



TASK ORDER NO.: 2015-11
 PROJECT NAME: **FY 2016 / 2017 Quarterly Lake Monitoring Program**
 CLIENT: City of DeBary
 16 Colomba Road
 DeBary, Florida 32713

The vendor, Pegasus Engineering, LLC, located at 301 West State Road 434, Suite 309, Winter Springs, Florida 32708, is a Corporation authorized to do business in the state of Florida. As part of this Task Order, Pegasus Engineering, LLC, and their subconsultant, will perform the services outlined in the attached document.

Total LUMP SUM FEE of this Task Order, including reimbursement expenses, is Forty Three Thousand One Dollar and Ninety-Eight Cents (\$43,001.98). The Client agrees to pay Pegasus Engineering, LLC for its services based on approved monthly invoices.

This Task Order shall be governed by the Continuing Consulting Contract for General Engineering Services agreement dated March 3, 2010.

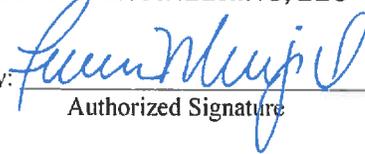
Client Signature:

Vendor Signature:

CITY OF DEBARY

PEGASUS ENGINEERING, LLC

By: _____
 Authorized Signature

By: 
 Authorized Signature

Elizabeth Bauer
 Printed Name

Fursan Munjed, P.E.
 Printed Name

Interim City Manager
 Title

Principal / Project Manager
 Title

 Date

June 17, 2016
 Date



ENVIRONMENTAL RESEARCH & DESIGN, INC.

Engineering • Science • Chemistry • Research
3419 Trentwood Blvd. • Suite 102 • Belle Isle (Orlando), FL 32812-4864
Telephone: 407-855-9465 • Fax: 407-826-0419

CITY OF DEBARY ANNUAL LAKE MONITORING PROGRAM

EXHIBIT A: SCOPE OF SERVICES

Prepared April 26, 2016

The Consultant (Environmental Research & Design, Inc., ERD) shall, at a minimum, perform the following specific tasks for the City of DeBary and the Engineer (Pegasus Engineering, LLC):

1. Quarterly Monitoring Program

- a. **Sample Collection:** Personnel from ERD will perform quarterly water quality monitoring within 15 lakes located within the City of DeBary. The specific lakes to be monitored are listed in Table 1.

TABLE 1

LAKES TO BE SAMPLED WITHIN THE CITY OF DEBARY

NO.	LAKE	NO.	LAKE
1	Lake Anna Marie	9	Gem Lake
2	Lake Maud	10	Lake Charles
3	Tropic Lagoon	11	Lake Lago Linda
4	James Pond	12	Lake of the Woods
5	Lake Olivia	13	Lake Louise
6	No Name Lake – West Side	14	Angeles Lake
7	No Name Lake – East Side	15	Half Moon Lake
8	Lake Marie		

Each of the 15 lakes will be monitored on a quarterly basis at a single location near the geographic center of each lake. Physical-chemical profiles of temperature, pH, specific conductivity, dissolved oxygen, and oxidation/reduction potential (ORP) will be performed at each site, beginning at depths of 0.25 m and 0.5 m, and continuing at 0.5 m intervals from the water surface to the bottom. A measurement of Secchi disk depth will also be conducted at each site. A surface water sample will be collected from each site at a water depth equal to 50% of the measured Secchi disk depth. Each collected sample will be analyzed for the parameters outlined below. It is the responsibility of the City of DeBary to ensure that ERD personnel have proper authorization and adequate access to all listed lakes for monitoring purposes. A total of 4 quarterly events will be conducted over the 12-month monitoring period.

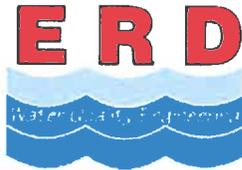
Laboratory analyses will be performed on each collected lake sample for the parameters listed below:

- | | | |
|-------------------------|---------------------------|---------------|
| 1. Alkalinity | 6. SRP | 11. E. Coli |
| 2. Ammonia | 7. Particulate Phosphorus | 12. Turbidity |
| 3. NO _x | 8. Total Phosphorus | 13. TSS |
| 4. Particulate Nitrogen | 9. Chlorophyll-a | 14. Color |
| 5. Total Nitrogen | 10. Fecal Coliform | |

- b. Data Compilation/Review:** All field and laboratory data generated during the quarterly monitoring events will be compiled into an Excel database on a continuing basis. The field and laboratory data will be reviewed and evaluated with respect to accuracy and precision of the data. The finalized data set will be used to generate the quarterly and annual monitoring reports.
- c. Prepare Quarterly Reports:** A summary report will be prepared for each quarterly monitoring event which outlines the results of the water quality monitoring program. Each quarterly report will be forwarded to Pegasus approximately 30 days following completion of each quarterly monitoring event. The measured field and lab data will be compared with Class III (recreational) surface water quality criteria, Numeric Nutrient Criteria (NNC), and other applicable criteria.

2. Prepare/Give City Council Presentation

The ERD Project Director will prepare and give a presentation to the Debarry City Commission which summarizes the results of the annual water quality report.



ENVIRONMENTAL RESEARCH & DESIGN, INC.

Engineering • Science • Chemistry • Research
 3419 Trentwood Blvd. • Suite 102 • Belle Isle (Orlando), FL 32812-4864
 Telephone: 407-855-9465 • Fax: 407-826-0419

CITY OF DEBARY ANNUAL LAKE MONITORING PROGRAM

EXHIBIT B: MAN-HOURS / FEE SUMMARY

Prepared April 26, 2016

TASK	DESCRIPTION	MAN-HOURS*					TASK AMOUNT (\$)
		PD	LM	FT	CH	CL	
<u>A. LABOR</u>							
1.	Quarterly Monitoring (34 lakes x 4 events)						
	a. Sample Collection	4	64	80	--	--	\$ 9,264.00
	b. Data Compilation/Review	16	48	--	24	--	6,914.08
	c. Prepare Quarterly Data Reports (4 total)	48	32	--	--	24	10,867.12
2.	Prepare/Give City Council Presentation	12	4	--	--	6	2,456.78
TOTAL – LABOR:		80	148	80	24	30	\$ 29,501.98
<u>B. REIMBURSABLE EXPENSES</u>							
1	Equipment Use Fee - Boats, Equipment, Expenses (\$50/day x 2 days/event x 4 events)						\$ 400.00
1	Monitoring Supplies – bottles, preservatives, filters, reagents, gloves, etc. (\$25/site x 15 sites x 4 events)						1,500.00
1, 2	Mileage (500 miles x \$0.40/mile)						200.00
TOTAL – REIMBURSABLE EXPENSES:							\$ 2,100.00
<u>C. LAB ANALYSES</u>							
1	Surface Water Samples (15 sites/event x 4 events x \$190/sample)						\$ 11,400.00
TOTAL – LAB ANALYSES:							\$ 11,400.00
PROJECT TOTAL:							\$ 43,001.98
FEE PER EVENT (for labor, reimbursables, and lab analyses under Task 1):							\$ 10,136.30

***Man-Hours:**

SYMBOL	PERSONNEL CLASSIFICATION	RATE (\$/hr)
PD	Project Director- Harvey H. Harper, Ph.D., P.E.	160.00
LM	Limnologist	65.00
FT	Field Technician	55.80
CH	Chemist	51.42
CL	Clerical	46.13