwater filter, and we will collect and quantify debris/pollution in a similar fashion.

Deliverable(s): The Grantee in collaboration with the contractor(s) will submit 1) a technical memorandum describing the storm events sampled, the number of samples collected, the timing of sampling, record of the hourly precipitation amounts based on nearby rain gage and document extent of roadway inundation; 2) copies of field sheets and signed/dated chain of command documents; 3) UUF sample analysis data in Excel format; 4) screenshots of under-grate basket and curb filter data entered into the FSA-MS4 Load reduction Tool; 5) photos of the debris captured by the under-grate baskets and curb filters; 6) summary of the analysis of cost and operational impacts of debris collection; 7) summary of flood prevention assessment and observations.

Payment Request Schedule: The Grantee will submit monthly payment request for the duration of the sampling period with monitoring results provided in the draft final report.

Task 6: Final Report

Description: Upon completion of the Pilot, a final report will be developed summarizing:

- Site assessment and chosen locations
- Storm Data
- Monitoring, sampling, and analysis completed for all technologies installed and any issues/deviations from the plan
- Laboratory Results
- Field Notes
- Photographs
- Summary – Storms and pollutants
- Total Expense (TOTEX: including capital, O&M assessments) analysis as a Village wide Stormwater Management Strategy

Deliverable(s): A minimum of 2 weeks before end of the agreement, a draft report will be submitted. Any requested DEP edits will be integrated into a final report (in Word) before being submitted.

Payment Request Schedule: The Grantee will submit a single payment request following approval of the deliverable for Task 6.

VI. PROJECT TASK TIMELINE:

The tasks must be completed by, and all deliverables received by, the corresponding task end date.

Task No.	Task Title	Est. Task Start Date	Task End Date	Deliverable(s)	Task Invoice Frequency
1	Quality Assurance Project Plan - Draft	Upon Execution	Prior to Sampling Activities	Draft QAPP	Single
	Quality Assurance Project Plan - Final	Upon Execution	Prior to Sampling Activities	Final QAPP	Single
2	Reporting	Upon Execution	3/15/2023	1) A progress report quarterly 2) A budget report quarterly	Quarterly (8/15/22, 11/15/2022, 1/15/2023, 4/15/2023)
3	Site Assessment	Upon Execution	8/30/22	Tech Memo on site assessment including locations and pictures	Single
4	Construction / Installation	Upon Execution	08/15/2022	Tech Memo on installation including pictures and online map	Single
5	Monitoring	08/15/2022	03/15/2023	Tech Memo (wet season) Tech Memo (dry season)	Monthly
6	Final Report - Draft	03/15/2023	06/15/2023	Draft Report	Single
	Final Report - Final	06/15/2023	08/15/2023	Final Report	Single

VII. BUDGET DETAIL BY TASK:

Fixed cost grant funding must not exceed the budget amounts as indicated below. Match funding shall be provided at the minimum amounts in the categories indicated below.

Task No.	Task Title	Budget Category	Grant Amount	Match Amount	Task Total
1	QAPP	Contractual Services	\$2,400	\$0	\$2,400
		Miscellaneous/Other Expenses	\$0	\$0	\$0
		Salary	\$0	\$1,200	\$1,200
		Fringe Benefits	\$0	\$0	\$0
		Equipment	\$0	\$0	\$0
Total for Task:		\$2,400	\$1,200	\$3,600	

2	Reporting	Contractual Services	\$0	\$0	\$0
		Miscellaneous/Other Expenses	\$0	\$0	\$0
		Salary	\$0	\$2,500	\$0
		Fringe Benefits	\$0	\$0	\$0
		Equipment	\$0	\$0	\$0
Total for Task:			\$0	\$2,500	\$2500
3	Site Assessment	Contractual Services	\$1,920	\$920	\$2,840
		Miscellaneous/Other Expenses	\$0	\$0	\$0
		Salary	\$0	\$0	\$0
		Fringe Benefits	\$0	\$0	\$0
		Equipment	\$0	\$0	\$0
Total for Task:			\$1,920	\$920	\$2,840
4	Construction / Installation	Contractual Services	\$1729	\$7,836	\$9,565
		Miscellaneous/Other Expenses	\$0	\$0	\$0
		Salary	\$0	\$0	\$0
		Fringe Benefits	\$0	\$0	\$0
		Equipment	\$67,988	\$0	\$67,988
Total for Task:			\$69,717	\$7,836	\$77,553
5	Monitoring	Contractual Services	\$80,700	\$41,983	\$122,683
		Miscellaneous/Other Expenses	\$0	\$0	\$0
		Salary	\$0	\$0	\$0
		Fringe Benefits	\$0	\$0	\$0
		Equipment	\$0	\$0	\$0
Total for Task:			\$80,700	\$41,983	\$122,683
6	Final Report	Contractual Services	\$4,800	\$0	\$4,800
		Miscellaneous/Other Expenses	\$0	\$0	\$0
		Salary	\$0	\$1,240	\$1,240
		Fringe Benefits	\$0	\$0	\$0
		Equipment	\$0	\$0	\$0
Total for Task:			\$4,800	\$1,240	\$6,040
Project Total:			\$159,537	\$55,679	\$215,216
Percentage Match:			75%	25%	100%

Note: Authorization for continuation and completion of work and any associated payments may be rescinded, with proper notice, at the discretion of the Department if the Legislature reduces or eliminates appropriations.

SALARY AND FRINGE BENEFITS BY TASK:

Fixed cost funding or match hourly and fringe rate(s) by position may not exceed those indicated below.

Task No.	Position Title	Hourly Rate	Fringe Rate (%)
1-6			
	<i>AbTech Technical Advisor</i>	<i>\$100</i>	<i>0%</i>
	<i>SOP Technologies (Sr. Engineer)</i>	<i>\$120</i>	<i>0%</i>
	<i>SOP Technologies (Jr. Engineer)</i>	<i>\$81</i>	<i>0%</i>
	<i>SOP Technologies (Technician)</i>	<i>\$60</i>	<i>0%</i>

Note: Upon submission of each payment request, the Grantee certifies that the hours and rates submitted are accurate and allowable costs for the grant agreement. Upon request by the Department's grant manager, additional documentation of hours worked will be provided.

Appendix A – City of Aventura Pilot Study

Appendix B – AbTech Smart Sponge Technical Specifications



CITY OF AVENTURA
DEPARTMENT OF PUBLIC WORKS

STORMWATER FILTERS ANALYSIS REPORT

2019-2020

Updated: June 30, 2020

EXECUTIVE SUMMARY

The City of Aventura first implemented SOP Technologies' patented stormwater curb inlet filters in Oct 2017, and city-wide in all city inlets in the summer of 2019.

Debris and litter in front of the filters were collected and analyzed In order to provide more data about the impacts of the stormwater filters as a Best Management Practice (BMP).

Summary of findings:

- Annual Pollution Prevention with Stormwater Filters
 - 38,528 lbs. of leaves, street litter and debris prevented from entering the stormwater system, local groundwater, and the Biscayne Bay.
 - Nutrient load reductions
 - 14.56 lbs. of Total Phosphorus (TP)
 - 30.25 lbs. of Total Nitrogen (TN)
 - Thousands of cigarette butts, plastic and paper objects, and other street litter are kept out of local waterways.
- Cost Savings
 - \$43,000 - \$97,000 net cost savings within 10 years
 - \$188 - \$420 saved within 10 years per curb inlet that has a stormwater filter
- Flood Prevention and Resilience Benefits
 - The city is keeping thousands of pounds of leaves and litter out of stormwater catch basins and pipes, thereby preventing street flooding.

[Link to view map of stormwater filters](#)



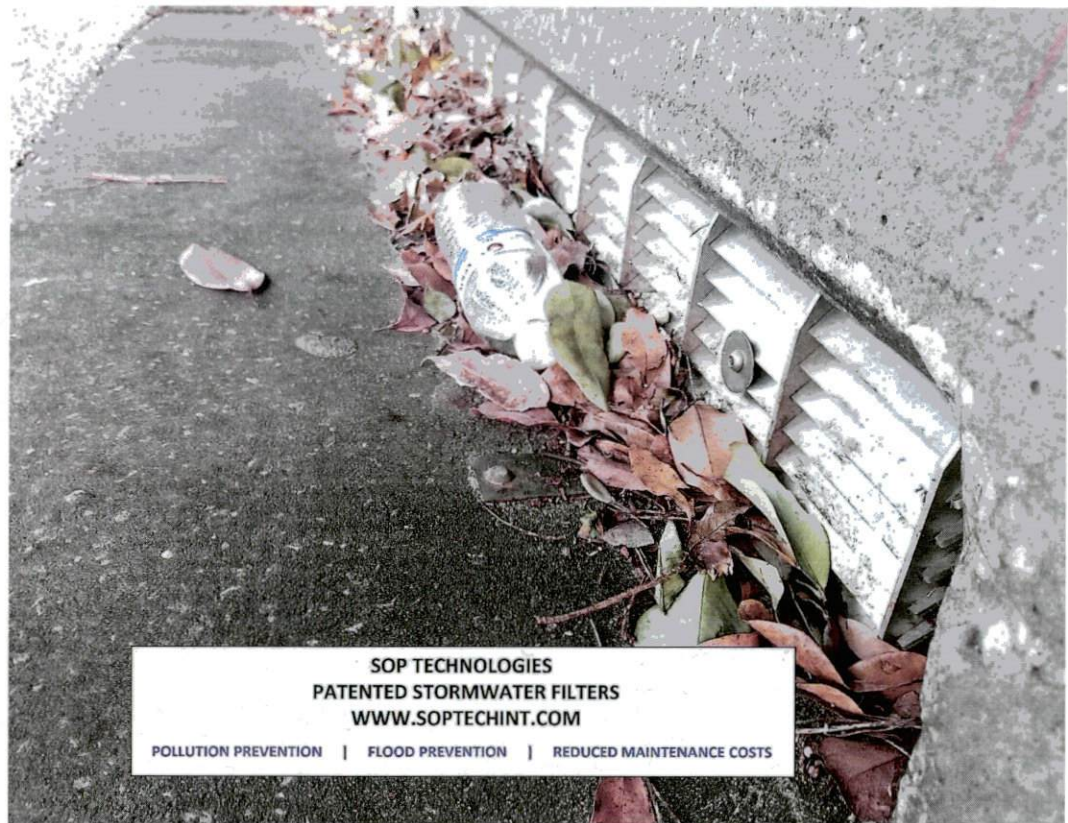
ABOUT SOP TECHNOLOGIES STORMWATER FILTERS

SOP Technologies' patented upward flow stormwater drainage filters are used to prevent leaves, trash and debris from entering stormwater drainage systems. This stormwater Best Management Practice (BMP) has been proven effective in the field since 2011 in Florida, and Australia since 2018.

Curb inlet filters keep debris at the street to facilitate debris removal and prevent debris and litter from entering stormwater drainage systems.

The three main benefits of the stormwater filters are:

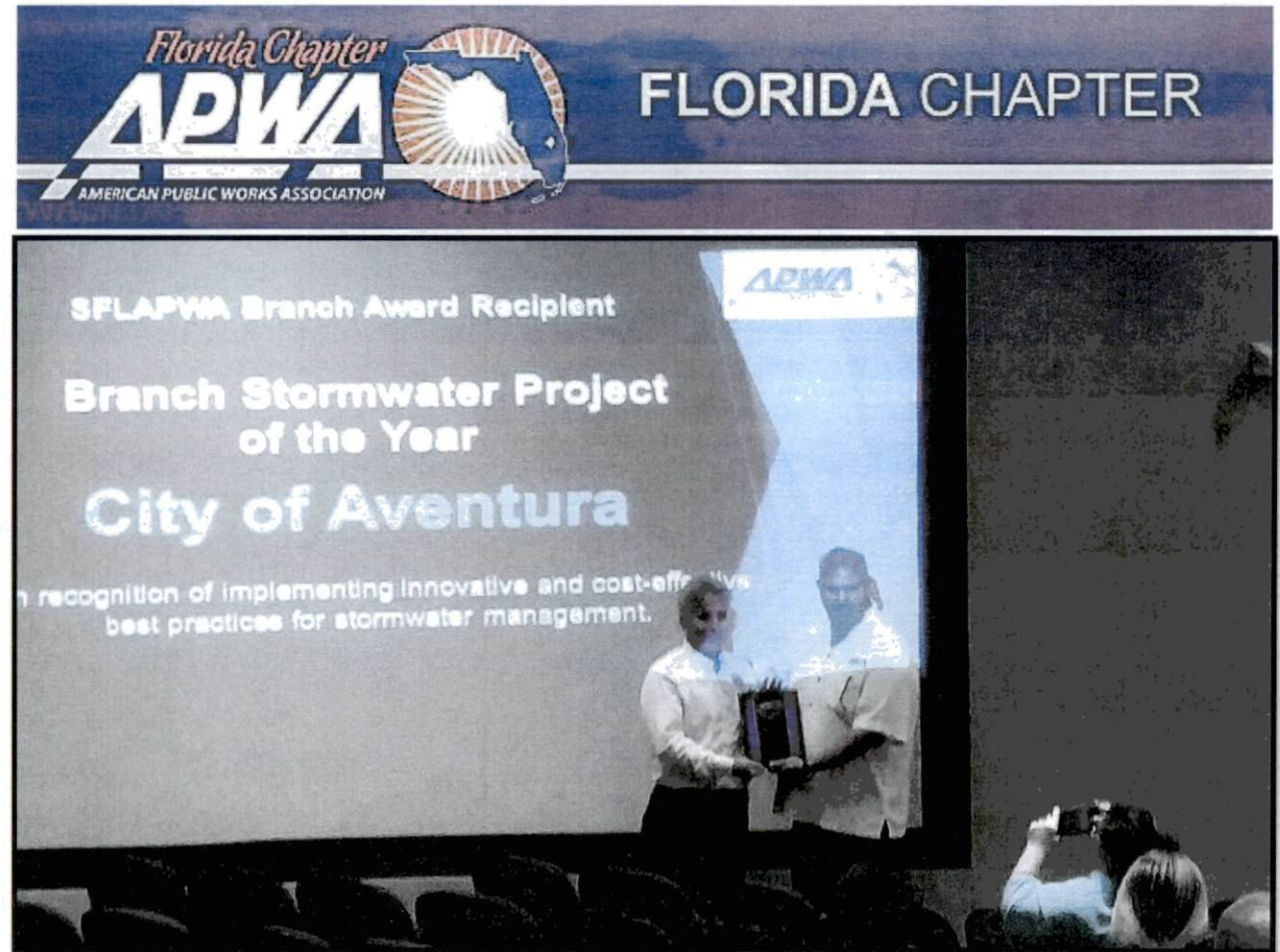
1. **Pollution Prevention:** With less debris entering stormwater systems, less nutrients and pollutants are discharged to waterways or introduced into groundwater.
2. **Cost Savings:** Debris is swept from the street (low cost) instead of using vacuum trucks (high cost) to remove debris from catch basins and pipes.
3. **Flood Prevention:** With less debris in catch basins and pipes, cleaner and greater volumes of water flow freely; thereby reducing flood risks and duration of floods.



INDUSTRY RECOGNITION

In 2019, the City of Aventura received the Branch Stormwater Project of the Year from the South Florida branch of the American Public Works Association (APWA).

The award was in recognition of implementing innovating and cost-effective best practices for stormwater management, due to the city's use of SOP Technologies' stormwater filters.



POLLUTION PREVENTION ANALYSIS

Based on the recommendation from the Florida Department of Environmental Protection (FDEP), debris/litter was collected as follows:

Two tiers/types of areas were selected:

- Residential areas (10 inlets)
- Commercial areas (10 inlets)

The map on the right highlights the locations of the inlets.

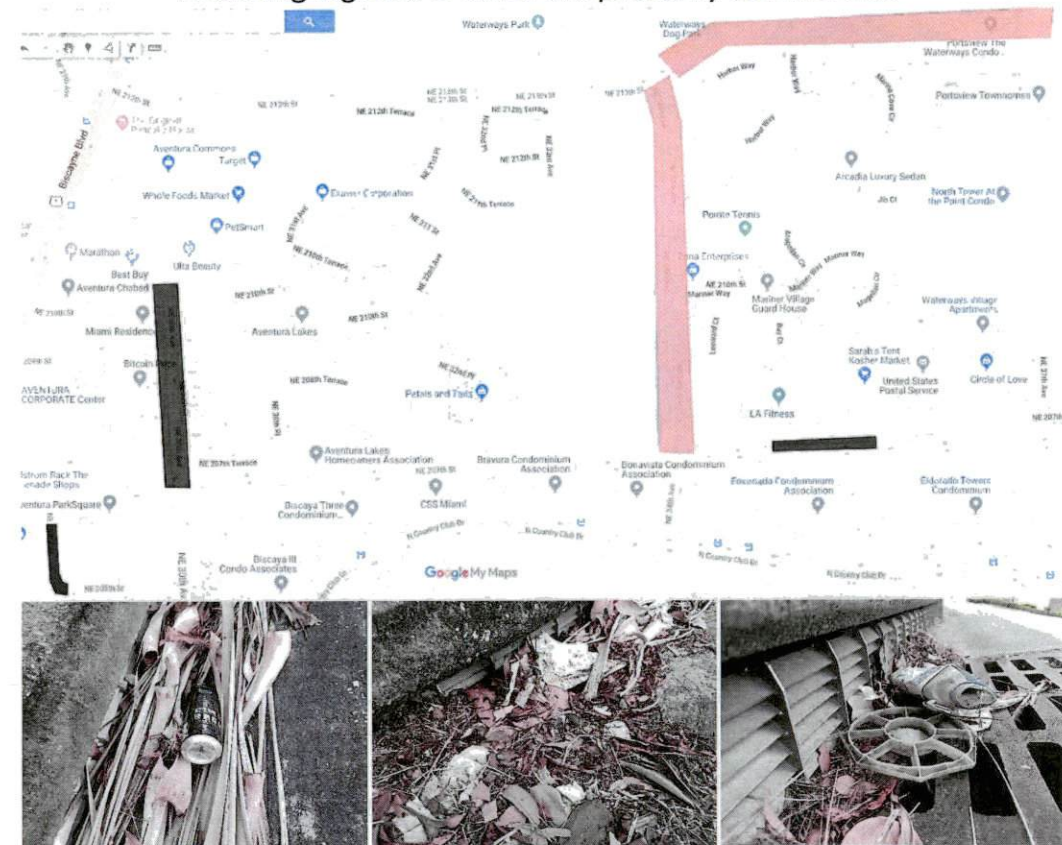
The inlets were all cleaned one week prior to collecting the data, so the debris collected accounts for debris/litter accumulation in front of the stormwater filters between 9/12/2019 and 9/19/2019.

Debris collected in the Residential areas was kept separate from the Commercial area debris. This way, we were able to compare the difference in debris accumulation for each tier.

[Click here to view the map of the areas.](#)

Areas highlighted in **ORANGE** are primarily residential.

Areas highlighted in **GREY** are primarily commercial.



POLLUTION PREVENTION ANALYSIS RESULTS

Debris collected from Residential areas and Commercial areas were grouped in separate bags and weighed using a luggage scale.



The total weight of the debris collected in front of the 20 inlet filters was 110.76 lbs. The commercial areas had more man-made litter, such as plastics and cans.

Residential Areas

- Weight of debris in front of 10 inlet filters: 42.72 lbs.
- Average debris weight per filter: 4.272 lbs.
- Estimated weight for 1 year of debris, per filter: 222.14 lbs.

Commercial Areas

- Weight of debris in front of 10 inlet filters: 68.04 lbs.
- Average debris weight per filter: 6.804 lbs.
- Estimated weight for 1 year of debris, per filter: 353.81 lbs.



POLLUTION PREVENTION ANALYSIS RESULTS (CONTINUED)

In order to more accurately represent the amount of debris/litter removed by use of the SOP Technologies curb inlet filters, several adjustments were made based on the average inlet sizes throughout the city and the proportion of Residential versus Commercial zones.

Residential versus Commercial areas review, used for adjustments

According to the current version of the City of Aventura Comprehensive Plan, in 2005, there were:

- 523.89 acres of residential uses, and
- 319.97 acres of commercial uses

Adjusting for inlet sizes

The City of Aventura is using 232 SOP Technologies stormwater inlet filters throughout the city.

Adjusting for the average size of the stormwater inlet filters in Aventura, when compared to the inlets used for the debris analysis, the following figures are a more accurate representation of pounds of debris prevented from entering stormwater systems by the filters:

- Residential Areas: 135.59 lbs. per year, per inlet
- Commercial Areas: 215.95 lbs. per year, per inlet

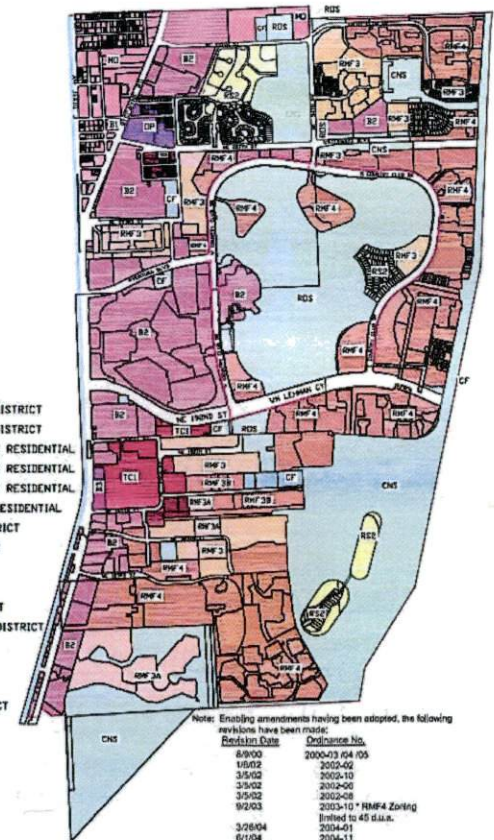
Total lbs. of debris blocked by the filters, factoring proportion of Residential and Commercial zones in the city: 38,528.74 lbs. per year.

Aventura Planning and Zoning Documents: <https://www.cityofaventura.com/207/Planning-Zoning>

AVENTURA ZONING MAP



RS1	RESIDENTIAL SINGLE FAMILY DISTRICT
RS2	RESIDENTIAL SINGLE FAMILY DISTRICT
RMF3A	MULTI-FAMILY MEDIUM DENSITY RESIDENTIAL
RMF3B	MULTI-FAMILY MEDIUM DENSITY RESIDENTIAL
RMF4	MULTI-FAMILY HIGH DENSITY RESIDENTIAL
RB	NEIGHBORHOOD BUSINESS DISTRICT
CB	COMMUNITY BUSINESS DISTRICT
HB	HEAVY BUSINESS DISTRICT
TC	TOWN CENTER DISTRICT
TCM	TOWN CENTER MARINE DISTRICT
TCN	TOWN CENTER NEIGHBORHOOD DISTRICT
OP	OFFICE PARK DISTRICT
MO	MEDICAL OFFICE DISTRICT
LI	LIGHT INDUSTRIAL DISTRICT
CF	COMMUNITY FACILITIES DISTRICT
RDS	RECREATION OPEN SPACE
CNS	CONSERVATION DISTRICT



Note: Enabling amendments having been adopted, the following revisions have been made:

Revision Date	Ordinance No.
8/9/00	2000-03 (04/05)
1/6/02	2002-02
3/5/02	2002-10
3/5/02	2002-06
3/5/02	2002-08
9/2/03	2003-10 * RMF4 Zoning limited to 45 d.s.f.
3/28/04	2004-01
6/1/04	2004-11
11/1/05	2005-16
10/3/08	2008-16

Adopted July 1999

POLLUTION PREVENTION ANALYSIS RESULTS (CONTINUED)

Total Nitrogen (TN) and Total Phosphorus (TP) captured by the stormwater filters in the City of Aventura were quantified using the FSA MS4 Load Reduction Assessment Tool available on the FDEP website.¹

Total annual lbs. of debris blocked by the SOP Technologies filters, factoring the proportion of Residential and Commercial zones in the city is: 38,528.74 lbs. per year.

The total pounds calculation of 38,528.74 was entered into the Load Reduction Assessment Tool to derive the Total Nitrogen (TN) and Total Phosphorus (TP) prevented from entering the stormwater systems.

Annual removal with SOP Technologies stormwater inlet filters / screens:

- **TP** 14.566 lbs.
- **TN** 30.251 lbs.

1. FSA-MS4 Load Reduction Assessment Tool updated 2019. Accessed 5/5/2020
<https://floridadep.gov/water/stormwater/documents/fsa-ms4-load-reduction-tool-updated-2019>

	A	B	C	D	E	F	G	H
1	Calculated Nutrient Load Reductions from MS4 Maintenance Practices							
2	FSA 2019							
3								
4	TOTAL PHOSPHORUS				Subtotal TP	Subtotal TP		
5	Street Sweepings - Dry Mass Collected (Kg)		0		Removed	Removed		
6	Amount of TP Removed (Kilograms)		0		(Kilograms)	(Pounds)		
7							0	0
8	Catch Basins - Dry Mass Collected		17.477					
9	Amount of TP Removed (Kilograms)		7				7	15
10								
11	BMP - Dry Mass Collected		0					
12	Amount of TP Removed (Kilograms)		0				0	0
13								
14	GRAND TOTAL TP REMOVED (KILOGRAMS) =						6.60617	
15	GRAND TOTAL TP REMOVED (POUNDS) =							14.56660
16								
17					Subtotal TN	Subtotal TN		
18	TOTAL NITROGEN				Removed	Removed		
19	Street Sweepings - Dry Mass Collected (Kg)		0		(Kilograms)	(Pounds)		
20	Amount of TN Removed (Kilograms)		0				0	0
21								
22	Catch Basins - Dry Mass Collected		17.477					
23	Amount of TN Removed (Kilograms)		14				14	30
24								
25	BMP - Dry Mass Collected		0					
26	Amount of TN Removed (Kilograms)		0				0	0
27								
28	GRAND TOTAL TN REMOVED (KILOGRAMS) =						13.719	
29	GRAND TOTAL TN REMOVED (POUNDS) =							30.251
30								
31								
32								
33								
34								
	Instructions	INPUT Solids Weight	INPUT Solids Volume	Calculated Load Reductions	Nutrient Val			

POLLUTION PREVENTION ANALYSIS RESULTS (CONTINUED)

Most of the debris in front of the stormwater filters was composed of leaves and organic matter, but there was also lots of street litter.

As shown on the table on the right, street litter was more prevalent in the Commercial areas when compared to Residential areas.

Item type	Quantity collected in front of the 10 Commercial Area filters	Quantity collected in front of the 10 Residential Area filters
Cigarette Butts	39	7
Plastic bottles, lids and other larger plastics	8	2
Plastic bottle caps, wrappers and smaller plastics	35	4
Glass bottles	1	0
Paper wrappers, napkins and paper products	39	9
Metal cans and metal objects	8	0
Styrofoam pieces and other materials	16	2

Litter in front of the 10 inlets in Commercial Areas



Litter in front of the 10 inlets in Residential Areas



COST SAVINGS ANALYSIS

The City of Aventura protected 232 curb inlets using SOP Technologies' stormwater filters, and the average curb inlet opening area (Height x Length) is 523 square inches. The inlet open area determines the filter size, which determines pricing, amount of debris and litter blocked at the inlet, etc. Therefore, this cost analysis can be used to determine cost savings for inlets of other sizes.

Based on the FDEP Load Reduction Tool results, costs of street sweeping and catch basin cleaning were compared using the University of Florida study to FDEP, "Municipal Separate Storm Sewer System (MS4) Practices Assessment Phase III – Reclaimed Water Areas" (2019) by Sansalone, et al, University of Florida. The study includes cost comparisons of using street sweeping versus catch basin cleaning (figures shown below for TP and TN).

Collecting leaves, debris and street litter costs much less using street sweepers when compared to using vacuum trucks.

Implementing stormwater inlet filters allowed the City of Aventura to collect significantly more debris with street sweepers, thereby saving money.

Street Sweeping
\$257 / lb. of TP
\$165 / lb. of TN



Catch Basin Cleaning
\$1,656 / lb. of TP
\$1,016 / lb. of TN



Using data from the debris collected in front of the City of Aventura inlets, and the cost of TN and TP removal, we plotted the cost of implementing the filters and using street sweeping, versus not having filters and using catch basin cleanings. Quantities of Total Nitrogen (TN) and Total Phosphorus (TP) collected by the filters were calculated using the FDEP Load Reduction Tool and data gathered at the City of Aventura for the pounds of debris SOP Technologies filters prevented from entering stormwater catch basins.

The data show that it costs less to use SOP Technologies inlet filters and street sweeping to remove debris, when compared to not using filters and using catch basin cleaning. **Within 10 years, the net cost savings per inlet in Aventura that uses a stormwater filter is from \$188 (for TP removal) and \$420 (for TN removal).** The cost savings factor the upfront costs to purchase the stormwater filters, filter installations, and street sweeping throughout the 10 years.

<https://floridadep.gov/water/stormwater/documents/fsa-ms4-load-reduction-tool-updated-2019>

Municipal Separate Storm Sewer System (MS4) Practices Assessment Phase III – Reclaimed Water Areas Final Report To Florida Department of Environmental Protection (FDEP). University of Florida (UF) College of Engineering, Engineering School of Sustainable Infrastructure and Environment (ESSIE), Environmental Engineering Sciences (EES) Department. Gainesville, Florida 32611 USA. January 2019. https://www.florida-stormwater.org/assets/FSAEF/Research/MS4/UF%20FDEP%20MS4%20Maintenance%20Final%20Report_edited.pdf

COST SAVINGS ANALYSIS (CONTINUED)

The net cost savings per inlet with a curb inlet filter is \$188 - \$420 within 10 years. This includes the cost of the filter, filter installation, and ongoing debris removal using street sweeping after filter implementation.

The estimated lifespan of SOP Technologies stormwater drainage filters is over 10 years; therefore, 10 years was used to conservatively estimate the Return on Investment (ROI) and cost savings (from maintenance operations) of implementing the stormwater filters.

The total cost, including installations, to implement stormwater curb drainage filters throughout the City of Aventura was \$159,972.

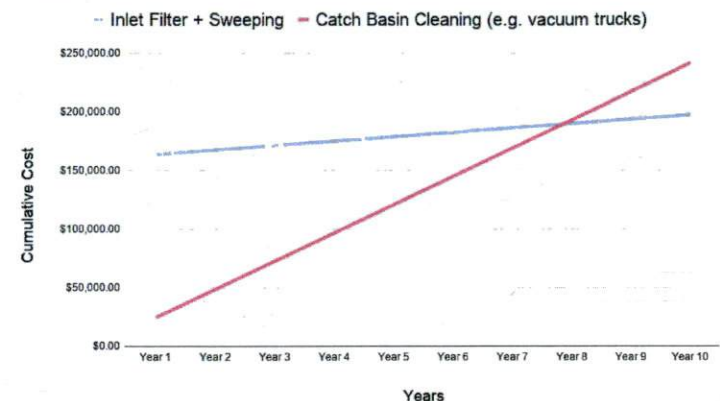
The financial “break-even point” of implementing the stormwater filters is from 6-8 years. Within 10 years, the city is estimated to save \$43,000 - \$97,000 on stormwater maintenance efforts because of the stormwater filters implementations.

Costs of street sweeping and catch basins cleanings are based on the cost per pound of Total Nitrogen (TN) and Total Phosphorus (TP) removal, using data from the FDEP Load Reduction Assessment Tool and the University of Florida MS4 study.

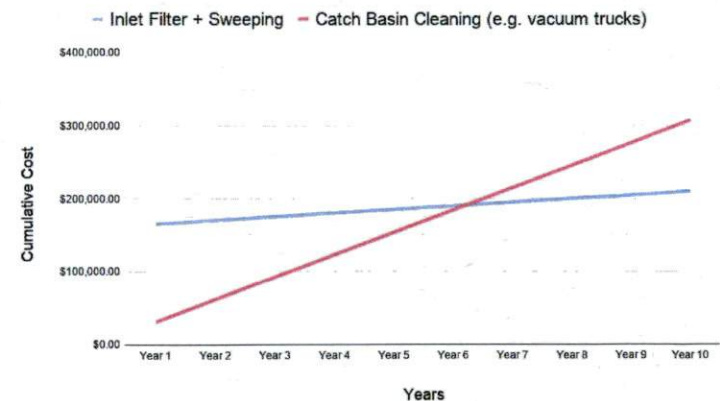
Maintenance Frequency

Before implementing stormwater curb inlet filters, the City of Aventura had a monthly (city-wide) street sweeping schedule. After implementing the filters, the city increased street sweeping to take place once every two weeks. The street sweeping is enough to keep the stormwater filters clean.

TP Removal 10 Year Cost Comparison (city-wide): Inlet Filters + Sweeping vs Catch Basin Cleanings



TN Removal 10 Year Cost Comparison (city-wide): Inlet Filters + Sweeping vs Catch Basin Cleanings



FLOOD PREVENTION ANALYSIS

Around the world, leaves, trash and debris on roadways clog stormwater drainage systems and cause floods. Although we have not quantified the specific flood prevention benefits of implementing our stormwater filters, it is known that having cleaner water flowing through drainage pipes is a way to effectively convey water, as opposed to having leaves and other items inhibiting water flow. In the City of Aventura, there haven't been floods caused by clogged storm drains or clogged stormwater filters. Cleaner stormwater systems are more resilient to severe storm events. Here are some news headlines that tie leaves, trash and debris to flooding:

Tampa, FL *Heavy Rains Test Tampa Stormwater Drainage Improvements* [link](#)

"We've actually had dive teams go out and do major cleaning of barnacles and trash in some of our big pipes that outfall into the bay that have completely been blocked," said Jean Duncan, director of the city's stormwater services."

Wellington, FL *What caused Wellington roads to flood? Rapid rainfall plus clogged drains* [link](#)

"Not only did the sluggish storm system dump 4.25 inches of rain on Wellington in less than an hour and a half, it also came with wild winds that knocked loose branches, leaves and pine needles and clogged drains, Assistant Village Manager Jim Barnes said."

San Diego, CA *Rain floods buildings on the campus of UC San Diego* [link](#)

"Campus police told 10News that clogged drains may have been the cause for most of the flooding."

Denver, CO *Denver clearing debris-clogged storm drains to avert flooding* [link](#)

"The wrath of Mother Nature is not the only culprit behind the flooding. Trash tossed in the streets is as much to blame, said Public Works spokeswoman Emily Williams. "A lot of times, it's trash, yard debris and pet waste that is being removed from the drains," she said."

Sacramento, CA *With More Rain On The Way, County Officials Say Months Of Planning Goes Into Preventing Flooding* [link](#)

"The county said it's also reminding people to simply pick up any trash or leaves in their neighborhood to prevent possible drain clogging."

New York, NY *Storm Drains Fail Again in Brooklyn* [link](#)

"The flooding occurred because to the catch basins, which collect rain water, were full of garbage, said a city Department of Environmental Protection spokeswoman. "

Malaysia *Maintain drainage system to avoid floods - Malacca exco* [link](#)

"We hope all parties would adhere to the standards and regulations (on drainage system maintenance) according to schedule as we know floods occur when drains and rivers are not properly maintained. "The rain may be heavy but with the drainage system clogged with grass and mud, the situation is worsened and as such all parties should not take lightly frequent cleaning up of drains," he told *Bernama*."

West Palm Beach, FL

West Palm Beach utility crews work to clear drains to prevent flooding during, after storms [link](#)

"WPTV found drains clogged with vegetation, beer cans, plastics and anything else you might imagine following the flood."



Arthur Mondale
@ArthurMondale

@westpalmbeach Stormwater Drainage Division maintains approx. 6,000 #drains and 184-miles of storm pipes. They're prepping for the next #flashflood @WPTV @PhotogEricP



♡ 3 1:14 PM - Aug 7, 2019



For questions about this report,
please contact:

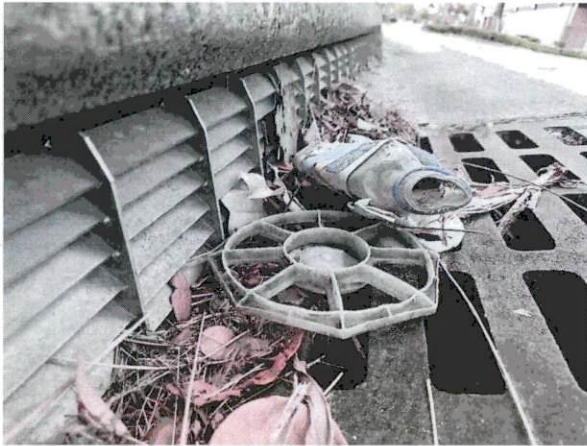
Emilio Lopez, CEO
305-792-8778
emilio@soptechint.com

Learn more about SOP Technologies stormwater filters at
www.soptechint.com



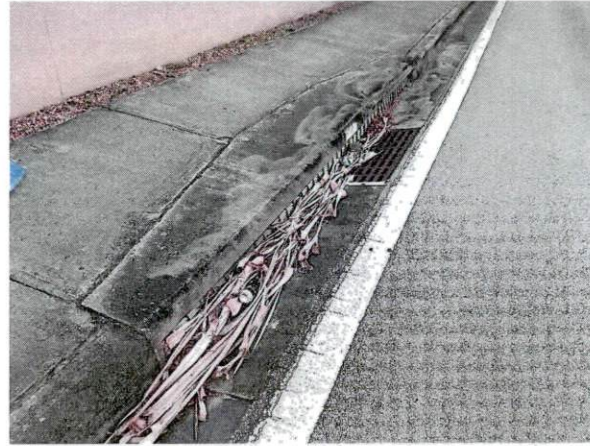
APPENDIX

Photos of debris in front of inlet filters



APPENDIX

Photos of debris in front of inlet filters



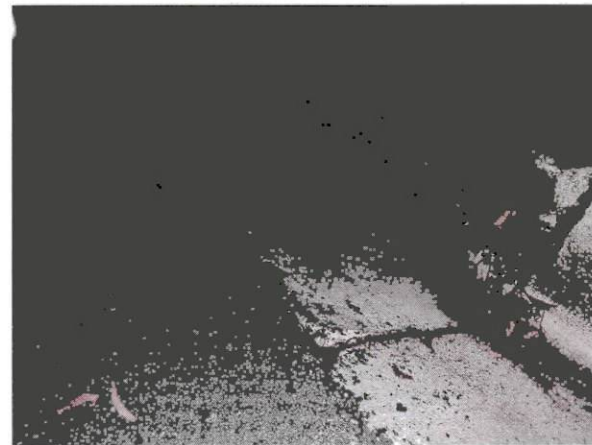
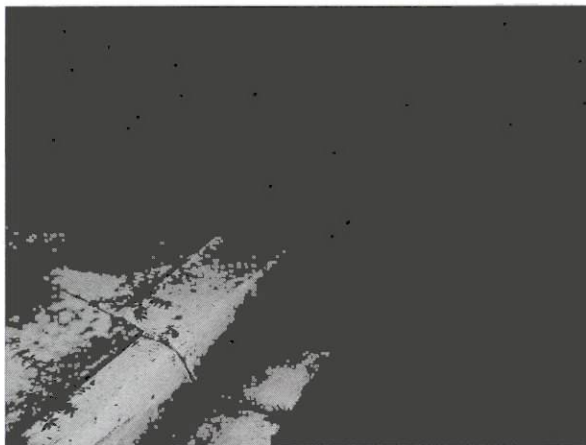
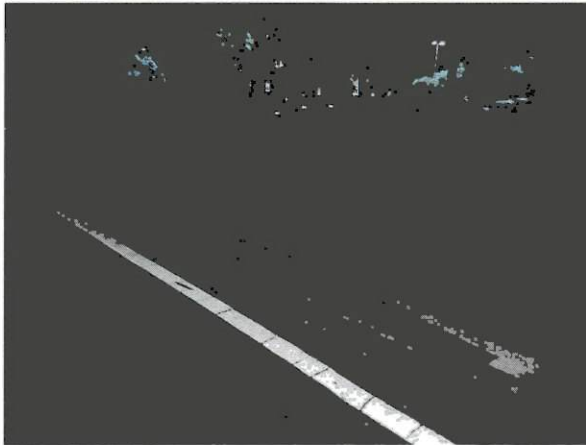
APPENDIX

Photos of debris in front of inlet filters



APPENDIX

Photos of debris in front of inlet filters



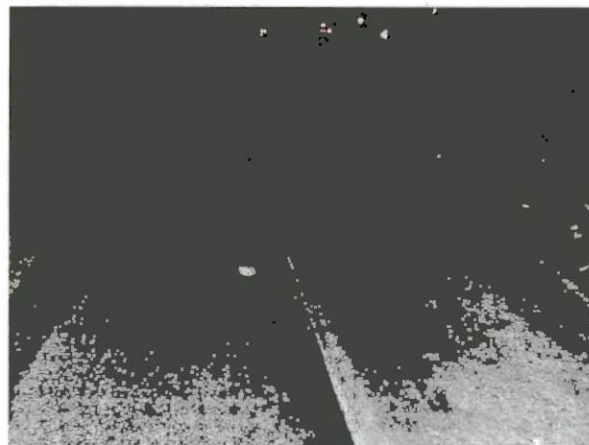
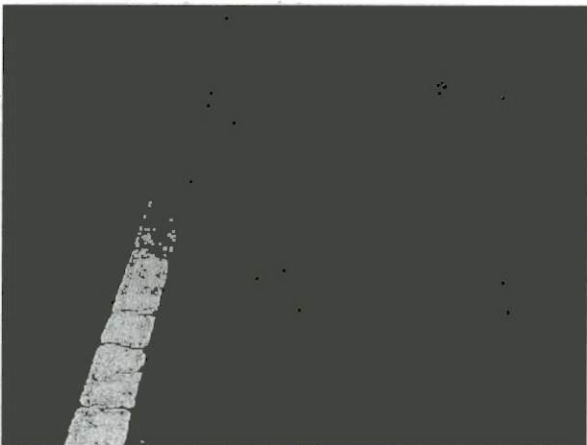
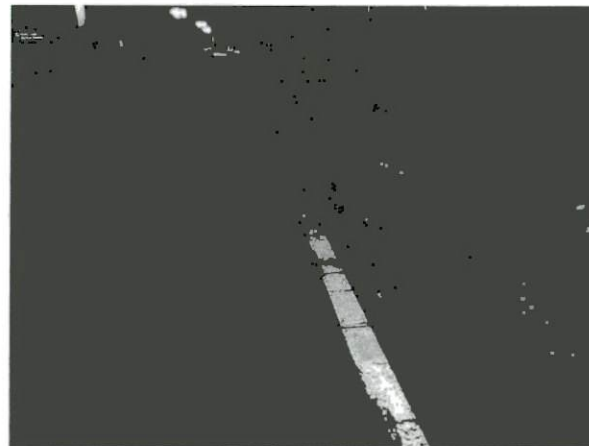
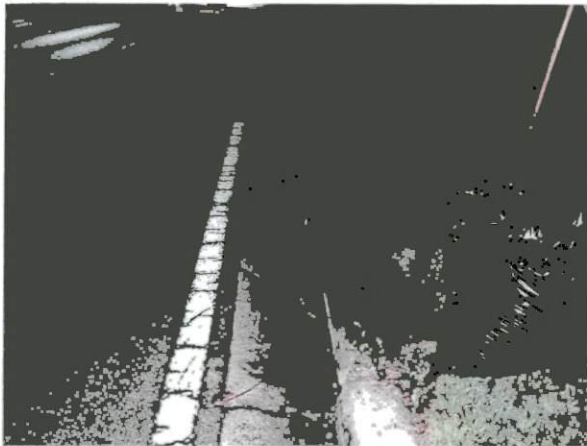
APPENDIX

Photos of debris in front of inlet filters



APPENDIX

Photos of debris in front of inlet filters



APPENDIX

Photos of debris in front of inlet filters and weighing debris



MEMORANDUM

AbTech

The logo for AbTech features the company name in a bold, black, sans-serif font. A light blue, teardrop-shaped graphic is positioned behind the letter 'A', partially overlapping it.

Leaders in Stormwater Purification

Executive Summary

The Company

AbTech Industries, Inc. ("AbTech" or the "Company") is an environmental technology company based in Scottsdale, Arizona. It has developed and patented the innovative Smart Sponge[®] absorption technology which is used in a variety of forms to filter contaminants from water. By adding other materials to Smart Sponge media, AbTech has created products with broad application in treating a variety of contaminants in water, especially those that plague stormwater runoff as it flows into rivers, lakes, and oceans polluting this ever increasingly scarce natural resource. AbTech operates in a market it has categorized as the Stormwater Purification Market, which goes beyond simple stormwater treatment that generally refers to the removal of trash, debris and sediment, by addressing additional contaminants such as hydrocarbons (oil and grease), bacteria and heavy metals.

AbTech's products range from catch basin filters to stormwater vaults that can be deployed in numerous applications to treat polluted water. AbTech's customer-centric products have been designed to position AbTech as the leader in Stormwater Purification with validated performance that proves them to be ideally suited for market acceptance. AbTech's products are designed to integrate and function within new and existing infrastructure without significant buildout or modification demands. Additionally, they complement existing or new green infrastructure, and allow for prompt market deployment. Simply, AbTech products offer an enhanced performance standard to address stormwater pollution with the ability to target specific pollutants at an unprecedented economic advantage.

Products & Technology

Smart Sponge Technology

AbTech's core technology is the Smart Sponge[®] filtration media, a polymer-based absorption material that binds to hydrocarbons (oleophilic) and repels water (hydrophobic). These characteristics make it an ideal solution for removing unwanted hydrocarbons (oil and grease) from water. In addition, AbTech has developed a proprietary, patented process for manufacturing Smart Sponge media that takes advantage of the different thermal behaviors of the polymers to bond the chains of the polymers in a flexible porous structure. The porosity of the Smart Sponge material gives it excellent flow rates when used as a filtration media. It also allows the polymer chains to selectively absorb hydrocarbon contaminants and pull them into its structure where they are encapsulated and kept from leaching back into the water stream. Based on the level of contaminant, the entire structure begins to swell (but not collapse into a total gel) while maintaining absorption capabilities well beyond usual levels. Once reaching saturation, the Smart Sponge material is easily recoverable and does not leach out any of the absorbed contaminant, even in rough water or under pressure, giving it less expensive disposal options, such as recycling through a waste to energy facility. These properties make it very suitable for purifying stormwater from surface run-off, as well as from other point and nonpoint sources. Additionally, Smart Sponge is effective for treatment of certain process waters from industrial operations. Smart Sponge products can be applied across various types of infrastructure including new or existing projects, catch basins, at the end-of-pipes (Smart Vaults), above and below ground, and in specific treatment scenarios in the industrial market.

Over the years, AbTech has developed variations of the Smart Sponge technology that include additives to the Smart Sponge media that allow it to address a wide range of contaminants, including heavy metals, phosphorus, nutrients, organics, bacteria, and hydrocarbons. Consequently, as the Smart Sponge technology platform continues to evolve and expand, new market potential emerges in tandem and AbTech positions itself as a leader in stormwater purification.

Engineered Systems and Smart Sponge[®]-based Products Being Sold¹

In conjunction with developing advanced filtration media, AbTech's engineers have also developed a variety of deployment systems that can be retrofitted into existing stormwater and wastewater infrastructure. This solves a major problem for industries and municipalities where aging water infrastructure and increasing enforcement of water quality standards (a result of increased awareness of the detrimental environmental and public health effects) pose one of the largest infrastructure challenges in the coming decades.

Smart Sponge[®] Popcorn

The Smart Sponge material can be formed into a variety of physical sizes or shapes to optimize its performance in a wide range of filtration applications. The Smart Sponge material is the cornerstone of AbTech Industries' current products, and AbTech Industries continues to find new applications for its use. When produced in its "popcorn" form (clumps of polymer similar in

¹ Excerpts taken from ABHD 2017 10k

shape to popcorn) Smart Sponge is an effective filtration media due to its high porosity and very favorable hydraulic characteristics. Smart Sponge Popcorn can also be sold to OEMs (original equipment manufacturers) and other users to be integrated into many different filtration pressure vessels or gravity flow structures.



Applicable Technology	Smart Sponge	Smart Sponge HM	Smart Sponge Plus	Smart Sponge AC	Smart Sponge BC
Targeted Contaminant	Hydrocarbons	Heavy Metals, Phosphorus, and Hydrocarbons	Bacteria and Hydrocarbons	Heavy Metals, Phosphorus, Chemicals and Soluble/Insoluble Hydrocarbons	Heavy Metals, Phosphorus, and Hydrocarbons

AbTech has developed several variations of Smart Sponge products by embedding other technologies into the original Smart Sponge material such as nanoparticles, activated carbon, and various char formulations designed specifically for the media to address additional contaminants beyond insoluble hydrocarbons; for example: nutrients, bacteria, heavy metals, and soluble organics. These medias not only have play in the stormwater market but also in the industrial market as well as within multiple other vertical markets.

Ultra-Urban® Filter

The Ultra-Urban Filter (UUF) with Smart Sponge media is an innovative low-cost BMP that helps customers meet NPDES requirements with effective filtration and purification, easy installation, and low maintenance. The UUF is made largely of recycled plastics in a modular filtration unit (or Catch Basin Insert) designed in a variety of shapes and sizes for use in storm drains and is used to treat stormwater runoff for new or retrofitted sites by absorbing oil and grease, adsorbing heavy metals and phosphates; and capturing trash and sediment.

The UUF is ideal for municipal, industrial and private sector applications ensuring compliance with stormwater regulations. The filter comes in three designs: The Curb Opening, Drop-In, and Customized Drain Insert. The unique micro porosity of Smart Sponge allows the standard sized UUF filters to handle a hydraulic flow rate of more than 200 gallons per minute and has proven effective in removing more than 80% of hydrocarbons and total suspended solids ("TSS") (300-micron nominal or greater).

The unique design of the Curb Opening Series allows installation crews to easily hang the appropriate number of filters in each drain on a simple mounting bracket. The product is designed with a lateral bypass to utilize each box as well as an overflow capability beyond "first flush" to eliminate the potential for street flooding in the event of an improperly serviced filter or a major storm. The technology is designed to treat first flush and automatically go into overflow mode beyond first flush which at that point has little or no contaminants remaining in it.

The UUF Drain Insert Series offers the same filtration characteristics of the Curb Opening series for stormwater filtration of hydrocarbons, trash and sediment. The unique micro porosity of Smart Sponge allows the Drain Insert Series UUF to handle a hydraulic flow rate of more than 500 gallons per minute and has proven effective in removing more than 80% of hydrocarbons and TSS. These units are designed to be suspended beneath a collar installed under the stormwater grates. This simple design allows easy access for maintenance with automatic overflow capability beyond first flush eliminating the potential for street flooding in the event of an improperly maintained filter.

Customized drain inserts are available for those customers with shallow drains or requiring deeper bed depths. AbTech Industries' engineers work with customers to understand the site characteristics, including hydraulics and contamination levels in order to confirm the appropriate Smart Sponge media to achieve the project's filtration goals.

UUF Chester Series

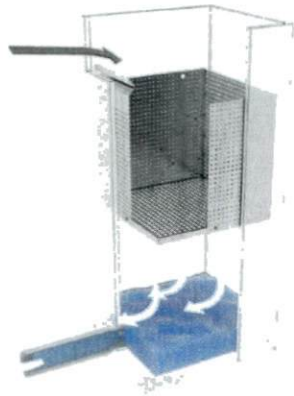
The UUF offering is manufactured with two different material configurations. The first and original UUF version, as described above, is made of recycled plastic with Smart Sponge media packed into the walls and base of the unit. When it is time to replace the Smart Sponge media, the entire unit must be replaced. The more compelling alternative is a newly released 100% stainless steel design referred to as the UUF Chester, available with or without removable Smart Sponge inserts.

Named after the city of its first large scale deployment, the UUF Chester is made of stainless steel, boasts a 20-year warranty, and contains Smart Sponge media inserts in Smart Pak® form, which can be replaced independently from the steel containment device thus creating an opportunity for recurring revenue from replacement Smart Sponge inserts. This innovation improves the value proposition for customers allowing them to easily replace the Smart Pak when the Smart Sponge material inside has been exhausted or utilize an alternative Smart Sponge media that addresses different pollutants, as needed. This is much less expensive than replacing the entire filter, as is required with the plastic UUF. Coupled with the extended lifecycle of the stainless-steel housing, these innovations are estimated to reduce the UUF's total cost over its life cycle by approximately 75% compared to AbTech's original plastic UUF and alternative technology offered by competitors that claim a similar function.

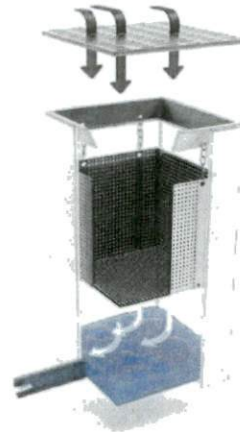
This is the latest evolution of AbTech technology. A breakthrough with not only impressive economic value for traditional stormwater treatment but also a true purification solution with inserts that can be upgraded as requirements change and technologies evolve. These new products show major promise as cost-effective solutions for catch basin protection and stormwater purification and are expected to lead the industry through rapid, widespread deployment.

Currently there are two variations of the UUF Chester series, one for maximizing sediment (referred to as total suspended solids or TSS) removal and received NJCAT verification with >99% removal performance, branded UUF TSS. The other variation, simply called the UUF Chester, that not only captures trash and sediment but removes colloidal and dissolved contaminants by utilization of smart sponge media variants to filter the stormwater. The following pictures are showing the Chester series versions.

Curb Opening UUF TSS



Drain Insert UUF TSS



Curb Opening UUF Chester



Drain Insert UUF Chester

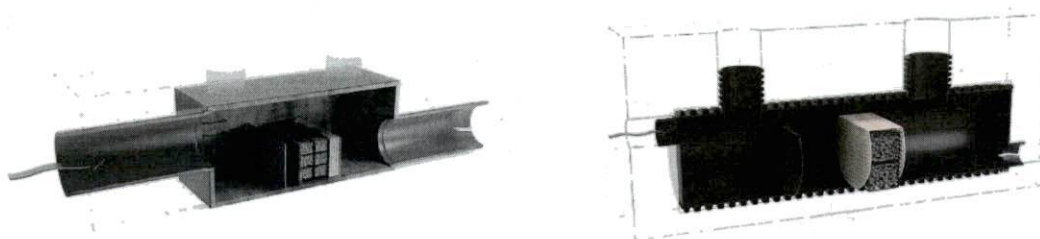


Smart Vaults (also referred to as "End-of-Pipe Units")

Smart Vaults, which include horizontal pipe or tank systems, use AbTech's advanced media at the end of a pipe as an effective alternative to treatment in individual catch basins. These systems, which are typically pre-cast vaults, pipes, and tanks, are easily retrofitted into existing or new stormwater systems and are ideal for stormwater treatment at or near the end of pipe. Smart Vaults can be adapted for various flow rates and contamination levels to solve a wide range of stormwater treatment issues.

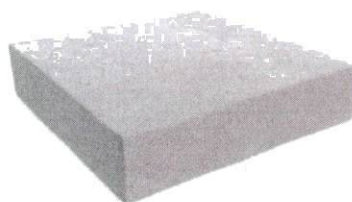
AbTech engineers its Smart Vault water treatment systems for large projects either as stand-alone solutions or as part of a treatment train to purify water working in conjunction with hydrodynamic separators or green infrastructure including retention ponds. These engineered solutions can be direct or radial flow and can easily be adapted to treat the first flush while allowing the later flow of a major storm event to pass around the systems to achieve the hydraulic requirements of the watershed.

Examples of Smart Vault designs using AbTech Smart Sponge media



SMART PAK® Inserts

AbTech's Smart Pak inserts are designed for stormwater purification in new or existing Smart Vaults or Stainless Steel UUF's. Smart Pak inserts may be specified with Smart Sponge media or its variants to target the contaminants of concern such as oil and grease, trash, debris, sediment, heavy metals, nutrients and coliform bacteria. Smart Pak inserts can be easily upgraded for expanded performance to help customers meet and/or exceed stormwater NPDES permit requirements with effective filtration, absorption, life expectancy and maintenance costs. Smart Pak inserts are constructed out of AbTech's patented Smart Sponge medias which are nonhazardous materials and can be utilized for a variety of applications. AbTech's Smart Pak inserts allow Smart Sponge technology to be scaled to virtually any size required in an easy-to-maintain form. The Smart Pak insert is the replaceable media cartridge that is used in the UUF Chester thus creating a recurring revenue stream after installation, similar to the razor-razor blade revenue model.

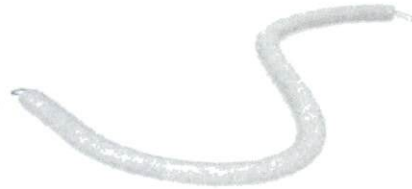


Absorbent Boom and Line Skimmer

AbTech's Tubular Absorbent Booms and Line Skimmers employ the Smart Sponge absorptive technology which rejects water while absorbing even sheen levels of hydrocarbons in low energy flow environments. Tubular Absorbent Booms and Line Skimmers are designed for on water applications or standing water to absorb and permanently encapsulate hydrocarbons resulting in no dewatering of oily water during removal. These products remain completely

buoyant, even after being saturated, allowing long term deployment and conveniently scheduled removal.

Smart Sponge Line Skimmer



Passive Skimmer

The Passive Skimmer, using Smart Sponge media, is designed to absorb and encapsulate hydrocarbons by floating directly on the water in catch basins, sumps, oil/water separators, and marine fueling stations. Passive Skimmers package Smart Sponge media in flexible mesh containers and are available in a variety of sizes depending on the need.

Smart Sponge Passive Skimmer



Bilge Skimmer

The Bilge Skimmer, using Smart Sponge media, is engineered and designed for permanently encapsulating the petroleum hydrocarbons that appear as oily sheen in the engine compartment of recreational boats during normal boat operation. The Bilge Skimmer will absorb the contaminant and allow the recreational boater to discharge clean water from the bilge pump.

Smart Sponge Bilge Skimmer



Smart Drum

AbTech has developed the Smart Drum a pressurized treatment solution that is a mobile "Pump and Treat" unit and can be scaled to polish low concentrations of hydrocarbons or other contaminants. The Smart Drum can be used for remediation applications such as a temporary end-of-pipe treatment or as a component in a treatment train to polish the water after treatment by other filters or as a pretreatment to remove contaminants that compromise the effectiveness of other filters in the treatment train.

Smart Drum filled with Smart Sponge Popcorn



by as much as 99% and concentrate the feed water up to 250,000 ppm TDS.

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Public Records Requirements**

Attachment 4

1. Public Records.

- a. If the Agreement exceeds \$35,000.00, and if Grantee is acting on behalf of Department in its performance of services under the Agreement, Grantee must allow public access to all documents, papers, letters, or other material, regardless of the physical form, characteristics, or means of transmission, made or received by Grantee in conjunction with the Agreement (Public Records), unless the Public Records are exempt from section 24(a) of Article I of the Florida Constitution or section 119.07(1), F.S.
- b. The Department may unilaterally terminate the Agreement if Grantee refuses to allow public access to Public Records as required by law.

2. Additional Public Records Duties of Section 119.0701, F.S., If Applicable.

For the purposes of this paragraph, the term “contract” means the “Agreement.” If Grantee is a “contractor” as defined in section 119.0701(1)(a), F.S., the following provisions apply and the contractor shall:

- a. Keep and maintain Public Records required by Department to perform the service.
- b. Upon request, provide Department with a copy of requested Public Records or allow the Public Records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, F.S., or as otherwise provided by law.
- c. A contractor who fails to provide the Public Records to Department within a reasonable time may be subject to penalties under section 119.10, F.S.
- d. Ensure that Public Records that are exempt or confidential and exempt from Public Records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the contractor does not transfer the Public Records to Department.
- e. Upon completion of the contract, transfer, at no cost, to Department all Public Records in possession of the contractor or keep and maintain Public Records required by Department to perform the service. If the contractor transfers all Public Records to Department upon completion of the contract, the contractor shall destroy any duplicate Public Records that are exempt or confidential and exempt from Public Records disclosure requirements. If the contractor keeps and maintains Public Records upon completion of the contract, the contractor shall meet all applicable requirements for retaining Public Records. All Public Records stored electronically must be provided to Department, upon request from Department’s custodian of Public Records, in a format specified by Department as compatible with the information technology systems of Department. These formatting requirements are satisfied by using the data formats as authorized in the contract or Microsoft Word, Outlook, Adobe, or Excel, and any software formats the contractor is authorized to access.

- f. **IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, F.S., TO THE CONTRACTOR’S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THE CONTRACT, CONTACT THE DEPARTMENT’S CUSTODIAN OF PUBLIC RECORDS AT:**

Telephone: (850) 245-2118

Email: public.services@floridadep.gov

Mailing Address: Department of Environmental Protection

ATTN: Office of Ombudsman and Public Services

Public Records Request

3900 Commonwealth Boulevard, MS 49

Tallahassee, Florida 32399

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Special Audit Requirements
(State and Federal Financial Assistance)**

Attachment 5

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 agreement*) to the recipient (*which may be referred to as the "Recipient", "Grantee" or other name in the 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 2 CFR Part 200, Subpart F-Audit Requirements, and Section 215.97, F.S., as revised (see "AUDITS" below), monitoring procedures may include, but not be limited to, on-site visits by DEP Department staff, limited scope audits as defined by 2 CFR 200.425, 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 (CFO) 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 2 CFR §200.330

1. A recipient that expends \$750,000 or more in Federal awards in its fiscal year, must have a single or program-specific audit conducted in accordance with the provisions of 2 CFR Part 200, Subpart F. EXHIBIT 1 to this Attachment 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 in 2 CFR 200.502-503. An audit of the recipient conducted by the Auditor General in accordance with the provisions of 2 CFR Part 200.514 will meet the requirements of this part.
2. For the audit requirements addressed in Part I, paragraph 1, the recipient shall fulfill the requirements relative to auditee responsibilities as provided in 2 CFR 200.508-512.
3. A recipient that expends less than \$750,000 in federal awards in its fiscal year is not required to have an audit conducted in accordance with the provisions of 2 CFR Part 200, Subpart F-Audit Requirements. If the recipient expends less than \$750,000 in federal awards in its fiscal year and elects to have an audit conducted in accordance with the provisions of 2 CFR 200, Subpart F-Audit Requirements, 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 federal entities).
4. The recipient may access information regarding the Catalog of Federal Domestic Assistance (CFDA) via the internet at www.cfda.gov

Attachment 5

1 of 6

PART II: STATE FUNDED

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

1. In the event that the recipient expends a total amount of state financial assistance equal to or in excess of \$750,000 in any fiscal year of such recipient (for fiscal years ending June 30, 2017, and thereafter), the recipient must have a State single or project-specific audit for such fiscal year in accordance with Section 215.97, F.S.; Rule Chapter 69I-5, F.A.C., State Financial Assistance; and Chapters 10.550 (local governmental entities) or 10.650 (nonprofit and for-profit organizations), Rules of the Auditor General. EXHIBIT I to this form lists the 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(8), 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 \$750,000 in state financial assistance in its fiscal year (for fiscal year ending June 30, 2017, and thereafter), 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 \$750,000 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.myflorida.com/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 2 CFR Part 200, Subpart F-Audit Requirements, and required by PART I of this form shall be submitted, when required by 2 CFR 200.512, by or on behalf of the recipient directly to the Federal Audit Clearinghouse (FAC) as provided in 2 CFR 200.36 and 200.512
 - A. The Federal Audit Clearinghouse designated in 2 CFR §200.501(a) (the number of copies required by 2 CFR §200.501(a) should be submitted to the Federal Audit Clearinghouse), at the following address:

By Mail:

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

Submissions of the Single Audit reporting package for fiscal periods ending on or after January 1, 2008, must be submitted using the Federal Clearinghouse's Internet Data Entry System which can be found at <http://harvester.census.gov/facweb/>

2. 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 one of the following addresses:

By Mail:

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

Electronically:

FDEPSingleAudit@dep.state.fl.us

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

Auditor General
Local Government Audits/342
Claude Pepper Building, Room 401
111 West Madison Street
Tallahassee, Florida 32399-1450

The Auditor General's website (<http://flauditor.gov/>) provides instructions for filing an electronic copy of a financial reporting package.

3. 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 one of the following addresses:

By Mail:

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

Electronically:

FDEPSingleAudit@dep.state.fl.us

4. 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 2 CFR 200.512, section 215.97, F.S., and Chapters 10.550 (local governmental entities) or 10.650 (nonprofit and for-profit organizations), Rules of the Auditor General, as applicable.

Attachment 5

3 of 6

5. Recipients, when submitting financial reporting packages to the Department of Environmental Protection for audits done in accordance with 2 CFR 200, Subpart F-Audit Requirements, or Chapters 10.550 (local governmental entities) and 10.650 (non and for-profit organizations), Rules of the Auditor General, should indicate the date and the reporting package was delivered to the recipient correspondence accompanying the reporting package.

PART V: RECORD RETENTION

The recipient shall retain sufficient records demonstrating its compliance with the terms of the award and this Agreement for a period of **five (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 **three (3)** years from the date the audit report is issued, unless extended in writing by the Department of Environmental Protection.

EXHIBIT – 1

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

Note: If the resources awarded to the recipient represent more than one federal program, provide the same information shown below for each federal program and show total federal resources awarded

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

Note: Of the resources awarded to the recipient represent more than one federal program, list applicable compliance requirements for each federal program in the same manner as shown below:

Federal Program A	First Compliance requirement: i.e.: (what services of purposes resources must be used for)	
	Second Compliance requirement: i.e.: (eligibility requirement for recipients of the resources)	
	Etc.	
	Etc.	
Federal Program B	First Compliance requirement: i.e.: (what services of purposes resources must be used for)	
	Second Compliance requirement: i.e.: (eligibility requirement for recipients of the resources)	
	Etc.	
	Etc.	

Attachment 5, Exhibit 1

5 of 6

Note: If the resources awarded to the recipient for matching represent more than one federal program, provide the same information shown below for each federal program and show total state resources awarded for matching.

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

Note: If the resources awarded to the recipient represent more than one state project, provide the same information shown below for each state project and show total state financial assistance awarded that is subject to section 215.97, F.S.

State Resources Awarded to the Recipient Pursuant to this Agreement Consist of the Following Resources Subject to Section 215.97, F.S.:						
State Program A	State Awarding Agency	State Fiscal Year ¹	CSFA Number	CSFA Title or Funding Source Description	Funding Amount	State Appropriation Category
Original Agreement	FDEP, GAA Line 1708A	2021-2022	37.112	Stormwater Sustainability Pilot Project	\$159,537	FCO
State Program B	State Awarding Agency	State Fiscal Year ²	CSFA Number	CSFA Title or Funding Source Description	Funding Amount	State Appropriation Category

Total Award	\$	\$159,537
-------------	----	-----------

Note: List applicable compliance requirement in the same manner as illustrated above for federal resources. For matching resources provided by the Department for DEP for federal programs, the requirements might be similar to the requirements for the applicable federal programs. Also, to the extent that different requirements pertain to different amount for the non-federal resources, there may be more than one grouping (i.e. 1, 2, 3, etc.) listed under this category.

For each program identified above, the recipient shall comply with the program requirements described in the Catalog of Federal Domestic Assistance (CFDA) [www.cfda.gov] and/or the Florida Catalog of State Financial Assistance (CSFA) [<https://apps.fldfs.com/fsaa/searchCatalog.aspx>], and State Projects Compliance Supplement (Part Four: State Projects Compliance Supplement [https://apps.fldfs.com/fsaa/state_project_compliance.aspx]). The services/purposes for which the funds are to be used are included in the Agreement's Grant Work Plan. Any match required by the Recipient is clearly indicated in the Agreement.

¹ Subject to change by Change Order.

² Subject to change by Change Order.

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**Exhibit A
Progress Report Form**

DEP Agreement No.:	C2105
Project Title:	Stormwater Sustainability Pilot Project
Grantee Name:	Village of Key Biscayne
Grantee's Grant Manager:	Roland Samimy
Reporting Period:	Choose an item. Choose an item.

Provide the following information for all tasks identified in the Grant Work Plan:

Summarize the work completed within each task for the reporting period. Provide an update on the estimated completion date for each task and an explanation for any anticipated delays or problems encountered. Add or remove task sections and use as many pages as necessary to cover all tasks. Use the format provided below.

Task #: Task Title

- **Progress for this reporting period:** Add Text
- **Identify any delays or problems encountered:** Add Text

Task #: Task Title

- **Progress for this reporting period:** Add Text
- **Identify any delays or problems encountered:** Add Text

Indicate the completion status for the following tasks (if included in the Grant Work Plan):

- Design (Plans/Submittal): 30% ☐, 60% ☐, 90% ☐, 100% ☐
- Permitting (Completed): Yes ☐, No ☐
- Construction (Estimated): _____ %

This report is submitted in accordance with the reporting requirements of the above DEP Agreement number and accurately reflects the activities associated with the project.

Signature of Grantee's Grant Manager

Date



Exhibit B
Florida Department of Environmental Protection
PROPERTY REPORTING FORM FOR
DEP AGREEMENT NO. C2105

Required Signatures: Adobe Signature or Original Ink

CONTRACTOR/GRANTEE: In order to comply with applicable state and/or federal regulations, list non-expendable equipment/personal property costing \$1,000 or more purchased directly or indirectly under the above Agreement. Complete: 1) a description of the property, 2) the serial number or other identification number, 3) the source, 4) who holds title, 5) purchase date, 6) cost, 7) share of that cost, 8) location/address, 9) use and condition, 10) any ultimate disposition data including date of disposal and sale price.

Description	Serial No./ID No.	Source	Owner	Purchase Date	Cost	% Charged to DEP Grant Funds	Location/ Address	Use and Condition	Disposition (if sold, include sale price)
Ex. Rainfall Gauge	12345	Bid	Grantee	MM/DD/YYYY	\$1,000/unit	100%	Project Site- 123 Main Street, Tallahassee, FL	New- Rainfall Measurements	Permanently installed at project site

CONTRACTOR/GRANTEE:	Contract/Project/Grant Manager:	Date:
---------------------	---------------------------------	-------

BELOW FOR DEP USE ONLY

DEP MANAGER: Send invoices supporting the cost of the items to Finance and Accounting for the processing of the Grantee's/Contractor's invoice for payment. Maintain a copy of the invoices supporting the cost of each item identified above in your contract file. Refer to DEP Directive 320 for Property Guidelines.

DEP Manager Signature and Date:

BFA - DEP 55-211 (Effective 09-12-2016)

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**Exhibit C
Payment Request Summary Form**

The **Payment Request Summary Form** for this grant can be found on the Water Restoration Assistance website at this link:

<https://floridadep.gov/wra/wra/documents/payment-request-summary-form>

Please use the most current form found on the website, linked above, for each payment request.

Quality Assurance Process for Procurement Of Sampling and Analytical Services

1. **Department grants for *sampling or analytical services, including research projects*, must include quality assurance (QA) requirements.**
 - a. Sampling services include the collection of sample media (e.g., water, sediment, soils, chemical wastes) or biological organisms.
 - b. Analytical services include analysis, observation or measurement activities conducted in the field or in a laboratory.
 - c. QA requirements must be included in the Grant as an exhibit that is incorporated by reference in the Grant. Note: Additional QA requirements may be included in the Grant Work Plan. Such additional QA requirements in the Work Plan must be described in specific, numbered tasks and deliverables.
 - d. Contact the Aquatic Ecology and Quality Assurance Section (AEQAS) for any questions about QA requirements.
2. **Steps for inclusion of QA Requirements in a Department Agreement**
 - a. **Grant Initiation**

There are several steps within the Grant Agreement Drafting and Routing Guide for inclusion of the QA Exhibit and language if sampling or analytical services are included in the grant.
 - b. **Grant Work Plan Development**

During consultation with the grantee and during development of the Work Plan, the DEP Grant Manager should provide the appropriate QA Requirements Exhibit to the Grantee (see 2.c., below).

 - i. Review the QA Requirements with the Grantee. Make sure that the Grantee understands the QA Requirements and can meet them for the proposed Scope of Services.
 - ii. Any changes to the QA Requirements negotiated with the Grantee must be reviewed and approved by the Department's Grant Manager and AEQAS.
 - iii. For research projects, *during the Work Plan development and well before Grant execution*, the Grantee must provide information for review by the Department's Grant Manager and AEQAS about proposed methodology for sampling, analysis, quality control, and experimental data evaluation procedures.
 - iv. The Work Plan must include appropriate QA Deliverables. Template language for QA deliverables for both Standard and Research QA Requirements (see below) are in the attached **QA Deliverables Template Language**.
 - c. **QA Requirements Exhibit**

One of two documents for QA Requirements is used as Exhibit D for Department Grants, depending on whether the project falls under *Standard* or *Research*, as described below. Select the appropriate document per the following:

 - i. Include the attached **Standard QA Requirements** if the sampling activities will be conducted according to the DEP Standard

Operating Procedures (SOPs) and the laboratory analyses will be performed by a certified laboratory accredited by the Florida Department of Health (FDOH) Environmental Laboratory Certification Program. **NOTE: For DEP Grants, DEP SOPs and certified labs are utilized in most cases.**

- ii. Include the attached **Research QA Requirements** if sampling activities will NOT be conducted according to the DEP SOPs and laboratory analyses will NOT be performed by a certified laboratory. See 2.b.iii., above.
 - iii. **Contact AEQAS for assistance with editing one of the above QA Requirements documents** if the proposed Work Plan for the sampling and/or analysis services to be provided by the Grantee does not appear to conform to either of the choices above (or seems to be a hybrid of the choices).
 - iv. **NOTE: AEQAS review and approval is required for all edited QA Requirements documents.**
- d. **Quality Assurance Plan (QA Plan)**
Grantees providing sampling and analytical services to the Department must submit a QA Plan upon execution of the Grant, and obtain approval for the QA Plan from the Department's Grant Manager before starting project work. The attached **Standard QA Plan Template** may be used if the Standard QA Requirements Exhibit is included in the Grant, and the attached **Research QA Plan Template** may be used if the Research QA Requirements are included in the Grant. **The Grant Manager must review the QA Plan for conformance with the Grant Work Plan and the Grant QA Requirements exhibit** (with review assistance from AEQAS staff, as needed). This submittal requirement is specified in the QA Requirements document attached to the Grant (see 2.c., above) and as part of the Deliverables in the Grant Work Plan (see 2.b.iv., above).
- e. **Exception to QA Plan Requirement**
The Grant Manager may opt to not require a QA Plan for Grantees who will not be designing a sampling scheme or a research project and are only providing standard sampling and/or analytical services to the Department. In those cases, the Grant shall include the Standard QA Exhibit, but state that the requirements of Section 6 of the Exhibit are waived and a QA Plan is not required.
- f. **Grant Execution**
The grant execution process varies throughout the agency, but there must be a final review that ensures that appropriate QA Requirements were included in the grant.