

Recommendation re: Approval of Task Authorization WSP-25-01 with WSP for the Crystal Lake EutroSORB®G Sediment Treatment Project

The Florida Department of Environmental Protection (FDEP) identified Crystal Lake as an “impaired surface water body” due to high nutrient levels exceeding regulatory surface water quality Numeric Nutrient Criteria (NNC). In 2018, FDEP approved the Crystal Lake Nutrient Reduction Plan, which requires reducing nutrients in Crystal Lake. Based on previous studies completed by WSP, sediment phosphorus flux represents approximately 90% of the total phosphorus load to Crystal Lake. Reducing phosphorus flux is critical to improving water quality because phosphorus is the primary nutrient limiting algal growth within the lake. Inactivation of sediment phosphorus using chemical amendments is the most cost-effective means of reducing nutrient loads and achieving compliance with the regulatory NNC and delisting Crystal Lake from Verified Impaired Surface Waters list. A feasibility study conducted on lake bottom sediments revealed EutroSORB®G was an effective treatment product.

WSP provided a proposal for a lake wide application of EutroSORB®G aimed at improving water clarity, reducing water column phosphorus concentration, and inactivating sediment phosphorus within Crystal Lake. The treatment is intended to reduce algal growth, increase water clarity and light transmission, and stimulate the growth of beneficial aquatic plants that will further improve water quality conditions.

The scope of work for this sediment treatment project includes:

- Project management, permit preapplication meeting with FDEP, and contractor oversight
- Environmental resource permitting
- Pre-application and post-application surface water field monitoring, water sample collection and laboratory analysis
- EutroSORB®G application
- Final report summarizing the treatment operation and pre- and post-application water quality conditions

WSP is a current firm on the June 2022 Professional Lakes & Watershed Management Services CCNA. They have provided assessment and feasibility consulting services on lakes in Lakeland since 2012 and on Crystal Lake since 2015. They subcontracted with Eutrofix to provide the EutroSorb G Sediment Treatment application. Eutrofix is considered a sole source in the industry.

Funding for this project in the not-to-exceed amount of \$267,813 is provided in the Fiscal Year 2025 Crystal Lake TMDL line item of the Stormwater Capital Improvement Plan.

Staff recommends the City Commission authorize the appropriate City officials to execute the Task Authorization WSP-25-01 with WSP for the Crystal Lake EutroSORB®G Sediment Treatment Project in the not-to-exceed amount of \$267,813.

## **TASK AUTHORIZATION FORM**

In accordance with the **WSP** Continuing Contract and Agreement for Professional Lakes & Watershed Management Services, dated June 6, 2022, the City hereby authorizes the services as set forth in the attached work order by the City and/or attached scope of services proposed by the Engineer and the following:

**Task Authorization No.:** WSP – 25-01

**Project No:** 596.246.7500.008514.616.00.000

**Project Title:** Crystal Lake EutroSORB®G Sediment Treatment Project

**Schedule:** **Start:** Upon Acceptance  
**Complete:** 180 days, or to completion of project

**Billing:** As set forth in the agreement and the approved proposal.

**Not-To-Exceed Cost:** \$267,813

**Scope of Work:** WSP Proposal (dated April 22, 2025) is attached herein as Exhibit "A." Engineer's reimbursable costs shall be in conformance with the City's Consultant Expense Reimbursement Policy, attached herein as Exhibit "B". Exhibits "A" and "B" are made a part of this Task Authorization.

### **AUTHORIZATION:**

#### **WSP**

Accepted By: \_\_\_\_\_  
Christine Mehle, PE, CFM  
Vice President, Florida Water Lead

Date: \_\_\_\_\_

#### **CITY OF LAKELAND**

Reviewed By: \_\_\_\_\_  
Laurie Smith, Lakes & Stormwater Manager

Date: \_\_\_\_\_

Accepted By: \_\_\_\_\_  
Heath Frederick, Director of Public Works

Date: \_\_\_\_\_

Accepted By: \_\_\_\_\_  
H. William Mutz, Mayor

Date: \_\_\_\_\_



# Exhibit "A"



550 Northlake Boulevard,  
Ste 1000  
Altamonte Springs, FL 32701  
[wsp.com](http://wsp.com)

April 22, 2025

Ms. Laurie Smith  
Lakes & Stormwater Manager  
City of Lakeland  
407 Fairway Avenue  
Lakeland, FL 33801

Via Email: [Laurie.Smith@lakelandgov.net](mailto:Laurie.Smith@lakelandgov.net)

**Re:** Crystal Lake EutroSORB®G Treatment  
WSP Project No. 2024US285619

Dear Ms. Smith:

WSP USA Environment & Infrastructure Inc. (WSP) is pleased to provide the following proposal for the Crystal Lake EutroSORB®G Treatment:

## INTRODUCTION

The City has requested WSP provide a proposal for a lakewide EutroSORB®G application aimed at improving water clarity, reducing water column phosphorus concentration, and inactivating sediment phosphorus within Crystal Lake. This project was the top-ranked alternative proposed in the Crystal Lake Water Quality Improvement Study. This project is in support of the current 4e Pollutant Reduction Plan (PRP) which the City of Lakeland (City) developed in 2018 to address the current nutrient impairment in Crystal Lake. The Crystal Lake PRP has been accepted by the Florida Department of Environmental Protection (FDEP) as an alternative to a State-imposed Total Maximum Daily Load.

Additional efforts to reduce external inputs and extend the longevity of the treatment are also part of the PRP. The treatment is intended reduce algal growth, increase light transmission to the lake bottom, and stimulate the growth of beneficial submerged aquatic vegetation which should further improve water quality conditions and provide fish habitat.

EutroSORB®G which will provide sediment phosphorus inactivation without decreasing pH and alkalinity (buffering capacity). EutroPhix is the exclusive distributor of EutroSORB®G in the United States and has a long working relationship with WSP as a sub-contractor. EutroSORB®G was proven to be an effective nutrient reduction treatment during WSP's Crystal Lake Water Quality Improvement Study using limnocorrals to test isolated water columns.

EutroSORB®G is a dry bentonite clay granule powder containing lanthanum (10% of product mass) to selectively bind free phosphate ions. EutroSORB®G is not a flocculent so its application has no immediate impact on algae or other suspended particles that are abundant in Crystal Lake. This property makes it very selective for preventing the release (flux) of orthophosphate from the sediment. EutroSORB®G powder is prepared into a slurry by mixing

the dry product with water in a container and applying the slurry over the water surface. EutroSORB®G will cause an initial cloudy appearance to the water which will settle over time.

### **TASK 1 - Attend the Project Kick-Off Meeting**

WSP and EutroPhix will attend a project kickoff meeting with representatives of the City to review the scope of services, the project implementation plan, and the project schedule.

### **TASK 2 – EutroSORB®G Application and Monitoring**

WSP will sub-contract with EutroPhix for the EutroSORB®G application portions of this project. Please note this proposal includes only the first of three annual treatments recommended for Crystal Lake. Upon authorization from the City project manager, WSP will instruct EutroPhix to mobilize the application operation. Immediately before the EutroSORB®G application, WSP will collect water quality field parameters to include Secchi depth, pH, dissolved oxygen, temperature, specific conductance, oxidation/reduction potential, and surface water samples from Crystal Lake. Water quality samples will be delivered to Southern Research Laboratories (SRL) for analysis of the following parameters:

- |                                   |                                  |
|-----------------------------------|----------------------------------|
| (1) Total Kjeldahl Nitrogen (TKN) | (2) Total Ammonia Nitrogen (TAN) |
| (3) NOx (nitrite + nitrate)       | (4) Total Nitrogen (TKN+TAN)     |
| (5) Orthophosphate                | (6) Total Phosphorus             |
| (7) Chl-a                         | (8) TSS                          |
| (9) Lanthanum (total)             |                                  |

The public boat ramp located on North Crystal Lake Drive will be utilized for staging of EutroSORB®G product and launching of EutroSORB®G application boats. Following boat launching, vehicles and trailers may be staged in the grass area next to the boat launch on Crystal Lake as space permits. The City will coordinate use of the boat ramp with Polk County. EutroSORB®G staging areas are shown in **Figure 1**. EutroSORB®G will be applied in a single application over a period of 3-to-4 days. WSP will collect a second set of water quality samples on the day following the last application day.

WSP will collect a third set of field parameters and surface water quality samples for analyses as described above within two weeks following the second sample event.

### **TASK 3 – Permitting, Project Management, and Reporting**

It is assumed that an Environmental Resource Permit (ERP) will be required to implement the project. WSP will assist the City by coordinating a pre-application meeting with FDEP and preparation/submittal of an ERP application and follow-up with FDEP. The ERP may require participation from Polk County as a co-permittee since the lake is not within the City of Lakeland city limits. The City will coordinate with Polk County if required. It is also assumed no 404 Dredge & Fill permits will be required for the project.

WSP will provide project management and contractor coordination during all phases of the EutroSORB®G application operations which will consist of progress updates as necessary and routine phone calls and/or emails describing progress to the City project manager. WSP will provide a final report summarizing the treatment operations and the pre and post water quality conditions based on the three sets of water quality data collected during **Task 2**.

## **SCHEDULE, DELIVERABLE, & BUDGET**

WSP can commence work on the above scope of services immediately upon receipt of an approved purchase order and the project ERP. The application start date will be determined once WSP receives the purchase order, but it is anticipated to begin within one week following receipt of the purchase order and ERP, weather permitting. The application is expected to be complete within one week of start. The final water quality sample will be collected



within two weeks of the end of the EutroSORB®G application. WSP will submit the final report within one month of the final water quality sample collection.

Deliverables will consist of routine progress communication and a final summary report memo which will include all water quality analytical reports.

➤ **Total lump sum budget for this project is \$267,813.**

The attached budget detail includes rates from WSP's current Continuing Contract for Professional Lakes and Watershed Management Services. The project will be invoiced monthly. Quotes from EutroPhix and SRL are provided as Attachment 1 and 2. WSP will not exceed the proposed total budget without advance approval from the City. This proposal is valid for 60 days.

Sincerely,

**WSP USA Inc.**

A handwritten signature in blue ink, appearing to read 'Lance M. Lumbar'.

Lance Lumbar, MS, MBA  
Vice President /  
Water Quality Management Lead

A handwritten signature in blue ink, appearing to read 'Crissy Mehle'.

Crissy Mehle, PE, CFM  
Vice President, Florida Water Lead

LL/CM/spp

Attachments:

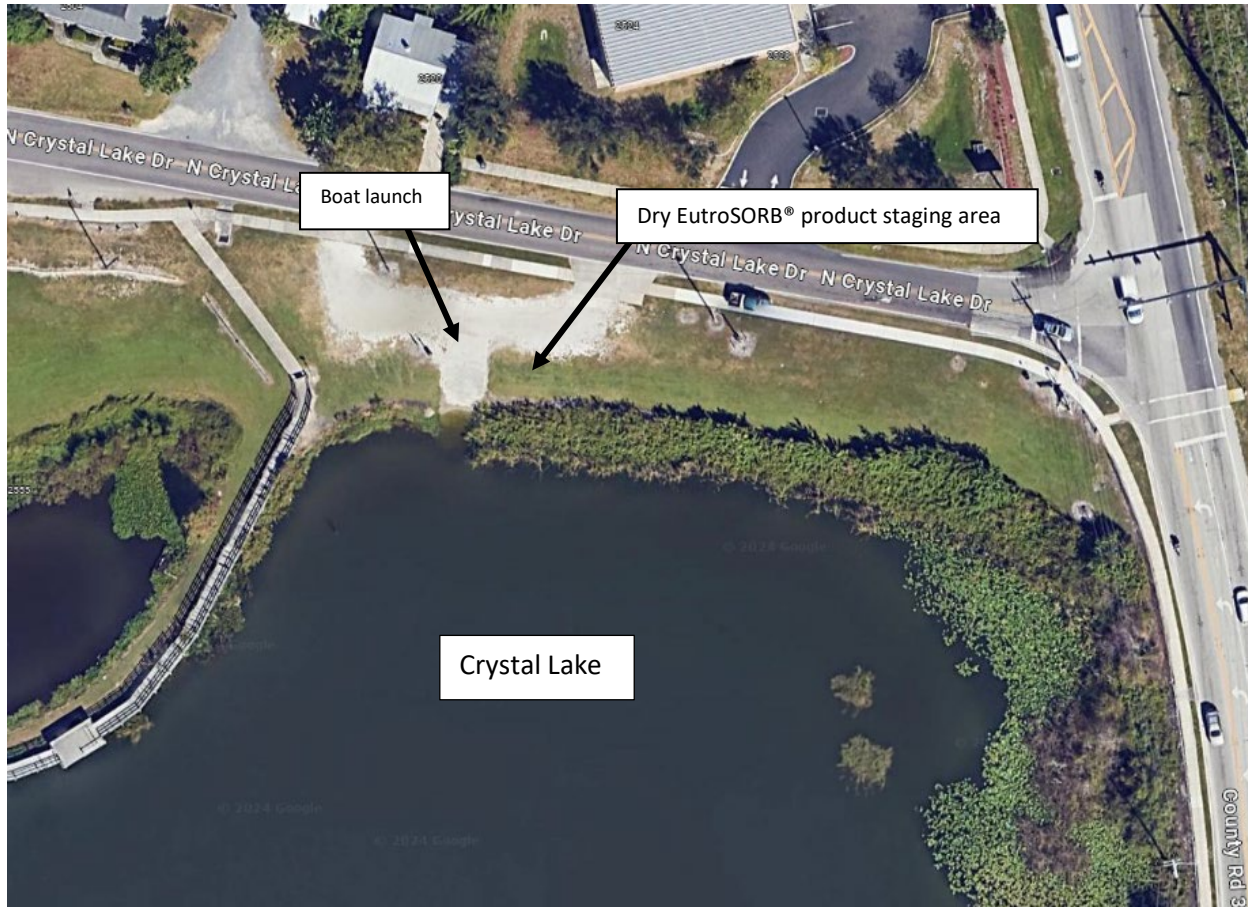
- Figure 1
- Budget
- Subcontractor Quotes

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# ATTACHMENTS

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Figure 1 - Staging Areas





## Budget

WSP USA		<b>Client: City of Lakeland - Public Works</b> <b>Date: 4/21/2025 Rev. WSP Project No. 2024US285619</b> <b>Scope: Crystal Lake EutroSORB G Treatment</b> <b>Reference: Continuing Contract and Agreement for Professional Lakes and Watershed Management Services, dated July 15, 2022</b>							
		Task 1 Kickoff meeting		Task 2 EutroSORB G Application and Monitoring		Task 3 Permitting, Project Management and Reporting		Total	
<b>I. Wood Labor Classifications</b>		<b>Hourly Rate</b>		<b>HOURS</b>	<b>COST</b>	<b>HOURS</b>	<b>COST</b>	<b>HOURS</b>	<b>COST</b>
Senior Principal	\$234.00		\$ -	2	\$ 468.00	2	\$ 468.00	4	\$ 936.00
Principal	\$214.00	4	\$ 856.00	15	\$ 3,210.00	23	\$ 4,922.00	42	\$ 8,988.00
Senior Associate	\$193.00	4	\$ 772.00	24	\$ 4,632.00	32	\$ 6,176.00	60	\$ 11,580.00
Senior II / Project Manager	\$162.00	4	\$ 648.00	35	\$ 5,670.00	46	\$ 7,452.00	85	\$ 13,770.00
Engineer/Scientist/Surveyor Professional II	\$115.00		\$ -		\$ -	28	\$ 3,220.00	28	\$ 3,220.00
Engineer/Scientist/Surveyor Professional I	\$99.00		\$ -	24	\$ 2,376.00	8	\$ 792.00	32	\$ 3,168.00
Senior Technician	\$94.00		\$ -	24	\$ 2,256.00		\$ -	24	\$ 2,256.00
Project Coordinator	\$89.00	4	\$ 356.00	8	\$ 712.00	8	\$ 712.00	20	\$ 1,780.00
Administrative Staff II	\$68.00		\$ -	8	\$ 544.00	8	\$ 544.00	16	\$ 1,088.00
<b>LABOR SUBTOTAL BY SUBTASK</b>		<b>16</b>	<b>\$2,632</b>	<b>140</b>	<b>\$19,868</b>	<b>155</b>	<b>\$24,286</b>	<b>311</b>	<b>\$46,786</b>
<b>III. Subcontractors and Optional Services</b>		<b>Task 1 Kickoff meeting</b>		<b>Task 2 EutroSORB G Application and Monitoring</b>		<b>Task 3 Permitting, Project Management and Reporting</b>		<b>Total</b>	
		<b>COST PER</b>							
	<b>UNIT</b>	<b>UNITS</b>	<b>COST</b>	<b>UNITS</b>	<b>COST</b>	<b>UNITS</b>	<b>COST</b>	<b>UNITS</b>	<b>COST</b>
EutroPhix (Product and Application)	\$ 219,074.00		\$ -	1	\$ 219,074.00		\$ -	1	\$219,074.00
SRL (per event)	\$ 353.00			3	\$ 1,059.00				\$ 1,059.00
<b>SUBCONTRACTOR/OPTIONAL SUBTOTAL</b>			<b>\$ -</b>		<b>\$ 220,133.00</b>		<b>\$ -</b>		<b>\$220,133.00</b>
<b>SUBTOTAL BY SUBTASK AND TASK</b>			<b>\$ 2,632.00</b>		<b>\$ 240,001.00</b>		<b>\$ 24,286.00</b>		<b>\$ 266,919.00</b>
<b>II. Direct Expenses</b>		<b>COST PER</b>		<b>UNITS</b>	<b>COST</b>	<b>UNITS</b>	<b>COST</b>	<b>UNITS</b>	<b>COST</b>
	<b>UNIT</b>								
Boat	\$165.00			3	\$495.00				
Filters	\$33.00			3	\$99.00				
YSI	\$100.00			3	\$300.00				
<b>DIRECT EXPENSES SUBTOTAL BY SUBTASK</b>					<b>\$894.00</b>				
<b>SUBTOTAL BY SUBTASK AND TASK</b>			<b>\$ 2,632.00</b>		<b>\$ 240,895.00</b>		<b>\$ 24,286.00</b>		<b>\$267,813.00</b>



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# QUOTES

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EutroPHIX  
11550 N. Meridian Street, Suite 600  
Carmel, Indiana 46032-4565  
(317) 580-8282

**Quote**

Document Date:

**April 22, 2025**

Effective For:

**WSP**

**Crystal Lake, Florida**

Pricing Valid:

**April 22, 2025 - September 30, 2025**

Item	Year 1
Materials (\$)	\$ 142,742
Application (\$)	\$ 71,371
Monitoring (\$)	\$ 4,960
Total (\$)	\$ 219,074

**\*prices exclude any applicable taxes, assuming tax exempt**

**Terms:** Due Net 60 Days

**Ordering Procedure:** Provide written communication of items, order date, shipping address, and billing address.

**To accept this proposal please sign and date:**

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**Please contact Pamela Dugan for any questions:**

Phone: (317) 495-5657

E-mail: [pamelad@eutrophix.com](mailto:pamelad@eutrophix.com)

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OR DISTRIBUTION**

ESTIMATE

SOUTHERN RESEARCH LABS, INC.  
279 Douglas Ave  
Altamonte Springs, FL 32714-3324

controller@srslab.com  
+1 (305) 924-2787

**Bill to**  
Mr. Lance Lumbard  
WSP USA E&I  
550 Northlake Blvd., Suite 1000  
FL.  
Altamonte Springs, FL 32701

**Ship to**  
Mr. Lance Lumbard  
WSP USA E&I  
Wood Env & Infrastructure Solutions, Inc.  
110-5 Sanctuary Parkway Suite 300  
Alpharetta, GA 30004  
ATTN: A/P Department

**Estimate details**  
Estimate no.: 1518  
Estimate date: 04/18/2025  
Expiration date: 09/18/2025

Contact: Lance Lumbard/Robert Sheridan

#	Product or service	Description	Qty	Rate	Amount
1.	TKN, Water	Total Kjeldahl Nitrogen, Water (351.2)	3	\$35.00	\$105.00
2.	NO3/NO2 (NOX)	SM 4500NO3 H-201	3	\$50.00	\$150.00
3.	Ortho Phosphate, Water 365.1	Ortho Phosphate (365.1)	3	\$30.00	\$90.00
4.	Chlorophyll A	Chlorophyll A (SM 10200H) (corrected)	3	\$110.00	\$330.00
5.	Lanthanum, Water	Lanthanum (La), Water	3	\$18.00	\$54.00
6.	Ammonia, Water	Nitrogen, Ammonia (350.1)	3	\$30.00	\$90.00
7.	Nitrogen, Total	Nitrogen, Total (TKN+NOX) Calculation	3	\$0.00	\$0.00
8.	Phosphorus LL, Total, Water	Phosphorus, Total (365.4) Low-Level	3	\$37.00	\$111.00
9.	TSS	Total Suspended Solids/Non-Filterable Residue (SM2540D)	3	\$25.00	\$75.00
10.	Environmental Impact Fee	Environmental Impact Fee (Per work order)	3	\$15.00	\$45.00
11.	Disposal Fees	Sample Disposal Fees (Per sample)	3	\$3.00	\$9.00

Total

\$1,059.00

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Accepted date

Accepted by

# **Exhibit "B"**

## **City of Lakeland Consultant Expense Reimbursement Policy Revised 6/18/2018**

### General

This policy governs all eligible reimbursement expenses paid to consultants hired by City Departments under professional service contracts. All reimbursable expenses must adhere to the following provisions and be verified and approved by the appropriate department head, or their designated representative administering the professional contract. An exhibit to each contract or agreement must be accepted by each professional services consultant prior to the agreement being considered fully executed. All proposed reimbursable consultant expenses must be submitted to the managing designee with matching receipts and specific documentation outlining the nature of the business conducted in association with the expenditure prior to approval by the City.

### Consultant Contract Provisions

1. Reasonable expenses will be reimbursed for customary business activities deemed integral to the completion of the consulting assignment (i.e. phone calls, copies, printing, facsimile services, etc.)
2. Reasonable travel expenses will be reimbursed at a rate not-to-exceed the following:
  - Car Rental – Limited to mid-size vehicles or smaller.
  - Airline Travel – Limited to tourist or coach class fare, all efforts will be made to identify the most economical flight options available at time of scheduling.
  - Use of private automobile for administration of project related requirements may be reimbursed at the current IRS mileage reimbursement rate. ([www.irs.gov](http://www.irs.gov))
  - Local hotel accommodations will be reimbursed at a rate not-to-exceed the GSA lodging rate for Tampa, Florida per night plus sales tax. ([www.gsa.gov](http://www.gsa.gov)) Incidentals related to the hotel stay will not be reimbursed.
  - Meal expenses will be reimbursed at a rate not-to-exceed the GSA M&IE rate for Tampa, Florida. A maximum of 15% gratuity on meals will be allowed.
  - No entertainment expenses will be reimbursed, including, but not limited to, alcoholic beverages, in-room entertainment, registrations, tickets to sporting events or entertainment events, banquet and or client entertainment.
  - No reimbursement will be provided for personal expenses of any nature.
  - When representing the interest of the City outside of the Lakeland area, reimbursement of reasonable hotel accommodation costs will be provided as determined by the responsible Department Head.

### Collection of Back-up Documentation

All consultant expenditures submitted for reimbursement shall be properly documented and approved by the appropriate department head or designated representative managing the agreement. Original receipts must be provided for payment, along with documentation on purpose. The department head or designated representative will be responsible for the collection of this documentation and for communicating with the consultant on issues related to reimbursable costs or back-up documentation. It will be the responsibility of the department head or designated representative to obtain the necessary approvals from the City Managers' Office for variances to the policy.

Prior to payment of invoices, the following will be required:

1. Verification that invoice references the correct professional service contract.
2. Verification that the specific contract deliverables have been met and scope of work has been satisfactorily completed.
3. Verification that all consultant reimbursable expenses were incurred in conjunction with specified services rendered and billed at cost.
4. All reimbursable expenses must be submitted with receipts documenting expenses.
5. Verify all expense calculations are correct.

### Variance Approval

All variances or modifications to the provisions in this policy must be approved by the City Manager or authorized designee.