

2021-0151

**INTRODUCED BY: MATTHEW JEWELL, PARISH PRESIDENT
(DEPARTMENT OF PUBLIC WORKS)**

ORDINANCE NO. 21-6-16

An ordinance to approve and authorize the execution of a professional services agreement with Comite Resources, Inc. for Wetland Wastewater Assimilation Biological Monitoring Project (S060404) for a period of five years in the amount of \$220,500.00.

WHEREAS, St. Charles Parish desires to continue Wetland Wastewater Assimilation Biological Monitoring as required by Luling Oxidation Pond LDEQ discharge permit; and,

WHEREAS, Comite will provide monthly (60) progress reports and five annual reports; and,

WHEREAS, Biological Monitoring is required to meet LDEQ and USEPA regulatory requirements for Wetland Wastewater Assimilation permits.

THE ST. CHARLES PARISH COUNCIL HEREBY ORDAINS:

SECTION I. That the Professional Services Agreement with Comite Resources, Inc. for Wetland Wastewater Assimilation Biological Monitoring for a period of 5 years in the amount of \$220,500.00 is hereby approved and accepted.

SECTION II. That the Parish President is hereby authorized to execute said agreement on behalf of the Parish of St. Charles.

The foregoing ordinance having been submitted to a vote, the vote thereon was as follows:

YEAS: BILLINGS, FONSECA, DARENSBOURG GORDON, CLULEE, GIBBS,
DUFRENE, BELLOCK, FISHER, FISHER-PERRIER
NAYS: NONE
ABSENT: NONE

And the ordinance was declared adopted this 21st day of June, 2021, to become effective five (5) days after publication in the Official Journal.

CHAIRMAN:

SECRETARY:

DLVD/PARISH PRESIDENT:

APPROVED:

DISAPPROVED:

PARISH PRESIDENT:

RETD/SECRETARY:

AT:

11:00 am

RECD BY:

PROFESSIONAL SERVICES AGREEMENT

THIS AGREEMENT made and effective as of the 23rd day of July, 2021 by and between ST. CHARLES PARISH acting herein by and through its President, who is duly authorized to act on behalf of said Parish, hereinafter called the OWNER, and Comite Resources, Inc., a corporation and/or limited liability company acting herein by and through its Secretary, Robert R. Lane, hereinafter called CONSULTANT, duly authorized by corporate resolution or certificate of authority attached hereto and made a part hereof. Whereas the Owner desires to employ a professional consulting firm to perform consulting work and services for **Wetland Wastewater Assimilation Biological Monitoring Project No. S060404** as described in Ordinance No. 21-6-16 which is attached hereto and made a part hereof.

1.0 GENERAL TERMS

The Owner agrees to employ the Consultant and the Consultant agrees to perform professional services required for the project described above. Consultant will conform to the requirements of the Owner and to the standards of the agencies participating with the Owner in the Project. The Consultant will coordinate all work between the Owner and all participating agencies and regulating agencies, if needed. Written authorization to begin different phases of the project will be given to the Consultant by the Owner, including Conceptual, Preliminary Design, Final Design, Bidding Assistance and Construction and Services. The Owner may terminate the Contract by written notification and without cause per Section 11.0 during any phase of the project.

The Consultant shall at all times during this Agreement maintain a valid Louisiana Consulting License and any other applicable licenses necessary for performance of the Project.

All work shall be under the direction of the Owner, and all plans, specifications, etc. shall be submitted to the Owner and all approvals and administration of this contract shall be through the Owner.

2.0 PROJECT

2.1 The Owner hereby contracts with the CONSULTANT to perform all necessary professional services in connection with the project as defined as follows:

**Wetland Wastewater Assimilation Biological Monitoring
Projects No. S060404**

2.2 The Project consist of the scope of services and work as defined in Attachment "A" hereto.

- 2.3 Consultant shall perform all scope of services and work in accordance with the Schedule as defined in Attachment "B" hereto unless otherwise mutually agreed upon by the parties in writing.
- 2.4 The Consultant agrees to comply with all Federal, State, and Local Laws and Ordinances applicable to the scope of services and work or in entering any other agreement with any another party to complete the work.

3.0 SERVICES OF CONSULTANT

- 3.1 Consultant shall provide Owner professional work and services in all phases of the Project to which this Agreement applies and as hereinafter provided to properly plan and execute the work on the project(s) assigned to the Consultant. These services may include but may not be limited to serving as Owner's professional consulting representative for the Project, providing professional consultation and advice, and furnishing customary civil, surveying, geotechnical, structural, mechanical, electrical, instrumentation and control consulting services and construction consulting and inspection.
- 3.2 Services provided by the Consultant shall be performed in accordance with generally accepted professional consulting practice at the time and the place where the services are rendered.
- 3.3 Consultant shall obtain from Owner authorization to proceed in writing for each phase of the Project.
- 3.4 Consultant shall provide minutes of all meetings with St. Charles Parish regarding any phase of the Project.
- 3.5 Consultant shall provide work and services to complete the project, including all necessary services described herein or usually implied as a prerequisite for the performance of the services whether or not specifically mentioned in this agreement, including attendance by the Consultant at project conferences and public hearings.
- 3.6 The Phases of the Project are as defined in Attachment "A".

4.0 OWNERSHIP OF DOCUMENTS

- 4.1 Documents including but not limited to plans, specifications, maps, basic survey notes, sketches, charts, computations and all other data prepared or obtained under the terms of this authorization shall become the property of the Owner and shall be made available for Owner's inspection at any time during the Project and, shall be delivered to the Owner prior to termination or final completion of the Contract.

- 4.2 Consultant may retain a set of documents for its files.
- 4.3 Reuse of Documents. Any reuse of documents or materials without written authorization or adaptation by Consultant to the specific purpose intended will be at Owner's sole risk and without liability or legal exposure to Consultant or to Consultant's independent professional associates, subcontractors, and consultants.
- 4.4 No materials, to include but not limited to reports, maps or other documents produced as a result of this Contract, in whole or in part, shall be available to Consultant for copyright purposes. Any such materials produced as a result of this Contract that might be subject to copyright shall be the property of the Owner and all such rights shall belong to the Owner, and the Owner shall be sole and exclusive entity who may exercise such rights.

5.0 SUPPLEMENTARY SERVICES

The Consultant shall provide, when requested in writing by the Owner, supplementary services not included in the basic work and services.

The compensation to the Consultant for the supplemental services, when performed by the Consultant, shall be in the form of a lump sum, billable hours, or "not to exceed" hourly rate which is mutually agreeable to the Owner and the Consultant in writing.

Such supplementary services may include the following:

- A. Soil investigations
- B. Laboratory inspection of materials and equipment
- C. Right-of-Way, easement and property acquisition surveys, plats, maps and documents
- D. Any major revisions for which the Consultant is not responsible, that are authorized by the Owner after the completion and approval of either the preliminary or final plans and specifications
- E. Services concerning replacement of any work damaged by fire or other causes during construction
- F. Services made necessary by the default of the contractor in the performance of the construction contract
- G. Services as an expert witness in connection with court proceedings
- H. Traffic consulting if necessary
- I. Topographic Survey
- J. Preparation of Environmental Assessment documents and/or Environmental Permits
- K. If all or part of the work is to be financed by a Federal or State Grant, the Consultant shall assist the Owner in the preparation of the Grant application and with the Grant Administration, unless otherwise specifically agreed upon previously herein.

6.0 DEFECTIVE WORK

During such visits and on the basis of such observations, Consultant may disapprove of or reject Contractor's work while it is in progress if Consultant believes that such work will not produce a completed Project that conforms generally to the Contract Documents or that it will prejudice the integrity of the design concept of the Project as reflected in the Contract Documents

7.0 NOTICE TO PROCEED

The Owner shall notify the Consultant in writing to undertake the services stated in this Agreement, and the Consultant shall commence the services within ten (10) days after receipt of such notification.

If the Owner desires to divide the Project into various parts, a Notice to Proceed shall be issued for each part, and the Owner and the Consultant shall mutually agree upon the period of time within which services for each part of the Project shall be performed.

The Consultant will be given time extensions for delays beyond their control or for those caused by tardy approvals of work in progress by various official agencies, but no additional compensation shall be allowed for such delays.

8.0 PAYMENTS

- 8.1 Owner shall pay Consultant for the performance of work and services as outlined in Attachment "C" to this Agreement.
- 8.2 Payment for Consultant work and services on projects that do not require construction services, such as feasibility studies or drainage studies, shall be made based upon Consultant's estimate of the proportion of the services actually completed at the time of billing and shall be made in partial payments at monthly intervals.
- 8.3 If the Project, or any portion thereof, is not completed for any reason, the final fee for consulting work and services shall be negotiated between Owner and Contractor. If the final fee for work and services is not mutually agreed upon, either party may elect in writing to submit the dispute to mediation. If mediation is not mutually agreed upon, written notice will be submitted to the other party of the intent to submit the dispute to the 29th Judicial District Court of St. Charles Parish, State of Louisiana.

- 8.4 If authorized in writing by Owner, for the performance of, or for obtaining from others Additional Services which are not considered normal or customary consulting, the Owner shall pay Consultant based on monthly invoices submitted by the Consultant, within sixty (60) days of receipt of Consultant's invoice. Consultant shall provide written notice to Owner when no services or work have been performed during a given month.
- 8.5 For Additional Authorized Services provided by the Consultant such as, but not limited to, wetlands permitting, land and right-of-way acquisition, surveying, NPDES and LADEQ permit renewal or acquisition work, etc. Owner shall pay Consultant based on an agreed upon hourly rate(s) between the Owner and Consultant. Payment shall be not-to-exceed based on hourly rates and actual hours worked.
- 8.6 The following documentation shall be required for payment to Consultant and shall be attached to the monthly invoice.
- a. A copy of the Owner's written authorization to perform the service.
 - b. Timesheets for all hours invoiced.
 - c. Invoice copies, logs or other substantiation of non-salary expenses.
- 8.7 For Additional Authorized Services that Consultant acquires from subcontractors and/or subconsultants, Owner shall pay Consultant a fixed sum previously agreed upon by Owner and Consultant, such sum to be established in each case when the scope of the work involved has been determined and before any of the Additional Services are provided. The use of subcontractors and/or subconsultants shall be subject to the provisions set forth in this Agreement. The following documentation shall be required for payment to Consultant and shall be attached to the monthly invoice:
- a. A copy of the Owner's written consent for the subcontractor and/or subconsultant to perform the service stating the Owner's and Consultant's agreed upon fixed sum established for the service performed.
 - b. Evidence that the subcontractor and/or subconsultant is insured as required by this Agreement.
- 8.8 For Supplementary Services described in Section 5, Owner shall pay Consultant for the fee negotiated at the time the work is assigned by the method stipulated in the contract amendment.

9.0 BUDGET LIMITATIONS

The construction budget for this Project shall be determined by the Owner, and the Consultant shall be advised of the budget limitation in writing by the Owner and the Consultant shall indicate his acceptance of same in writing to the Owner. Any subsequent budget revisions shall be confirmed in writing.

If, at the completion of the Preliminary or Design Phase, the Consultant does not concur with the construction budget, he shall so notify the Owner, and the Consultant and Owner shall mutually agree on a revised construction budget prior to any work on the Design Phase.

If no bid is received within the budget limitation and a redesign of the project is required by the Owner, such redesign shall be accomplished by the Consultant at no additional cost to the Owner, provided, however, if the receipt of bids is, for any reason, delayed beyond a period of six (6) months from the date of the completion of the Design Phase the amount stated as the construction budget shall be adjusted, immediately prior to the time bids are received, by use of a construction cost index acceptable to both parties of this agreement.

10.0 FUNDS

No work shall be authorized until funds are established for each individual task.

11.0 TERMINATION OR SUSPENSION

- 11.1 This Agreement may be terminated for any reason by either party upon thirty (30) days written notice.
- 11.2 The Consultant, upon receipt of such notice, shall immediately discontinue all services in connection with the performance of this Agreement and shall proceed to cancel promptly all existing orders and contracts insofar as such orders or contracts are chargeable to this Agreement.
- 11.3 The Consultant shall, as soon as practicable after receipt of notice of termination, submit a statement showing in detail the services performed and payments received under this Agreement to the date of termination.
- 11.4 The Owner shall then pay the Consultant promptly that portion of the prescribed fee to which both parties agree.
- 11.5 Consultant fully acknowledges that no payment will be made for any work performed or expenses incurred after receipt of the termination by either party unless mutually agreed upon in writing.
- 11.6 Failure to meet agreed delivery dates or authorized extensions are considered substantial failures and breach of this contractual agreement by Consultant.
- 11.7 This agreement shall automatically terminate upon satisfactory completion of all services and obligations described herein or five (5) years from the date of its execution, whichever event occurs first.

12.0 INSURANCE

- 12.1 The Consultant shall secure and maintain at his expense such insurance that will protect him and the Owner, from claims under Workmen's Compensation Acts and from claims for bodily injury, death or property damage which may arise from performance of services under this Agreement. Insurance for bodily injury or death shall be in the unencumbered amount of \$1,000,000.00 for one person and not less than \$1,000,000.00 for all injuries and/or deaths resulting from any one occurrence. The insurance for property damage shall be in the unencumbered amount of \$1,000,000.00 for each accident and not less than \$1,000,000.00 aggregate.
- 12.2 The Consultant shall also secure and maintain at his expense professional liability insurance in the unencumbered sum of \$1,000,000.00.
- 12.3 All certificates of insurance SHALL BE FURNISHED TO THE OWNER and shall provide that insurance shall not be cancelled without ten (10) days prior written notice to the Owner. The Owner may examine the policies.
- 12.4 Consultant shall include all subcontractors and/or subconsultants as insured under its policies or shall furnish separate certificates for each. All coverages for subcontractors and/or subconsultants shall be subject to all the requirements stated herein.
- 12.5 St Charles Parish shall be named as an additional insured on general liability insurance policies.
- 12.6 For all purposes under Louisiana law, the principals of this Contract shall be recognized as the statutory employer of all contract employees as provided in LSA-R.S. 23:1061.

13.0 INDEMNIFICATION

Consultant shall indemnify and hold harmless the Owner, its employees, agents and representatives, against any and all claims, demands, suits or judgments for sums of money to any party for loss of life or injury or damages to person or property growing out of, resulting from or by any reason of any negligent act by the Consultant, its employees, agents, servants or representatives, while engaged upon or in connection with the services required or performed hereunder.

14.0 WARRANTY

- 14.1 Consultant warrants that it will perform its design services with the degree of skill and to the standard of care required of the consulting profession to meet all Federal, State and Local requirements.

14.2 If Consulting Services for project designed by Consultant does not meet those requirements noted herein above, then to the extent that this occurs as a direct result of Consultant's failure to meet the standard of care in its design services, Consultant will indemnify the Parish for Consultant's share of the costs incurred to bring Consulting Services for project to the limitations mandated.

14.3 The obligations expressed in Section 14 above in no way limit the Consultant's obligations expressed elsewhere in this Contract.

15.0 EXCLUSIVE JURISDICTION AND VENUE

For all claims arising out of or related to this agreement, CONSULTANT hereby consents and yields to the exclusive jurisdiction and venue of the Twenty-Ninth Judicial District Court for the Parish of St. Charles, State of Louisiana, and expressly waives any (a) pleas of jurisdiction based upon Consultant's residence and (b) right of removal to Federal Court based upon diversity of citizenship.

16.0 OTHER

This Agreement constitutes the entire agreement between the parties. There are no understandings, agreements, or representations, oral or written, not specified withing this Agreement. This Agreement may not be modified, supplemented or amended in any manner, except by written agreement signed by both parties.

IN WITNESS WHEREOF, the parties to these presents have hereunto caused these presents to be executed the day, month and year first above mentioned.

WITNESSES:

Pichelle Champagne

Billy Raymond

ST. CHARLES PARISH

Matthew Jewell

By: Matthew Jewell
Parish President

6-22-21

Date:

WITNESSES:

John DAY

Jason Day

Comite Resources, Inc.

Robert R. Lane, PhD

By: Robert R. Lane, PhD
Secretary

7-23-21

Date:

ATTACHMENT "A"

Wetland Wastewater Assimilation Biological Monitoring Project No. S060404

Project Scope:

CONSULTANT shall perform the scope of services described in the following paragraphs.

Introduction

St. Charles Parish was issued a permit from the Louisiana Dept. of Environmental Quality (Louisiana Pollutant Discharge Elimination System (LPDES) permit LA0032131) to discharge effluent from the Luling wastewater treatment plant into a forested wetland as part of its treatment system in order to polish secondarily treated municipal effluent. The overall objective of this scope of services is to conduct monitoring to specifically meet the requirements of the LPDES permit. The details of the proposed monitoring and reporting schedule are given below. The proposed work is based on the results of the field investigations and monitoring of the site described in the Use Attainability Analysis (UAA) as well as discussions with Louisiana Department of Environmental Quality (LDEQ) and City personnel.

Objectives

Measurements of hydrology, vegetation, water and soil chemistry and accretion will be carried out as dictated by the discharge permit (Table 1). Monthly monitoring reports and annual reports will be prepared in order to ascertain that the specific criteria for protection of the receiving wetland are met. Meetings will be held with City personnel and LDEQ as necessary to ensure satisfactory completion of the monitoring.

Table 1. Monitoring requirements for each of the assimilation wetland study sites.

Parameter	Flora	Sediment	Surface Water
Flora Species Diversity	P		
Aboveground Vegetation Productivity	A		
Water Level Measurements			M
Metals: Mg, Pb, Cd, Cr, Cu, Zn, Fe, Ni, Ag, Se	P	P	P
Nutrient Analysis I: TKN, TP	P	P	S
Nutrient Analysis II: NH ₃ N, NO ₂ +NO ₃ N, PO ₄		P	S

Others: BOD ₅ , TSS, pH, Dissolved Oxygen, Salinity, Temp			S
Accretion Rate		P	
Nutrient Loading Rates			A
Adaptive Management Practices			A

P: Periodically – Must be made once during the fourth year of the permit period for all wetland areas.

A: Annually – Once per year at all wetland areas.

S: Semiannually – Once per six months at all wetland areas.

M: Monthly – Once per month at all wetland areas.

METHODS

Experimental Design

The city of Luling discharges secondarily treated effluent into forested wetlands adjacent to the wastewater oxidation pond. The assimilation wetland is located directly to the east of the oxidation pond. The 608-ha wetland is a continuously flooded freshwater forested wetland dominated by water tupelo and bald cypress. Three sites were established at the Luling assimilation wetland, including Discharge, Mid, and Out sites, and a Reference site was located nearby. The Discharge, Mid, and Reference sites are forested while the Out site is a freshwater emergent marsh. The Marsh Reference site is the same as the Hammond marsh Reference site.

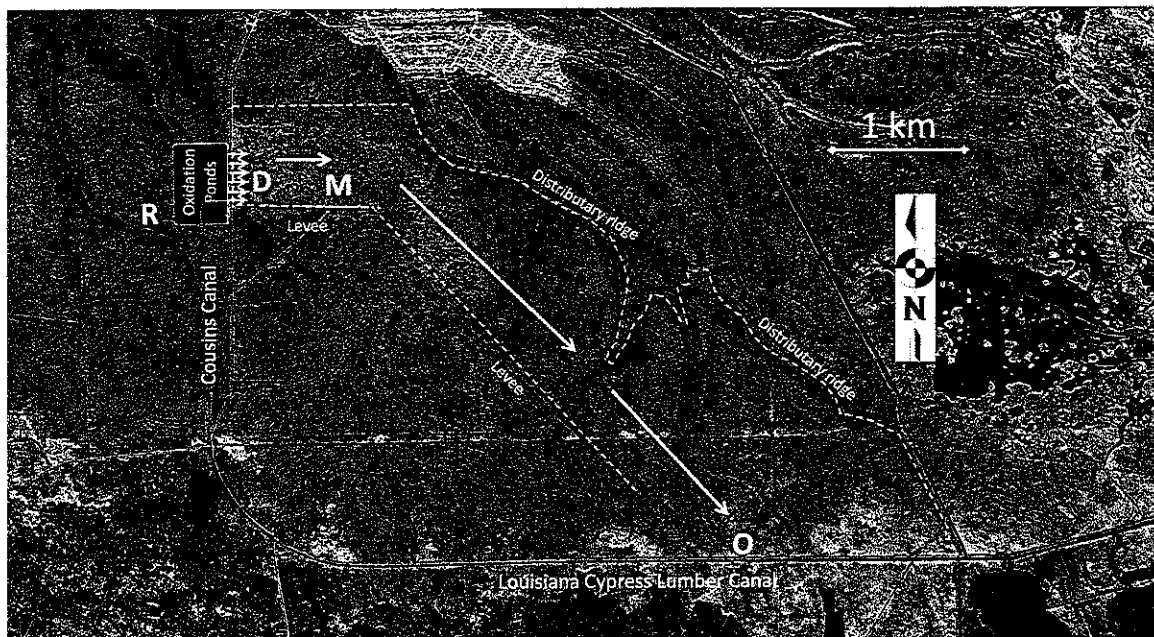


Figure 1. Location of the Luling WTP and assimilation wetlands. Upper case letters indicate sampling sites. Arrows indicate general direction of water flow.

Water Analysis

In Situ Measurements

Conductivity, salinity, dissolved oxygen, pH and temperature will be measured using an In-Situ smarTROLL Multiparameter Handheld probe (shorturl.at/dmFQX). The probe will be calibrated with known standards prior to field measurements. Data will be uploaded to a mobile device, and then archived and backed-up upon return from the field. These measurements will be taken during monthly site visits at all monitoring sites.

Nutrients and Suspended Solids

Discrete water samples for nutrient and total suspended solids (TSS) analysis will be collected semiannually at the study sites and the discharge pipe as dictated by the discharge permit. Single water samples will be taken 5 to 10 cm below the water surface with effort taken not to stir bottom sediments or include any film that may be present on water surface. Samples will be collected in 500 ml acid washed polyethylene bottles or as provided by the laboratory. The samples will be immediately stored at 4°C until transported to an analytical laboratory and within 24 hours filtered and subsampled. The samples will be analyzed for nitrite (NO₂-N), nitrate (NO₃-N), ammonium (NH₃-N), total Kjeldahl nitrogen (TKN), total phosphorus (TP), and ortho-phosphate (PO₄-P) by Pace Analytical, an EPA approved analytical laboratory, using standard methods (APHA 1985).

Metals Analysis

Triplicate water samples will be collected once during September through November in the fourth year of the permit from each of the study sites as dictated by the discharge permit. The following parameters will be analyzed for by Pace Analytical: magnesium (Mg), lead (Pb), cadmium (Cd), chromium (Cr), copper (Cu), zinc (Zn), iron (Fe), nickel (Ni), silver (Ag), and selenium (Se).

Vegetation Analysis

Tree Productivity

10m x 100m plots have been previously established at each forested study site in order to monitor vegetation species composition and productivity. The diameter at breast height (DBH) of all trees in each plot will be measured directly above and below an identification tag located approximately 4.5 ft above the ground. The tag will be inverted for the top measurement. The procedures have been followed as outlined in the Forest Inventory and Analysis National Core Field Guide (version 7.2). Trees with buttresses will be tagged 1.5 ft above the butt swell. In addition to the tree diameter, the species and tag number will also be recorded. Centimeter diameter tape will be used with 0.1 cm increments. Forked trees will be measured differently depending where the fork originates: if below 1.0 foot then they are treated as distinctly separate trees; if between 1.0 and 4.5 feet DBH of each fork is measured at a point 3.5 feet above the pith intersection; and if the fork is above 4.5 feet DBH will be taken at 4.5 or slightly below if the fork is at 4.5 ft. Trees with swellings, bumps, depressions, and branches at 4.5 ft, DBH will be measured immediately above the irregularity at the place it ceases to affect normal stem form. The DBH of leaning trees will

be made 4.5 ft from the ground along the bole as measured along the underside face of the bole.

Stem production will be estimated from annual changes in wood biomass calculated using allometric equations based on stem dbh as the independent variable (Table 1). Aboveground net primary production (NPP) will be calculated as the difference in biomass from year to year.

Table 1. Allometric equations used to convert diameter at breast height (dbh) to woody biomass.

Species	Biomass (kg)	f(D)	DBH Range	Reference
<i>Fraxinus spp.</i>	Biomass(kg) =	$((2.669*((DBHcm*0.394)^2)^{1.16332}))^{0.454}$	>10 cm	Megonigal et al. '97
<i>Taxodium distichum</i>	Biomass(kg) =	$10^{(-.97+2.34*LOG10(DBHcm))}$	>10 cm	Megonigal et al. '97
<i>Nyssa aquatica</i>	Biomass(kg) =	$10^{(-.919+2.291*LOG10(DBHcm))}$	>10 cm	Megonigal et al. '97
<i>Acer rubrum</i>	Biomass(kg) =	$((2.39959*((DBHcm*0.394)^2)^{1.2003}))^{0.454}$	10-28 cm	Megonigal et al. '97
<i>Quercus nigra</i>	Biomass(kg) =	$((3.15067*((DBHcm*0.394)^2)^{1.21955}))^{0.45}$	10-28 cm	Megonigal et al. '97
	Biomass(kg) =	$((5.99898*((DBHcm*0.394)^2)^{1.06527}))^{0.45}$	>28 cm	Megonigal et al. '97
<i>Salix spp.</i>	Biomass(kg) =	$10^{(-1.5+2.78*LOG10(DBHcm))}$	n.a.	Scott et al. 1985
Other Species	Biomass(kg) =	$((2.54671*((DBHcm*0.394)^2)^{1.20138}))^{0.45}$	10-28 cm	Megonigal et al. '97
	Biomass(kg) =	$((1.80526*((DBHcm*0.394)^2)^{1.27313}))^{0.45}$	>28	Megonigal et al. '97
All species < 5 cm	Biomass(kg) =	$((2.50008*((DBHcm*0.394)^2)^{1.19572}))^{0.45}$	<10cm	Phillips 1981

Marsh Productivity

Net primary productivity (NPP) of emergent wetlands will be measured using the End of season live (EOSL) technique (White et al. 1978; Burdick et al. 1989). EOSL biomass will be collected during the last week of September or the first week of October during each year of the project. Aboveground biomass will be sampled using five 0.1 m² clip plots (Shew et al. 1981). Vegetation within each clip plot will be cut as close to the wetland surface as possible, placed in labeled paper bags, and brought back to the laboratory where live vegetation will be separated from dead, dried at 60°C, and weighed. The dry weight of the live material will be extrapolated to live dry weight per square meter (g dry wgt/m²).

Metals & Nutrient Analysis

Triplicate green leaf samples will be collected once during September through November of the fourth year from the major species at the study sites as dictated by the discharge permit. These samples will be analyzed for TP and TKN by Pace Analytical. In addition, samples will be analyzed for metal concentrations, including Mg, Pb, Cd, Cr, Cu, Zn, Fe, Ni, Ag, and Se.

Soils Analysis

Sediment Accretion

Accretion will be measured using the feldspar marker technique (Cahoon and Turner 1989). Feldspar marker horizons were prepared by spreading a thin (~1 cm) layer of white feldspar clay on the wetland surface. The center of the plot was marked with a PVC pole. Material accumulated above the feldspar marker is measured annually. The rate of vertical accretion is calculated by dividing the mean thickness of material above the surface of the horizon by the amount of time the horizon had been in place.

Metals & Nutrient Analysis

Triplicate sediment samples will be collected at the study sites during September through November in the fourth year of the study as dictated by the discharge permit. These samples will be analyzed for TP and TKN by Pace Analytical. In addition, samples will be analyzed for metal concentrations, including Mg, Pb, Cd, Cr, Cu, Zn, Fe, Ni, Ag, and Se.

Statistical Analyses

All summary and diastolic statistics will be made using JMP statistical software (Sall et al. 2017). Other appropriate statistical analysis will also be conducted as needed.

Responsibilities and Deliverables

Comite Resources, Inc. will be responsible for sample collection, data analysis and interpretation, and meeting with City and LDEQ personnel sufficient to ensure satisfactory progress of the project. The City will be responsible for the payment of all sample analyses. Deliverables include monthly monitoring reports and five (5) Annual Reports.

Literature Cited

- APHA (American Public Health Association). 1985. A.E. Greenberg, R.R. Trussell, L.S. Clesceri, and M.A.H. Franson (eds.), *Standard Methods for the Examination of Water and Wastewater*, 16th Ed., Washington, D.C.
- Burdick, D.M., I.A. Mendelssohn, and K.L. McKee. 1989. Live standing crop and metabolism of the marsh grass *Spartina patens* as related to edaphic factors in a brackish, mixed marsh community in Louisiana. *Estuaries* 12: 195-204.
- Cahoon, D.R. and R.E. Turner. 1989. Accretion and canal impacts in a rapidly subsiding wetland. Feldspar marker horizon technique. 12:260-268.
- Sall, J., M. Stephens, A. Lehman, and S. Loring. 2017. *JMP Start Statistics: A guide to statistical and data analysis using JMP*, sixth edition. Cary, NC: SAS Institute Inc. 660p.
- Shew, D.M., R.A. Linthurst, and E.D. Seneca. 1981. Comparison of production computation methods in a southeastern North Carolina *Spartina alterniflora* salt marsh. *Estuaries* 4: 97-109.
- White, D.A., T.A. Weiss, J.M. Trapani, and L.B. Thien. 1978. Productivity and decomposition of the dominant salt marsh plants in Louisiana. *Ecology* 59: 751-759.

ATTACHMENT "B"

Wetland Wastewater Assimilation Biological Monitoring Project No. S060404

Project Schedule:

Comite Resources, Inc. will perform Biological Monitoring in the Luling Pond Wetland Assimilation discharge area as described in the Scope of service and in accordance with LDEQ discharge permit for the Luling Oxidation Pond.

They shall submit monthly progress reports along with an Annual report for each month and year of the five-year contract.

ATTACHMENT "C"

Wetland Wastewater Assimilation Biological Monitoring
Project No. S060404

Project Cost:

Owner shall pay Consultant a fee of \$220,500.00 for work performed in sixty (60) equal payments of \$3,675.00 based on submittal of monthly (60) progress reports acceptable to Owner and five (5) Annual Reports.

Invoice Contact Information:

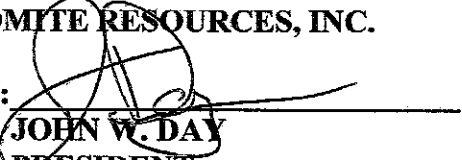
Robert R. Lane, PhD
Chief Operating Officer
Comite Resources, Inc.
PO Box 66596
Baton Rouge, LA 70896
(p) 225-247-3917
(e) rlane@comiteres.com
(w) comiteres.com

**Excerpts from the
MINUTES OF THE SPECIAL MEETING OF THE
BOARD OF DIRECTORS
OF COMITE RESOURCES, INC.**

RESOLVED, that Robert R. Lane, of Comite Resources, Inc., be and he is hereby authorized and empowered for and on behalf of Comite Resources, Inc. to execute any and all documents that he deems necessary and as required to enter into a contract with St. Charles Parish on behalf of the corporation

COMITE RESOURCES, INC.

BY:


**JOHN W. DAY
PRESIDENT**

CERTIFICATION

I, Robert R. Lane, Secretary of Comite Resources, Inc. do certify that the above and foregoing to be a true and correct copy of excerpts of the minutes of the Board of Directors of said Corporation, duly and legally called, convened and held on the 15 day of JUNE, 2017, in BATON ROUGE Louisiana, where a quorum of the Directors was present and that the same has not been revoked or rescinded.

WITNESS my signature and the seal of the Corporation at COVINGTON, Louisiana, this 17 day of MAY, 2021.


**ROBERT R. LANE
SECRETARY**

