

Exhibit "Aiii"

Exhibit A Scope of Services

PROJECT TITLE: Professional Engineering Services for Bear Branch

EXECUTIVE SUMMARY:

Water resources across the globe are under severe pressure due to increasing anthropogenic impacts caused by excess nutrient loading, in particular phosphorus. Lakes and streams that were once healthy are rapidly becoming hypereutrophic with recurring harmful algal blooms (HABs). There is significant demand for accelerated restoration and the development of operationally and technically efficient technologies for sustainable and scalable water resource management. This proposal details new water resource management and nutrient-mitigation strategies for accelerated restoration of phosphorus-impaired water bodies.

Phosphorus is the limiting nutrient in most of Florida's surface waters. The mitigation of this pollution improves water quality and shifts ecosystem function to a less favorable environment for the formation of HABs. These ecosystem shifts and nutrient reductions are long-lasting (years to decades) and provide beneficial use benefits as well as reduction in primary productivity and the risk of HABs. Combining phosphorus removal technologies with best management strategies that reduce nutrient loading is a proactive cost-effective strategy for preventing and managing the conditions that lead to eutrophication and HABs. This proposal details a comprehensive project focused on water column phosphorus removal from Bear Branch, an urban stream with high phosphorus loading.

The Bear Branch Project proposes the automated injection of a liquid phosphorus sequestration technology (EutroSORB® WC) to rapidly and safely remove soluble reactive phosphorus (SRP) from a hypereutrophic nutrient-impaired urban stream. Project performance will be determined by comparing upstream pre-treatment phosphorus concentrations (i.e., baseline data) to phosphorus levels obtained downstream of the treatment system. At the conclusion of the project, the cost/lb-P mitigated with automated injection of a phosphorus sequestration technology as a cost-effective approach to address the effects of eutrophication in impaired urban waters will be compared to a cost analyses of best management practices for nutrient mitigation.

The information obtained during the Bear Branch Project can be used to develop a complete nutrient mitigation plan for nutrient-impaired urban streams and rivers with high phosphorus loads such as Bear Branch, Peace River, and surrounding inflows that would promote the goals of reducing nonpoint source pollution and restoring impaired urban water bodies across the state of Florida.

PROJECT LOCATION: Bear Branch is a stormwater conveyance system located in Polk County in the City of Bartow. Project Coordinates: 27.542306, -81.502775. See Figure 3 and 4 for a location map.

OBJECTIVES: The purpose of this demonstration is to:

- Demonstrate that the application of EutroSORB WC[®] can remove P from the water column, bind it in an insoluble form, and reduce P concentrations in Bear Branch
- Demonstrate the ability of EutroSORB WC to be implemented in a large-scale field applications, including the ability to adjust dosing rates
- Demonstrate the efficiency and cost-effectiveness of using a lanthanum-based amendments to reduce P loads in water

APPROACH:

The data obtained from this demonstration will help guide Florida's Adaptive Management Strategies and address the goals of the Blue-Green Algae Task Force using new scalable technologies to mitigate excess phosphorus loading in impaired HAB-prone water bodies.

Bear Branch Project: Streams, as low-lying points in the landscape, are strongly influenced by stormwater discharge, pollutant loading, and increased temperatures all of which characterize urbanization. To be effective, urban stream restoration efforts must be integrated within broader best management practices for meaningful long-lasting results. Bear Branch is an urban stream located in Polk County approximately 1 mile upstream of the Peace River that does not meet Florida Department of Environmental Protection (FDEP) Numeric Nutrient Criteria. Phosphorus mitigation technologies that meet water resource manager's decision-making criteria for phosphorus management have not yet been evaluated at scale in urban streams. This proposal provides a novel approach using proven, integrated technologies to manage phosphorus that can be widely applied to remove phosphorus in streams, stormwater culverts, agricultural ditches, canals, and lakes. Two integrated and scalable technologies will be utilized during this demonstration project:

1. EutroSORB[®] WC is a liquid blend of phosphorus binding minerals proven to rapidly bind and strip soluble reactive phosphorus (SRP) from the water column. The phosphorus becomes tightly bound and forms a stable and inert insoluble compound.
2. SePRO's Automated Treatment Technology (SATT) systems are designed to provide accurate, variable-rate application of liquid technologies to aquatic environments. These systems have been developed and refined over the last twenty years, including implementation of projects in cooperation with the Army Corps of Engineers and various state agencies.

For the Bear Branch phosphorus inactivation demonstration, approximately 2,000 gallons of EutroSORB® WC will be applied into the flowing water of Bear Branch using a SePRO Technology (SATT) automated injection system. The duration of the project assumes a 2-month SATT injection of EutroSORB WC at a 2 CFS design flow. The solar-powered SATT system is designed to provide accurate, variable-rate application of liquid chemical amendments to aquatic environments will be utilized in this demonstration (Figures 1 and 2). SATT dosing rates can be varied as a function of flow and phosphorus concentrations.



Figure 1. Example Solar-Powered SATT System for EutroSORB WC application



Figure 2. Example SATT System for EutroSORB WC application

The SATT system will operate on the bank of Bear Branch in a fenced area. The EutroSORB WC will be dosed into the flowing water of the creek with a hose that will be temporarily anchored on the bed of the creek or suspended from the flow gauge pole (Figure 3).



Figure 3. Bear Branch Demonstration Area

Monitoring will occur upstream of the injection station and at multiple locations downstream prior to discharge into the Peace River. The collection of pre- and post-treatment water quality samples will be conducted and analyzed for total phosphorus and SRP. This data will help guide the appropriate selection of application rates. Treatment performance will be evaluated by comparing pre-treatment phosphorus monitoring (i.e., baseline data) to phosphorus levels obtained during and after treatments. The amount of pre-treatment phosphorus in Bear Branch as well as flow data will allow for an accurate determination of the quantity of SRP and pounds of phosphorus removed during the 2-month demonstration. Improved water quality will reduce the formation of harmful algal blooms and the associated risks to human health and the environment. Flow data will be measured with a water level logger and a discharge rating curve which is generated by measuring water levels and corresponding current velocities for a cross-section of the stream. The proposed project would be implemented in Q1 of 2024 with the application of ~2,000 gallons of EutroSORB WC at a design flow of 2 cubic feet per second (CFS) to mitigate an estimated 1,700 lbs of phosphorus.

The implementation of a phosphorus mitigation technology using an automated injection approach at Bear Branch represents an economical, widely applicable, and transferable water restoration and management solution that can be implemented at any scale. Since the early 2000s, SePRO Corporation has designed and deployed SATTs to conduct management of aquatic invasive plants and problematic algae. Such systems have been designed for very low flows up to 1000s of CFS and are scalable to higher flow rates depending on project needs. The goal of the SATT system is to provide accurate variable-rate treatments with confidence, built in safety mechanisms, complete system control, and real-time system monitoring.

The materials used in the Bear Branch Project is based on lanthanum-based chemistries that have extensive laboratory, mesocosm trials, and full-scale field applications that have successfully demonstrated the effectiveness of these chemistries in binding phosphorus. The

lanthanide chemistries that will be implemented during this proposed project have been widely used for decades to inactivate phosphorus.

QUALITY ASSURANCE/QUALITY CONTROL PROGRAM.

Bear Branch: Monitoring will occur upstream of the injection station and at multiple locations downstream of the injection station prior to discharge into the Peace River. The collection of pre- and post-treatment water quality samples will be conducted and analyzed for total phosphorus and SRP. In addition, whole effluent toxicity test analyses will be conducted on Bear Branch water prior to project startup to ensure no harm will occur to the ecosystem during the demonstration. These data will help guide the appropriate selection of application rates and the evaluation of project cost and performance data to support technology transfer and project effectiveness. The project will leverage data from the Polk County Water Atlas environmental database to supplement the project data set and enhance project analyses. Project success criteria will be defined with a quantitative evaluation of the upstream phosphorus loading coming into the treatment area compared to the reduction of phosphorus loading downstream of the SATT station prior to discharge into the Peace River. The minimum mass of phosphorus targeted for sequestration during the demonstration is ~1,700 lbs. Table 1 and 2 summarizes the Bear Branch monitoring plan.

Table 1. Bear Branch Phosphorus Monitoring Plan

Task	Item	Timeline
Monitoring & Project Schedule	Whole Effluent Toxicity Test	Pre-treatment analyses of Bear Branch water with EutroSORB WC for eco-tox evaluation
	Water Quality	Upstream and downstream samples collected over a 10-week period. Assumes a 2-month SATT injection of EutroSORB WC (2 CFS design flow). Flow rates may affect the project duration.

The Bear Branch Monitoring Program will involve pre- and post-treatment sampling at 1 upstream and 3 downstream sites at 150 feet, 500 feet and ¼ mile below the injection site (Figure 4).



Figure 4. Bear Branch Injection and Sampling Locations

Table 2. Bear Branch Water Quality Monitoring Plan

Bear Branch WQ Monitoring Plan		Sampling Events	Samples per Event	Location
Week	-1	1	2	(1 upstream site, and 1 downstream site)
	1	3	12	(1 upstream site, and 3 downstream sites)
	2	3	12	(1 upstream site, and 3 downstream sites)
	3	2	8	(1 upstream site, and 3 downstream sites)
	4	2	8	(1 upstream site, and 3 downstream sites)
	5	2	8	(1 upstream site, and 3 downstream sites)
	6	2	8	(1 upstream site, and 3 downstream sites)
	7	2	8	(1 upstream site, and 3 downstream sites)
	8	2	8	(1 upstream site, and 3 downstream sites)
	9	2	8	(1 upstream site, and 3 downstream sites)
	10	2	8	(1 upstream site, and 3 downstream sites)
Total		23	90	(1 upstream site, and 3 downstream sites)

The estimated funding amounts and proposed timeline for the Bear Branch Project timeline are provided in Table 3 below.

Table 3. Bear Branch Phosphorus Mitigation Project Cost Summary & Timeline

Item	Costs (\$)	Notes
Materials & Equipment (Phosphorus Mitigation Technologies and SATT)	\$314,500	Assumes a 2-month SATT injection of EutroSORB WC (2 CFS design flow)
Monitoring & Analyses	\$34,500	WET Testing, Water Quality (TP, SRP)
Freight & Logistics	\$13,000	Freight, forklift, material handling equipment, and safety
Project Labor (including application)	\$27,000	Site preparation, equipment installation, material handling, sampling, and monitoring
Estimated Total Cost	\$389,000	Flow rates will affect the project duration and/or cost

TASKS and DELIVERABLES:

Table 4 below summarizes the Tasks and Deliverables with the estimated Timeline. This project is a lump sum per task reimbursement with total project costs of \$389,000.

Table 4. Project Tasks and Timeline

Task No./ Deliverable	Task or Deliverable Title	Task Start Date	Task End Date	Deliverable Due Date/ Frequency
1	Quality Assurance Project Plan	8/1/2023	4/30/2024	
1a	Draft QAPP			2/15/2024
1b	Final QAPP			4/30/2024
2	Project Management	Upon Execution	3/1/2025	
3	Monitoring	Upon Execution	3/1/2025	30 days after the end of the previous operational quarterly sampling
4	Final Report	Upon Execution	5/1/2025	
4a	Draft Report			3/1/2025
4b	Final Approval			5/1/2025

Additional detail and requirements for the Project Tasks per the grant requirements are provided below.

Task #1: Quality Assurance Project Plan

Description: The Grantee will submit and receive approval on a Quality Assurance Project Plan (QAPP) prior to the commencement of project-related work. The QAPP must specify the sampling procedures, locations, instruments, and parameters to be sampled.

Deliverable #1a: The Grantee will submit a draft QAPP in Word format to the Department's Grant Manager. Upon request, the Grantee will provide a paper copy of the Draft QAPP to the Department's Grant Manager.

Deliverable #1b: The Grantee will submit the Final Department-approved QAPP electronically in PDF format to the Department's Grant Manager. Upon request, the Grantee will provide a paper copy of the Final QAPP to the Department's Grant Manager.

Task #2: Project Management

Description: The Grantee will perform project management, including bidding and subcontractor selection, field services, site meetings with subcontractor(s), and overall project coordination, implementation, and supervision. The Grantee will procure subcontractor(s) services in accordance with the laws of Florida.

Deliverables: Completed project management activities to date as evidenced by:

- An electronic copy of the Grantee's executed contract(s) and scope of services for project management submitted to the Department's Grant Manager prior to submitting any invoices for the subcontracted work.
- Submit meeting minutes including attendees and topics discussed.
- Before, after, and during date-stamped photos. Upon request by the Department's Grant Manager, the Grantee will provide additional supporting documentation relating to project management.

Task #3: Monitoring

Description: The Grantee will conduct monitoring in accordance with the Department-approved QAPP for this project.

Deliverables: The Grantee will submit a Quarterly Operating Report (QOR) summarizing the operations and monitoring, including text, tables, laboratory reports, figures, and appendices (as necessary). The QOR will include an Executive Summary that succinctly describes the quarter's (3 months) activities, completed operational and monitoring activities (dates completed, sampling conducted and any not conducted and why), monitoring results along with interpretation of those results (as expected or not as expected), laboratory reports and sampling logs (including field and weather data) submitted to the Department's Grant Manager. Upon request, the Grantee will provide a paper copy or copies to the Department's Grant Manager.

Task #4: Final Report

Description: The Grantee will prepare a Final Report summarizing the results of the project, including all tasks in the Grant Work Plan. The Final Report must include at a minimum:

- Project location and background, project description and timeline, grant award amount, and anticipated benefits.
- Financial summary of actual costs versus the budget, along with any changes required to the budget. Include any match or locally pledged contributions provided, along with other related project work performed outside of this Agreement to identify the overall project cost.
- Discussion of project schedule versus actual completion, including changes required to the schedule, unexpected site conditions and adjustments, significant unexpected delays, and corrections, and/or other significant deviations from the original project plan.
- Summary of activities completed as well as those not completed and why, as well as a brief summary of any additional phases yet to be completed.

- Date-stamped photo documentation of work performed (before, during and after), appropriate figures (site location, site plan[s]. etc.), appropriate tables summarizing data/information relevant to Grant Work Plan tasks, and appropriate attachments relevant to the project.
- Discussion of whether the anticipated benefits have been/will be realized (e.g., why a Best Management Practice (BMP) approach did or did not exceed the expected removal efficiency).
- Summary of monitoring activities completed and any not completed and any not completed and why, monitoring results, and an interpretation of data based on planned versus realized results.

Deliverable 4a Draft Final Report

The Grantee will submit an electronic copy of the draft Final Report in Word format to the Department's Grant Manager for review and comments, prior to submission of the Final Report. Upon request, the Grantee will provide a paper copy of the draft Final Report.

Deliverable #4b: Final Report

The Grantee will submit an electronic copy of the Final Report, with all suggested changes incorporated, in PDF format to the Department's Grant Manager for review and approval. Upon request, the Grantee will provide a paper copy of the Final Report.