



**CONTRACT FOR CONSULTING SERVICES
FOR
PROFESSIONAL STORMWATER AND ENVIRONMENTAL
ENGINEERING SERVICES**

Between

THE COUNTY OF VOLUSIA

AND

GEOSYNTEC CONSULTANTS, INC.

Contract No. 24-SQ-101KW

County of Volusia
Purchasing and Contracts Division
123 West Indiana Avenue, Room 302
Deland, Florida 32720-4608
www.volusia.org/purchasing

CONTRACT FOR PROFESSIONAL CONSULTING SERVICES

This Contract made and entered by and between Geosyntec Consultants, Inc., duly authorized to conduct business in the State of Florida, whose principal place of business is located at 900 Broken Sound Parkway, Suite 200, Boca Raton, FL 33487 (hereinafter the "Consultant") and County of Volusia, a body corporate and politic and a subdivision of the State of Florida, whose address is County of Volusia, 123 West Indiana Avenue, DeLand, Florida 32720 (hereinafter "County").

RECITALS:

WHEREAS, the County requires a competent and qualified consultant to provide professional services in support of the County's operations; and

WHEREAS, the County has requested and received expressions of interest for the retention of services of consultants; and

WHEREAS, the County has determined that the Consultant is fully qualified to render the required service. Among the factors to be considered in making this finding are the capabilities, adequacy of personnel, past record, and experience of the firm or individual; and

WHEREAS, the County has determined pursuant to Florida Statutes 287.055 (a/k/a "Consultant's Competition Negotiation Act") (as amended) and 337.105 (as amended) that the Consultant is competent and qualified to furnish said services stated hereunder to the County and Consultant desires to provide professional services according to the terms and conditions hereunder, and

WHEREAS, it has been determined that the execution of this Contract is beneficial to the people of County of Volusia, Florida.

NOW, THEREFORE, in consideration of the foregoing recitals which are incorporated herein by reference, and other specific consideration set forth in this Contract, the receipt and sufficiency of which is acknowledged by the Consultant and County, the parties agree and stipulate as follows:

1. DEFINITIONS.

For this Contract and any incorporated exhibits, certain terms, phrases, words and their respective derivations shall have the meaning set forth and defined therein and shall be applicable in both. Definition of terms in the Contract shall first be governed by this Contract, and second by the incorporated Scope of Services/Work (Exhibit A). In the event of any conflict among the foregoing, the conflict shall be resolved in the order of priority set forth in the preceding sentence. If there is no applicable definition as described above, the terms, phrases, and words, and their respective derivations when used in this Agreement and the Scope of Work, shall have the meanings ascribed to them in the following order of precedence: first, in the most current edition Black's Law Dictionary and last, in the most current edition of the Oxford English Dictionary, if a term is not defined in the Agreement or Black's Law Dictionary.

1.1. **Addendum:** A written explanation, interpretation, change, correction, addition, deletion, or modification of equal dignity herewith affecting the contract documents including drawing and specifications prepared by the Consultant, approved and issued by the County and/or distributed to third parties.

1.2. **Affidavit:** The instrument which is to be signed by the Consultant and submitted to the County upon the County's request through the Project Manager, upon completion of the job, showing that all bills have been paid. It shall also mean such instrument that may be requested by the

County incidental to partial payments.

- 1.3. **Amendment:** An amendment to an approved Task Assignment or this Contract in writing by the County, approved by the Director of Purchasing and Contracts, and signed by the County and the Consultant authorizing a modification or revision to one or more terms or conditions of this Contract or the Task Assignment.
- 1.4. **Application for Progress Payment:** The current estimate form furnished and certified by the Consultant, which is to be used by contractor in requesting progress payments.
- 1.5. **Architect:** A person or firm that is authorized to practice architecture pursuant to Florida Statute 481.299 or a general contractor who provides architectural services under a design-build contract authorized by F.S. 481.299(3)(as amended).
- 1.6. **Architect/Engineer:** The design professional identified in the contract documents and who is licensed and registered in the State of Florida. The terms "Architect" and "Architect/Engineer (A/E)" means the architect/engineer or its authorized representative.
- 1.7. **Basic Contract:** This Contract between the County and the Consultant covering the services requested from a formal solicitation. Authorization for performance of services under the basic Contract shall be in the form of a written Task Assignment (see Task Assignment).
- 1.8. **Bid Documents:** The official forms on which the County requires formal bids to be prepared and submitted by the bidder.
- 1.9. **Calendar day:** Any day, including Saturdays, Sundays, and holidays, regardless of weather conditions.
- 1.10. **Compensation:** The amount paid by the County to Consultant for professional services regardless of whether stated as compensation or stated as hourly rates, overhead rates, or other figures or formulas from which compensation can be calculated which includes the total monies payable to the Consultant under a Task Assignment which includes all services, labor, materials, supplies, travel, training, profit, overhead, costs, expenses, and any other costs necessary to complete the Task Assignment.
- 1.11. **Completion Date:** The date that the County or its designated representative approves and accepts all Work or Services for a Scope of Work in a Task Assignment or this Contract.
- 1.12. **Consultant:** The person or entity qualified to perform work under this Contract and any Task Assignment related thereto. In addition, Consultant must be a professional engineer or engineering firm, including an architect (or registered landscape architect, surveyor and mapper, professional engineer, architect or registered landscape architect providing professional services within the meaning of Section 287.055, F.S. (as amended), who is registered in the State of Florida. In addition, the Consultant may be the Engineer or Architect or Landscape Architect of record or may provide services through and be subcontracted to the Engineer of record.
- 1.13. **Continuing contract:** A contract for professional services entered into in accordance with all the procedures of Section 287.055, F.S. (as amended), between the County and a firm whereby the firm provides professional services to the County for projects for work of a specified nature as outlined in a this Contract and its associated Task Assignments as required by the County, with no time limitation except one governed by the termination provisions of this Contract and a Task Assignment.

- 1.14. **Contract Administrator:** The Director of Purchasing and Contracts or his/her designee responsible for addressing any concerns within this Contract.
- 1.15. **Contract Documents:** Contract documents shall include but are not limited to the following:
- (1) This Contract ("Basic Contract");
 - (2) Exhibits;
 - (3) Task Assignments;
 - (4) Any valid modifications or Amendments to this Contract or Task Assignments issued after its execution of this Contract, and any Amendments to the foregoing;
 - (5) Certificates of insurance;
 - (6) Notice of Award and/or Notice to Proceed;
 - (7) The conditions of this Contract (general, special, supplementary, and other);
 - (8) Drawings;
 - (9) Project specifications;
 - (10) Written interpretations;
 - (11) Project manuals; and
 - (12) Addenda (including RSQs, RFPs and Consultant's responses to RFPs) issued before the execution of this Contract.
- 1.16. **County Representative:** Also known as the Owner's representative who is the County Engineer or person designated by the County to review, approve and make decisions regarding the scope of work.
- 1.17. **County:** Shall mean the County of Volusia (a body corporate and politic and a subdivision of the State of Florida).
- 1.18. **Deliverable:** The result(s) or end products or services of a Project or Task Assignment that meet the defined design or construction specifications, and functional parameters articulated in the Scope of Work for this Contract and a Task Assignment which, e.g., include but are not limited to: design drawings\specifications, structures, equipment, machinery, studies, reports, written documentation, training, systems or processes.
- 1.19. **Drawings/Plans:** The official approved drawings or plans or exact reproductions thereof, which have been prepared, signed, sealed and dated by the Consultant, which shows the location, character, dimensions and details of the work to be done and which are considered part of the Contract Documents.
- 1.20. **Effective Date:** The date that this Contract, a Task Assignment, Addendum, Amendment, Modification is fully executed by Consultant and the County.
- 1.21. **Engineer:** The person, firm, or corporation named as such in the contract and/or authorized by the County to act as the County's representative or the County construction engineer authorized to practice engineering services pursuant to Florida Statute 471.03(2)(i)(as amended) and who may serve as the County's engineers of construction, engineering and inspection. The term Engineer shall be synonymous with design architect/engineer or Architect/Engineer or Consultant.
- 1.22. **Engineer of Record:** The professional Engineer or engineering firm contracted or employed by the County and registered in the State of Florida who develops criteria and concept for the work, performs the analysis and is responsible for the preparation of the plans and specifications. The engineer of record may be County in-house staff or a Consultant retained by the County.

- 1.23. **Field Order:** A written instrument issued by the Consultant to the contractor, which clarifies or interprets the drawings and technical specifications, and/or orders minor variations in the work, as opposed to a change in the work, and which does not involve an adjustment in contract price or time.
- 1.24. **Final Certificate of Payment:** A certificate for payment which shall constitute a representation of the Consultant to the County that the quantity of the work has been performed in accordance with the Contract Documents. The Consultant shall obtain from the contractor(s) periodic waiver of liens and "no lien affidavits" at each payment
- 1.25. **Final Completion:** That date when (a) the Work is complete in accordance with the Contract Documents including the minor items identified during the final inspection, and (b) the contractor has submitted its request for final payment including the contractor's release and all Subconsultant affidavits.
- 1.26. **Firm:** Any individual, firm, partnership, corporation, association, or other legal entity permitted by law to practice architecture, engineering, or surveying and mapping in the state.
- 1.27. **Inspector or Field Representative:** County Employee or an authorized representative of the Consultant assigned to make inspections of the work performed and materials furnished by the contractor.
- 1.28. **Landscape Architect:** A person or firm that is authorized to practice landscape architecture pursuant to Florida Statute 481.311 (as amended).
- 1.29. **Modification:** A written Amendment to the Contract Documents approved by the County which includes but is not limited to the following:
 - 1.29.1. **Field Order:** A written clarification, interpretation, minor change or alteration issued by the Consultant.
 - 1.29.2. **Addenda:** A document written by the Consultant and approved by the County that is added to the original Contract Documents to clarify, revise, add to, or delete from the original Contract Documents or previous addenda. The document includes a written clarification or interpretation prepared by the Consultant.
- 1.30. **Notice of Award:** A written notice by County that the Consultant has been determined by an evaluation committee and the County Council to be highly qualified and approved for an award of a contract.
- 1.31. **Notice to Proceed:** The official letter from the County to the Consultant establishing a date on which the Task Assignment will commence.
- 1.32. **Original Expiration Date:** The date that this Contract was originally intended to expire excluding any extensions or renewals of this Contract for a time certain.
- 1.33. **Owner:** The owner is Volusia County for whom all Work or Services under this Contract and any Task Assignment related thereto are performed by the Consultant.
- 1.34. **Professional Services:** Those services within the scope of the practice of Architecture, Professional Engineering, Landscape Architecture, or registered Surveying and Mapping, as defined by the laws of the state, or those performed by any Architect, Professional Engineer, Landscape Architect, or registered Surveyor and Mapper in connection with his or her professional employment or practice.

- 1.35. **Project:** A fixed capital outlay study or planning activity described in the public notice of the County which includes the entire Scope of Work including the Scope of Work in any Task Assignment that shall be performed in accordance with the Contract Documents. A Project may include:
 - 1.35.1. A grouping of minor construction, rehabilitation, or renovation activities.
 - 1.35.2. A grouping of substantially similar construction, rehabilitation, or renovation activities.
- 1.36. **Project Manager or County Project Manager:** The County employee who is assigned to the Project and is responsible for the day-to-day administration and coordination of the Project for the County. The County may change the Project Manager at any time by providing notice to the Consultant and/or Consultant.
- 1.37. **Proposal:** The document submitted by the Consultant in response to a formal solicitation used to determine if the Consultant is highly qualified.
- 1.38. **Request for Statement of Qualifications (RSQ):** An invitation process initiated and used by the County to select contractor(s) or consultant(s) to perform work or provide services in a prospective project(s) based upon their apparent qualifications as submitted by them (respondents) in response to the invitation.
- 1.39. **Scope of Services/Work:** The general services/work, herein defined in this Contract, as well as the scope of work in a Task Assignment including responsibility for performing and complying with all incidental matters pertaining thereto, as set out in the Task Assignment.
- 1.40. **Services:** Those services are the Professional Services of work or tasks as defined in Section 287.055, F.S. to be performed by the Consultant as provided for under this Contract and any Task Assignment which shall be performed by a duly licensed professional Engineer or Engineering firm, Architect or Architectural firm, Landscape Architect or Landscape Architectural firm, Surveyor, and/or Mapper who is registered in the State of Florida.
- 1.41. **Shop Drawings:** All diagrams, illustrations, brochures, schedules, and/or other data which are prepared by contractor or Consultant, a Subconsultant, manufacturer, supplier, distributor, or other person on behalf of the contractor, and which illustrate the equipment, material, or some portion of the work.
- 1.42. **Specifications:** The document that establishes the material and performance requirements of goods and services.
- 1.43. **State:** State of Florida.
- 1.44. **Subconsultant:** A person other than a materialman or laborer who enters into a contract with a Consultant for the performance of any part of the Basic Contract.
- 1.45. **Sub-subconsultant:** A person other than a materialman or laborer who enters into a contract with a subconsultant for the performance of any part of such subconsultant's contract.
- 1.46. **Substantial Completion:** The date as certified by the County's Project Manager when the Task Assignment or Project or a specified part as agreed to in writing by the parties is sufficiently completed to the satisfaction of County or its designated representative, in accordance with the Contract Documents, so that the project or specified part can be utilized for the purposes for which it was intended; or if there be no such certification, the date when

final payment is due in accordance with the applicable Task Assignment.

- 1.47. **Task Assignment:** Specific, detailed services or work placed against an awarded and established continuing services Contract memorialized as an Amendment to this Contract by the parties prior to the commencement of such Work or Services by the Consultant.
- 1.48. **Work:** Any and all obligations, Services, duties and responsibilities necessary to the successful completion of the Project assigned to or undertaken by Consultant under the Contract Documents, including the furnishing of all labor, materials, equipment and other incident.

2. ORDER OF PRECEDENCE.

- 2.1 If Consultant finds a conflict, error, or discrepancy in the Task Assignment, it shall call it to the County Project Manager's attention, in writing, and request the County Project Manager's interpretation and direction before proceeding with the Work affected thereby. Such notice shall be provided by the Consultant to the County Project Manager in a timely fashion so as not to cause additional costs due to delay. In resolving such conflicts, errors, and discrepancies, the documents shall be given precedence in the following order:
 - 2.1.1 Modifications (i.e., amendments or field orders) to the contract
 - 2.1.2 The contract between the county and consultant
 - 2.1.3 Task Assignment
 - 2.1.4 Addenda, exhibits, or attachments material to the contract

3. SCOPE OF WORK.

- 3.1. **General Scope of Services.** The following general Scope of Services shall be governed by Section 3.2 of this Contract. The Consultant shall provide services under this Contract in accordance with the Scope of Services set forth in Exhibit "A".
 - 3.1.1. Provide all certifications ("Engineer of Record"), calculations, drawings, and any other documents required for special permits and authorizations from various government bodies or agencies having jurisdiction over the project except for those permits that the County is responsible to provide to the consultant such as environmental surveys/permits, wetland identification surveys, traffic impact studies, property surveys, geotechnical studies/reports and quality control testing;
 - 3.1.2. Prepare a time scaled diagram (Design Schedule) showing the proposed dates of completion of various design phases and scheduled completion of working drawings and technical specification manuals; submit the design schedule for County Project Manager's review and approval;
 - 3.1.3. Obtain at least three quotes from Subconsultants if any part of the Task Assignment requires a Subconsultant to perform the Work;
 - 3.1.4. Evaluate proposals furnished by the contractor or a construction management firm, if requested by the County. Cooperate with and facilitate the performance of duties of a construction manager, if so required by the County;
 - 3.1.5. The Work or Services to be rendered by the Consultant shall be commenced, as specified in the Task Assignments as may be issued hereunder, and shall be completed within the time specified therein;
 - 3.1.6. If specified in a Task Assignment, furnish consultation and advice during the

construction of a project and perform construction administration or commissioning services;

3.1.7. Furnish all other architectural/engineering services including without limitation those specified hereinafter and those required for the completion of specific projects as described in the Task Assignment:

3.1.7.1. **Investigation Phase.** Consultant shall visit the project site, initiate and hold project meetings as may be necessary to develop the design and preliminary sketches of the contemplated project. The Task Assignment shall specify the required number of visits necessary for the Consultant to design/develop construction plans and technical specification. The Consultant shall confer with the project manager to ascertain the number of site/project meetings. The number of site visits and/or project meetings shall depend upon the complexity of the project.

3.1.7.2. **Design/Construction Plans and Specification.** Consultant shall submit design development documents and estimates of the approved design to the County for review. Each plan package and its component parts shall be prepared in accordance with the Task Assignment. The plans shall be of sufficient detail indicating floor plan layout, elevations, outline specifications, to illustrate the size and character of the entire project in its essentials as to kinds of material, type of structure, mechanical and electrical systems (if applicable), site work, and such other work as may be necessary for a completely functioning project. Consultant shall submit a cost estimate, if requested, or opinion estimate for this phase of the work for review and approval by the County. The estimate shall include, as required for the project, the identification of costs for heating, ventilation, plumbing, air conditioning, electrical lighting and power.

3.1.7.3. Notwithstanding, Section 3.1.7.2, Consultant shall submit a cost estimate, if requested, or opinion estimates during each phase of the work. Estimates shall be submitted between 30, 60, and 90 percent, and again at the 100 percent stage of completion or as specified in the Task Assignment. Each estimate will be utilized to review the Scope as may be necessary to complete the project within the construction budget. In the event that the project construction cost estimate exceeds the construction budget as set forth above, consultant shall, after review and upon written request of the County at Consultant's direct labor rates, pursuant to 3.2.6.1, continue to revise any or all of the project design, drawings, specifications, and estimates in a manner satisfactory to the County, until the revised estimate conforms to the County's budget. Consultant shall submit to the County for review the required number of sets of the contract plans, the latest cost estimate, and complete specification books as specified in the Task Assignment.

3.1.7.4. Each 100% final construction plan package shall be accurate, legible, complete in design, and suitable for public bidding purposes. Construction drawings shall meet the following minimum plans and design documentation packaging requirements:

- 3.1.7.4.1. Cover/Key Sheet
- 3.1.7.4.2. Summary of Pay Items, if applicable
- 3.1.7.4.3. Reference Points, if applicable
- 3.1.7.4.4. Typical Sections

3.1.7.4.5. Miscellaneous Detail Sheet

3.1.7.5. Consultant shall also prepare final construction drawings and technical specifications suitable for inclusion in a County prepared bidding package. The construction documents shall be prepared at the drawing scales specified in the Task Assignment for the development of the following elements:

- 3.1.7.5.1. Statement of probable costs of the project
- 3.1.7.5.2. Layout/site plan
- 3.1.7.5.3. Grading and drainage plans
- 3.1.7.5.4. Technical specifications that define materials appropriate for construction

3.1.7.6. Following the approval of design development documents and estimates of cost by the County, Consultant shall prepare construction Contract Documents that include plans, suitable for reproduction for the project in complete detail as per the Task Assignment.

3.1.7.7. **Completed Plans, Specifications, Documents, and Cost Estimate.** Upon completion and final approval by the County of the plans, specifications, other Contract Documents, and detailed construction cost estimates and/or opinion estimate of construction cost per task assignment, Consultant shall deliver to the County in the medium and number of copies specified in the Task Assignment the following:

- 3.1.7.7.1. Any data or field notes obtained pertaining to the project, including data and field notes obtained from additional surveys;
- 3.1.7.7.2. Complete final approved original tracings or electronic files of contract plans;
- 3.1.7.7.3. Typed masters or electronic files of Contract Documents, other than plans, suitable for reproduction on 8" x 11" paper; and
- 3.1.7.7.4. The last cost or opinion estimate of the construction cost in detail for approval by the County.

3.1.7.8. **Permitting Phase Services.** If required in the Task Assignment, Consultant shall be responsible for applying and assisting the County in securing all applicable permits; for preliminary coordination with the County and other appropriate regulatory agencies so that the design efforts are properly directed towards permit approval; for preparing and submitting permit packages based on preliminary coordination with the County; and for other appropriate regulatory agency requirements under the County's name at the time of submittal. Consultant shall include in the permit packages the site and system design information required by the County and other regulatory agencies, applicable sketches and calculations. Consultant shall respond to the requests of the County and other regulatory agencies concerning the submitted information; report to the County any requests for information not required at the time of permit submittal, as made known during the preliminary coordination; reproductions in excess of requirements; or regulation changes requiring permit resubmission. County shall be responsible for the permitting

fees. The County, however, will not pay a fee to the Consultant when the Consultant is required to resubmit a permit package to a regulatory agency so as to address deficiencies, omissions, or corrections to the original permit package that are not attributable to changes in rules made by the regulatory agency after submission of the original permit package. Consultant shall attend the appropriate number of office and field meetings necessary for the preliminary coordination as set forth in a Task Assignment.

3.1.7.9. **Bidding Phase.** Consultant shall attend the pre-bid conference meeting at the location selected by the County. Consultant shall answer questions, as applicable, and take minutes as necessary for a written response; provide plan and specification clarification and prepare addenda to be issued by the County; review and evaluate bid packages from each respondent; and summarize in writing his/her recommendation based on the definition of responsive and responsible as defined in the Contract Documents.

3.1.7.10. **Construction Phase Services.** Consultant shall visit the project site, including attending job construction meetings, during construction to monitor the progress, quality of the work, and that the work is proceeding in accordance with the construction Contract Documents. During such visits, Consultant shall make reasonable efforts to protect the County against defects and deficiencies in the work of the contractors by informing the County Representative the work does not, in their opinion, conform to the Contract Documents. Consultant shall keep the County informed of the progress and quality of the work by submitting a written report of each visit. As part of the site visits, if required for the project, the Consultant's mechanical and electrical engineers shall also visit the project site and attend job construction meetings as requested to determine if the mechanical and electrical work is proceeding in accordance with the construction Contract Documents. Task Assignment shall specify the required number of visits necessary for the Consultant to monitor the progress and quality of work. Consultant shall perform the following tasks, including, but not limited to, assisting the County during the construction to verify that the project is completed in general conformance with the construction Contract Documents.

3.1.7.10.1. **Preconstruction Conference:** Consultant shall prepare the agenda, if requested; attend the County's preconstruction conference meeting; prepare and submit notes of the meeting.

3.1.7.10.2. **Design Clarification Responses:** Consultant shall provide technical interpretation of the plans/drawings, specifications, and Contract Documents; evaluate requested deviation from the approved design or specification; and review and respond to requests for information (RFI) from the contractor. Consultant shall prepare supplementary sketches as may be necessary for clarification of construction plans and assist in resolving actual field conditions encountered.

3.1.7.10.3. **Site Visits:** Consultant shall visit the job site to monitor the progress and quality of the work and determine, in general, if the work is proceeding in accordance with the intent of the Contract Documents including site visits for both substantial and final completion for each project. The Consultant shall route all job correspondence to the contractors through County.

- 3.1.7.10.4. **Pay Request Review:** Consultant shall determine based on the observations and surveillance, as set forth above and on the evaluation of the contractor's progress payment requests, the amount owed to the contractor(s) and transmit the contractor's payment requests to the County with recommendation for payment in accordance with the terms and conditions of the Contract Documents. The Consultant shall conduct visits to the project as necessary to determine the dates of Substantial and Final Completion and shall issue to the County a Final Certificate of Payment. Such certificate for payment shall constitute a representation of the Consultant to the County that the quantity of the work has been performed in accordance with the Contract Documents. The Consultant shall obtain from the contractor (s) periodic waiver of liens and "no lien affidavits" at each payment. Additionally, at completion of the project, Consultant shall obtain from the contractor(s) final waiver of lien, final "no lien affidavits," and final affidavit of release of liens prior to certification of Final Payment.
- 3.1.7.10.5. **"As-Built":** The Consultant shall prepare record drawings by reviewing and considering information or drawings provided by the contractor; revise original design drawings of the project and submit to the County hardcopy and an electronic file of the record drawing using information supplied by contractor.
- 3.1.7.10.6. **Shop Drawing Review:** The Consultant shall review shop drawings and other data that the contractor is required to submit. Consultant shall examine for compliance with design concept and recommend to County, approval or rejection of shop drawings and of material and equipment submitted as qualified for use in the project, based on literature and samples supplied by the contractor through the County. Consultant shall submit to the County original drawings that will reflect all amendments to the Contract Documents. Consultant shall prepare any necessary amendments and assemble written guarantees required of the contractors.
- 3.1.7.10.7. **Project Close-Out:** The Consultant shall make final review of construction to determine if work was completed in general conformance of the construction contract documents; assist in the preparation of final "punch list" when the project is substantially completed; assist in negotiating the final payment for construction; and submit a final letter report upon which final settlement and contract closeout can be based. If required, prepare and submit to Florida Department of Environmental Protection (FDEP) or Department of Health for approval, the FDEP certificate of completion of construction for both water and sewer.
- 3.1.7.11 **Deliverables.** Submit final design plans and support documents to the County for review and approval at specified junctures in the medium and number of copies specified in the Task Assignment. If required in the Task Assignment, each plan set submitted shall have the percentage completed for those submittals clearly indicated on the first sheet of each set of plans.

3.2. Performance Criteria:

- 3.2.1. All Work or Services shall be performed in accordance with the Contract Documents and shall be approved by the County in writing prior to commencing any Work or Service(s) described herein or in a Task Assignment.
- 3.2.2. This Contract standing alone does not authorize the performance of any Work or Services to be provided by the Consultant or require the County to place any orders for Work or a Service. Authorization for performance of professional services by the Consultant under this Contract shall be in the form of written Task Assignments issued and executed by the County and signed by the Consultant. Each Task Assignment shall describe the Services required, state the dates for commencement and completion of the Work, and establish the amount and method of payment.
- 3.2.3. Notwithstanding the General Scope of Work and Services provision in Section 3.1., the Scope of Work for a Project shall be set forth with specificity and describe in detail all specifications, plan requirements, deliverables, additional performance criteria, maximum not-to-exceed compensation, the commencement and completion dates, materials, equipment, testing and any other item or criteria required to complete the Work or Services in the Task Assignment. Each Task Assignment shall relate to the General Scope of Work and Services in Section 3.1 and shall supplement this Contract and be made a part thereof.
- 3.2.4. All materials and labor necessary to complete a Task Assignment shall be furnished by the Consultant unless the Contract Documents state otherwise. Said materials shall be of good quality and as specified in the Contract Documents; and all work and labor will be performed, pursuant to Section 7.3.5, to the satisfaction of the County.
- 3.2.5. The Consultant shall provide the services required herein strictly in an independent contractor relationship with the County and, except as expressly set forth herein, is not, nor shall be, construed to be an agent or employee of the County. For each purpose related to this Contract and each Task Assignment, Consultant and contractors, Subconsultants or subconsultants shall be independent contractors with respect to the County and nothing herein shall create any association, partnership, joint venture or agency relationship between them. The County shall not provide vehicles or equipment to the Consultant to perform the duties required by a Task Assignment under this Contract nor will the County pay for any business, travel, office or training expense or any other contract performance expense not specifically set forth in the scope of services of a Task Assignment. The Consultant is not exclusively bound to the County and may provide service to other private and public entities as long as the service by the Consultant for such entities does not conflict with the Consultant's services to the County in any Task Assignment.
- 3.2.6. As applicable to each Project performed by the Consultant during the term of this Contract or Task Assignment, the County may at any time, by written order, make changes within the general scope of a Task Assignment and the Work and/or Services to be performed through Amendments to the Task Assignment. Except as provided in this Contract otherwise, if any such change causes an increase or decrease in the Consultant's cost of, or the time required for performance of, the Project Work or Services, an equitable adjustment shall be made and this Contract shall be amended through the Amendment of the Task Assignment in writing stating the equitable adjustment prior to the commencement of Work covered by the equitable adjustment. Any claim by the Consultant for adjustment under this Section must be asserted in writing within thirty (30) days from the date of receipt by the Consultant of the notification of change unless the County grants in writing an additional period of time

before the completion of the Contract; otherwise, the claim shall be deemed waived. The Consultant shall proceed with the prosecution of the Work or Service as changed. Except as otherwise provided in this Contract, no charge for any extra work or materials shall be allowed or approved by the County.

- 3.2.6.1. **Changes to Scope of Work.** Either party may propose changes to the scope or time schedule of the Work or Services under a Task Assignment which shall be submitted to the other party in writing for consideration of feasibility and the likely effect on the cost and schedule for performance of the Work or Services. The parties shall mutually agree upon any proposed changes, including resulting equitable adjustments to costs and schedules for the performance of the Services. The agreed changes shall be documented in one (1) or more Amendments to the Task Assignment signed by the County and Consultant prior to the commencement of Work or Services covered by the equitable adjustment. If, despite good faith negotiations, the parties are unable to agree to the terms of an Amendment to a Task Assignment, the parties shall follow the dispute resolution process provided under Section 18.
- 3.2.7. **Time is of the Essence.** Time is of the essence for each Task Assignment issued under this Contract and all Projects performed in accordance herewith.
- 3.2.8. For each purpose related to this Contract, Consultant's Subconsultants or Sub-Subconsultants shall be independent consultants with respect to the County and nothing herein shall create any association, partnership, joint venture or agency relationship between them.
- 3.2.9. County and Consultant shall exhaust all methods to resolve issues, including but not limited to, the dispute resolution procedures in Section 18 of this Contract before any action is taken to declare the County or Consultant in default of this Contract.

4. TERM OF CONTRACT.

- 4.1. Subject to Section 4.2, the Term of this Contract shall commence on the Effective Date of this Contract or when it is fully executed by all parties and **shall terminate three (3) years from the Effective Date.** Except as provided in Section 4.2 the expiration of the term of a Task Assignment issued under this Contract shall have no effect upon this Contract. This Contract may be renewed by the County if the County determines that renewal is in the best interest of the County and satisfies the requirements of Section 287.055, F.S. (as amended). Said renewal shall be in writing and made a part of this Contract and shall incorporate this Contract by reference.
- 4.2. All Task Assignments issued under this Contract shall terminate at the expiration of the term of the Task Assignment, unless amended in writing by the parties, or the term of this Contract, except if a Task Assignment issued before the expiration of this Contract cannot be completed until after the expiration of this Contract, then this Contract shall expire on the Completion Date of said Task Assignment, including any Amendments thereto, and after all Work or Services under the Task Assignment have been approved and accepted by County's Project Manager. As such, the obligations entered therein by both parties under this Contract and said Task Assignment shall remain in full force and effect until completion of all Work or Services performed under this Contract and/or the Task Assignment.
- 4.3. The Work or Services to be rendered by the Consultant shall be commenced, as specified in the Task Assignments as may be issued hereunder, and shall be completed within the time

specified therein.

- 4.4. No new or additional Task Assignments shall be issued after the Original Expiration Date of this Basic Contract. The extension of this Contract to coincide with the completion of an existing Task Assignment issued prior to the original expiration date of this Contract shall not be construed as or constitute authorization by the County or the Consultant to enter into a new or additional Task Assignment after the original expiration date of this Contract, unless this Contract is renewed prior to entering into an Contract for a new or additional Task Assignment.

5. CONTRACT PRICE AND COMPENSATION.

- 5.1. For Work, Services, or each separate Project performed under a Task Assignment during the term of the Contract, the Consultant shall be paid Compensation for all Work or Services performed in a Task Assignment, including labor and materials on a “fixed fee,” “time and materials”, “cost-plus-a-fixed-fee” or “guaranteed maximum-not-to-exceed” basis as applicable in the Task Assignment. The Task Assignment shall state the method of Compensation.

- 5.1.1. Regardless of the method of Compensation, e.g., “fixed fee”, “time and materials”, “cost-plus-a-fixed-fee” or “guaranteed maximum-not-to-exceed” basis, Compensation shall not be adjusted because of errors or omissions which are not the fault of the County in computing the Project or Task Assignment costs which result in an increase in the cost of the Task Assignment or because the time for completion varies from the original estimate, including completion or substantial completion of the Task Assignment prior to the scheduled or Contract or Task Assignment completion date or on account of County’s election to furnish any of the Work or Services. In addition, Consultant shall certify in the Task Assignment that the original contract price or Compensation for a Project or Task Assignment and any additions thereto shall be adjusted to exclude any significant sums by which the County determines the contract price or Compensation was increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs.

- 5.1.2. **Reimbursable Expenses:** Subject to the County’s Travel and Reimbursement Policy, Sections 112.061 (7) and (8), Florida Statutes (as amended), or their successor, reimbursable expenses include actual and verifiable expenditures without any mark-up made by the Consultant or Consultant’s employees and/or agents that directly relate to the Task Assignment and to the expenses listed in the following subparagraphs:

- 5.1.2.1. Expenses of transportation, when traveling is directly related to the Project and necessary, based on and in accordance with the Scope of Work of a Task Assignment;
- 5.1.2.2. Long distance calls and telegrams;
- 5.1.2.3. Fees paid for securing approval of authorities having jurisdiction over the tasks of the Project or Task Assignment;
- 5.1.2.4. Expenses of reproductions;
- 5.1.2.5. Postage and handling of drawings and specifications;
- 5.1.2.6. Any other expenses related to the Project; and

- 5.1.2.7. If authorized in the Task Assignment, the cost of other expenditures made by the Consultant that relate directly to the Scope of Work in the Task Assignment.
- 5.1.3. **Truth-in-Negotiation Certificate.** For any fixed fee, cost-plus-a-fixed-fee or guaranteed maximum-not-to-exceed compensation professional service contract or Compensation in a Task Assignment over \$150,000.00, Consultant shall execute a truth-in-negotiation certificate stating that wage rates and other factual unit costs supporting the Compensation are accurate, complete, and current at the time of contracting. Any Professional Service contract or Task Assignment under which such a certificate is required must contain a provision that the original contract price or Compensation and any additions thereto will be adjusted to exclude any significant sums by which the County determines the contract price or Compensation was increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs. All such contract or Compensation adjustments must be made within one (1) year following the end of the contract. Otherwise, such adjustments shall be deemed waived by the Consultant and null and void for the purposes of this Contract or the Task Assignment. The signature on this Contract by Consultant shall act as the execution of a truth-in-negotiation certificate stating that wage rates and other factual unit costs supporting the compensation of this Contract are accurate, complete, and current at the time of contracting.
- 5.1.4. **Fixed Fee or Price & Guaranteed Maximum-Not-To-Exceed Compensation.** The total Fixed Fee or Price and Guaranteed Maximum-Not-To-Exceed Compensation for a Task Assignment shall be comprised of the total cost of the project, including all design engineering, materials, machinery, equipment, labor, temporary construction, capital spare parts, reimbursable expenses, all mark-ups for overhead and profit. In addition, the Task Assignment shall state with specificity the commencement and completion dates, all materials, contingency and escalation allowances, any and all expenses (including those referenced in Section 5.1.2 herein), and all other items of cost necessary to complete the Task Assignment, whether furnished by County, Consultant, third parties, or others. A Scope of Work for a Task Assignment specifying Compensation on guaranteed maximum-not-to-exceed basis shall allocate the guaranteed maximum-not-to-exceed price or Compensation among, and provide for payments against specified deliverables and performance.
- 5.1.5. **Retainage.** The County shall not withhold retainage from Compensation paid to a Consultant.
- 5.1.6. **Payments.**
- 5.1.6.1. **Punch List.** If County, in its reasonable discretion, does not consider a Project substantially complete, the County shall notify Consultant in writing giving the reasons. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment, and the certificate shall state the time within which those items shall be completed or corrected, the time to be within the contract time. Disputes regarding payments shall be resolved through the dispute resolution procedure articulated in Section 18 of this Contract.
- 5.1.6.2. **Approval of Final Payment.** If, on the basis of the County Project Manager's observation and review of Consultant's Work or Services performed during the Task Assignment, final inspection and review of the final application for payment and the County Project Manager's satisfaction that the work has been completed and Consultant has fulfilled all of its

obligations under the Contract Documents, County Project Manager, after receipt of the final application for payment, indicate in writing his or her approval of payment and present the application to Accounts Payable for payment. Otherwise, the County Project Manager shall return the application to the Consultant, indicating in writing the reasons for refusing to approve final payment, in which case the Consultant will make the necessary corrections and resubmit the application.

- 5.1.6.3. **Invoice Detail.** Regardless of the method of compensation, e.g., “fixed fee”, “time and materials”, or “guaranteed maximum not-to-exceed” basis, the Consultant shall submit an invoice for which Professional Services were rendered to the County in response to its request therefore upon the completion and acceptance of the services detailed in Section 3.1 herein. Each invoice shall show detailed explanations of the services accomplished by labor hours by classification, associated rates, any material or subcontracted costs and any indirect rates or costs in accordance with the prices set forth in a Task Assignment. All of the above shall sum to the total amount requested.
- 5.1.7. **Invoices.** Invoices or payment requests shall be addressed by Consultant and submitted to the County’s Project Manager. The Consultant shall submit:
- A. A monthly statement for Professional Services rendered to the date of the statement subject to Section 5.1.5. The monthly statements shall reflect the Work or Services actually completed at the time of billing.
 - B. A Final Statement for each County requested Project indicating the Work or Services actually completed after final acceptance of said Work or Services by the County. The Consultant’s determination of the Work or Services actually completed is to be prepared by the Consultant, and accompanied by such supporting data as may be required by the County Project Manager. County Project Manager shall review the Consultant’s statement and notify the Consultant in writing within twenty (20) business days from receipt of the statement if any amounts requested are disputed or lack adequate support or documentation.
- 5.1.8. For each Task Assignment, Consultant shall submit a monthly statement for Professional Services rendered to the date of the statement. The monthly statements shall reflect the Work or Services actually completed at the time of billing. The Consultant’s determination of the Work or Services actually completed is to be prepared by the Consultant, and accompanied by such supporting data as may be required by the County Project Manager. County Project Manager shall review the Consultant’s statement and notify the Consultant in writing within twenty (20) days from receipt of the statement if any amounts requested are disputed or lack adequate support or documentation.
- 5.1.9. The County may withhold payment of any specific invoiced charges in a pay request or monthly statement which it disputes in good faith and pay all undisputed charges on the invoice, pay request or monthly statement.
- 5.1.10. Within forty-five (45) days of acceptance by the County Project Manager of all the Work or Services for which Consultant has submitted the monthly statement of professional services, the Consultant shall be paid the unpaid balance of any money due for any undisputed Work or Services covered by said statement. All payments

shall be governed by the Local Government Prompt Payment Act as set forth in Part VII of Chapter 218 Florida Statutes (as amended).

5.1.11. **Taxes.** County is a tax exempt entity and shall not be charged or invoiced for the payment of taxes for Work or Services performed under this Contract.

5.1.12. Pursuant to the terms and conditions articulated in this Contract, an appropriate fee shall be negotiated for each specific Project or Task Assignment to be performed under this Contract and such fee shall be stipulated, together with the Scope of Work for each Task Assignment or project, in separate Task Assignments to this Contract.

5.1.13. **Consultant's Continuing Obligations.** Consultant's obligation to perform the Work or services and complete the Task Assignment in accordance with the Contract Documents shall be absolute. Neither approval of any progress nor final payment to Consultant, nor the issuance of a certificate of substantial completion, nor any payment by County to Consultant under the Contract Documents nor any act of acceptance by the County nor any failure to do so, nor any correction of defective work by County shall constitute an acceptance of Work or Services not in accordance with the Contract Documents.

5.2 **Payment of Consultant's Subconsultants or Sub-Subconsultants.** Consultant shall save and hold the County harmless from any and all claims or actions by Consultant's Subconsultants or Sub-Subconsultants for payment of monies such Subconsultant or Sub-Subconsultant claims to be owed by Consultant for Work performed under this Contract.

5.3 Nothing in this Contract shall create any obligation on the part of the County to pay directly to any Subconsultants or Sub-Subconsultants of Consultant any monies due to such Subconsultant or Sub-Subconsultant or claims of a Subconsultant or Sub-Subconsultants for amounts owed by Consultant to Subconsultant or Sub-Subconsultant for Work performed under this Contract.

6. TERMINATION.

6.1. The performance of Work or Services under this Contract may be terminated by the County in accordance with this clause in whole or from time to time in part, upon at least thirty (30) days prior written notice to Consultant whenever the County shall determine that such termination is in the best interest of the County. Any such termination shall be effected by delivery to the Consultant of a Notice of Termination specifying the extent to which performance of work under the Contract is terminated, and the subsequent date upon which such termination becomes effective.

6.2. **Non-Appropriation.** Notwithstanding any other term or provision of this Contract, the continuation of this Contract beyond a single fiscal year of County is subject to the appropriation and availability of funds in accordance with Chapter 129, Florida Statutes. Termination by the County due to non-appropriation shall be without a termination charge by Consultant. County shall not be obligated to pay Consultant under this Contract beyond the date of termination except as set forth in this Contract. County's obligation to pay Consultant is limited to the budgeted amount for a fiscal year approved by the Volusia County Council for the then current fiscal year of this Contract and is otherwise limited to legally available non-ad valorem tax revenues.

6.3 Upon receipt of such notification, Consultant shall inform County of the extent to which performance is completed and unless notified in writing by the County otherwise, the Consultant shall take no further steps towards completion of the Project. Upon payment by County,

Consultant shall deliver to County any and all completed Deliverables and Deliverables-in-progress that then exist for the Project. If the County terminates the Project due to the Consultant's failure to meet a completion deadline as set forth in this Contract, the County may seek the services for the Project from another consultant. Payment will be made to the Consultant pursuant to 6.4.15.

- 6.4. After receipt of a Notice of Termination as set forth in Section 6.1 above, and except as otherwise directed by the County, the Consultant shall:
 - 6.4.1. Stop work under this Contract on the date and to the extent specified in the Notice of Termination.
 - 6.4.2. Place no further orders or subcontracts for materials, services or facilities, except as may be necessary for completion of such portion of the work under this Contract, as it is not terminated.
 - 6.4.3. Terminate all orders and subcontracts pursuant to this Article 6 to the extent that they relate to the performance of Work or Services terminated by the Notice of Termination.
 - 6.4.4. Assign to the County, in the manner, at the times and to the extent directed by the County, all of the right, title, and interest of the Consultant under the orders and subcontracts so terminated, in which case the County shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts.
 - 6.4.5. With the approval of the County and to the extent required by the County, settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts. County's approval of such settlements shall be final for all the purposes of a termination under Article 6. In addition, Consultant shall transfer title and deliver to the County, in the manner, at the times, and to the extent, if any, directed by the County:
 - 6.4.5.1. The sketches, calculations, reports, models, studies and other Work-in-process, completed Work or Services, supplies, and other materials produced as a part of, or acquired in connection with the performance of the Work or Services terminated by the Notice of Termination; and,
 - 6.4.5.2. The completed or partially completed designs, plans, drawings, information, and other property, which, if the Contract has been completed, would have been required to be furnished to the County.
 - 6.4.6. Consultant shall complete performance of such part of the Work or Services as shall not have been terminated by the Notice of Termination.
 - 6.4.7. After receipt of a Notice of Termination, the Consultant shall submit to the County its termination claim, in the form and with a certification as prescribed by the County. Such claim shall be submitted promptly but in no event later than thirty (30) days from the effective date of termination, unless one (1) or more extensions in writing are granted by the County, upon request of the Consultant made in writing within such thirty (30) day period or authorized extension thereof. Upon failure of the Consultant to submit its termination claim within the time allowed, the County may determine on the basis of information available to it, the amount, if any, due to the Consultant by reason of the termination and shall there upon pay to the Consultant the amount so determined.

- 6.4.8. Subject to the provisions of Section 6.4.7., the Consultant and the County may agree upon the whole or any part of the amount or amounts to be paid to the Consultant by reason of the total or partial termination of work pursuant to Article 6 which amount or amounts may include a reasonable allowance for profit on work done; provided, that such agreed amount or amounts exclusive of settlement costs, shall not exceed the total contract price or Compensation as reduced by the amount of payments otherwise made and as further reduced by the contract price of Compensation for Work not terminated. As such, the Contract shall be amended accordingly and the Consultant shall be paid the agreed amount. Nothing herein, prescribing the amount to be paid to the Consultant in the event of failure of the Consultant and the County to agree upon the whole amount to be paid to the Consultant by reason of the termination of Work or Services pursuant to this clause, shall be deemed to limit, restrict, or otherwise determine or affect the amount or amounts which may be agreed upon to be paid to the Consultant.
- 6.4.9. In the event of the failure of the Consultant and the County to agree as provided in Section 6.4.8. above upon the whole amount to be paid to the Consultant by reason of the termination of work pursuant to Article 6, the County shall pay to the Consultant the amounts determined by the County as follows, but without duplication of any amounts already agreed upon by the parties.
- 6.4.9.1. For completed Work or Services accepted by the County, the price or prices or Compensation specified in the Contract for such work, less any payments previously made.
- 6.4.9.1.1. Notwithstanding section 5.1.4., the total compensation shall include the total of the following:
- 6.4.9.1.1.1. The costs incurred by the Consultant in the performance of the Work and Services terminated, including initial costs and preparatory expenses allocable thereto, but exclusive of any costs attributable to the Work and Services paid or to be paid for under Sections 6.4.8., and 6.4.9.1., hereof;
- 6.4.9.1.1.2. The cost of settling and paying claims arising out of the termination of Work or Services under subcontracts or orders as provided herein, which are properly chargeable to the terminated portion of the Contract exclusive of amounts paid or payable on account of work or services delivered or furnished by Subconsultants or Sub-Subconsultants prior to the effective date of termination, which amounts shall be included in the costs payable herein.
- 6.4.10. This Contract may be terminated by the Consultant if the Consultant provides a minimum of thirty (30) days written notice to the County's Director of Purchasing and Contracts. In the event the Consultant breaches any of the terms and conditions of this Contract and after receipt of notice from the County of said breach and time to cure the same the Consultant fails to cure the breach, the County may take over the Work and Services and complete the Work or Services; or otherwise, the Consultant shall be liable to the County for any increased cost of the Project reasonably incurred by the County in the process of completing the Consultant's unfinished Work and Services. As such, County may apply unpaid Compensation due and owing to the

Consultant prior to the default as a set off against the costs incurred by the County for taking over such Work or Services.

- 6.4.11. In the event that there is a partial termination of this Contract by the County or Consultant because of non-appropriation by County, subject to Article 4 - Term of Contract and Article 5 - Contract Price and Compensation, Consultant shall be paid in accordance with terms of this Article 6, to the date of termination on a prorated basis for any task, milestone, or Deliverable started but not completed which were designated for payment on a payment schedule provided to the County prior to the commencement of work on the task, milestone or Deliverable which is the subject of the partial termination. County's obligation to pay Consultant under this Contract is limited to the budgeted amount for the fiscal year approved by the Volusia County Council for the then current fiscal year of this Contract and is otherwise limited to legally available non-ad valorem tax revenues. Consultant shall have no right to compel the Volusia County Council to appropriate funds for any fiscal year to pay the compensation set forth in Article 5-Contract Price and Compensation. Consultant and County shall be obligated to continue performance under this Contract for the work or services within the Scope of Work or Services under this Contract which is not the subject of the partial termination by non-appropriation.
- 6.4.12. If termination of this Contract occurs for any reason:
 - 6.4.12.1. The County shall continue to have the unfettered right to use or access any license, designs, plans, or exhibits, any of the Deliverables or work products from tasks or milestones, arising under that Contract and produced pursuant to the Contract Documents for which the County has paid prior to termination of this Contract or for which County makes payment after termination of this Contract.
- 6.4.13. Except as otherwise provided in this Contract, Consultant shall return to the County all County Confidential Information in Consultant's possession and Consultant shall certify in a written document signed by the Consultant that all such information has been returned.
- 6.4.14. Except as provided in Section 6.4.12.1., the County shall return to Consultant or destroy all Consultant's Confidential Information in the County's possession (including, without limitation, all devices, records, data, notes, reports, proposals, lists, correspondence, specifications, drawings, blueprints, sketches, materials, equipment or other documents or property relating to such Consultant's Confidential Information and all copies of any of the foregoing (in whatever medium recorded)) and all Third-Party Products in its possession not yet accepted and not yet paid for in full together with all copies of documentation and other material related thereto, and shall certify in a written document signed by the County Project Manager that all such information and material has been returned or destroyed.
- 6.4.15. For all undisputed outstanding invoices submitted to the County prior to the effective date of the termination and subject to Section 4 - Term of Contract, Section 5 - Contract Price and Compensation, and this Section 6, the County shall cause payments to be made to Consultant within thirty (30) days of receipt of invoice. Consultant shall invoice the County for any sums Contactor claims to be owed by County under this Contract for work performed from the last invoice to the effective date of termination. County shall review such invoice for payment and County shall pay any undisputed amount within thirty (30) days.

6.4.16. In the event of termination by the County for non-appropriation, for all items or products ordered by Consultant before receipt by Consultant of the Notice of Termination which Consultant could not cancel without imposition of a fee, the County shall cause payments to be made to Consultant within thirty (30) days of receipt of an undisputed invoice for all cancellation, restocking or residual fees resulting from the cancellation or return of third party products ordered from or shipped by the vendor thereof prior to the effective date of the termination.

6.4.17. All provisions of this Contract which imposes or contemplates continuing obligations on a party will survive the expiration or termination of this Contract.

7. RESPONSIBILITY OF CONSULTANT.

7.1. Consultant shall be duly licensed under the laws of the State of Florida as an Architect, Engineer, Landscape Architect, Mapper or Surveyor for the purposes of this Contract and to satisfy the requirements of Section 287.055, F.S. (as amended).

7.2. Consistent with Article 3 herein, Consultant's performance of Work or Services shall be in accordance with the terms and conditions of this Contract and the applicable Task Assignment(s). The Consultant's performance of Work or Services shall be as a professional consultant to the County to carry out the activities of a Task Assignment under the direction of the County's Project Manager.

7.3. Consultant shall perform Work or Services required under this Contract or Task Assignment, including but not limited to reports, studies, schedules, estimates, the development or preparation of plans, specifications, and cost estimates pertaining to a Project. Consultant shall confer with the County Project Manager to ascertain the functional or design criteria of each Task Assignment. The services of Consultant shall also include of the following:

7.3.1. Unless otherwise provided in this Contract or Task Assignment, Consultant shall commence in accordance with the Contract Documents the Services required for the Project or Task Assignment within ten (10) days of the County's Notice to Proceed.

7.3.2. Consultant shall verify to the County for the applicable Task Assignment that all designs, and specifications, and all data reports, studies, plans, bulletins, schedules, and other drawings therewith conform to the Scope of Work in the Task Assignment and applicable governmental regulations, statutes, and ordinances, including any amendments thereto. Said certification shall be in the form acceptable to the County and made a part of this Contract and attached to the Task Assignment and incorporated herein by reference.

7.3.3. Consultant covenants, and agrees that there are no obligations, commitments, or impediments of any kind that shall limit or prevent Consultant's performance of the Work or Services.

7.3.4. The Consultant covenants and agrees that it will not contract for or accept employment for the performance of any Work or Service with any individual, business, corporation or government unit that would create a conflict of interest in the performance of its obligations pursuant to this Contract with the County.

7.3.5. Consultant covenants and agrees that all of the Work or Services to be furnished by Consultant under this Contract and any Task Assignment from the inception of this Contract or Task Assignment until the Project has been fully completed, shall be of the standard and quality that prevail among similarly situated licensed professional

consultants engaged in the Consultant's profession or practice in the State of Florida under the same or similar circumstances involving the design and/or construction of the Project.

- 7.3.6. Consultant covenants and agrees that all of the Work or Services to be furnished by Consultant shall be in accordance with the most current specifications or technology at the time this Contract is fully executed for projects such as the Project in the Task Assignment as of the time Consultant delivers to County the drawings, specifications and/or Deliverables. Thereafter, Consultant shall keep the County informed of any changes or advancements in such specifications or technology occurring any time prior to or during actual implementation of the Project.
- 7.3.7. Consultant covenants and agrees as follows:
 - 7.3.7.1. Consultant recognizes that its special talent, training, and experience caused the County to select Consultant to be the prime professional on the Project or Task Assignment;
 - 7.3.7.2. Consultant comprehends the specifications and requirements of the Scope of Work of the applicable Task Assignment and the use of the same in their entirety to provide Project Deliverables;
 - 7.3.7.3. Consultant possesses the special skills to recognize material errors or omissions that shall make a Deliverable fail to perform within the specifications and requirements of the Scope of Work for the applicable Task Assignment.
 - 7.3.7.4. That Consultant shall adhere to the standard of care applicable to a consultant with the degree of skills and diligence normally employed by a licensed professional in his field or practice performing the same or similar services or Work in compliance with all applicable federal, state, and municipal laws, regulations, codes, and ordinances.
- 7.3.8. Consultant covenants and agrees that any Project data, reports, studies, designs, drawings, specifications and requirements prepared by Consultant or its agents or subconsultants shall be completed, pursuant to Section 7.3.5. In addition, Consultant shall include in any such reports, studies, bulletins, schedules, designs, drawings, and/or specifications warnings about known hazards to the Project.
- 7.3.9. Consultant covenants and agrees to the following: (1) the Project plans and specifications shall conform to their foreseeable use in the Project with all the amenities as set forth in the plans and specifications in the Task Assignment; and, (2) the Consultant shall produce Deliverables made pursuant to Section 7.3.5. Consultant's duties, as set forth herein, shall at no time be in any way diminished by reason of any approval by County of any plans or specifications in a Task Assignment, nor shall Consultant be released from any liability by reason of such approval by County, it being understood that County at all times is ultimately relying on Consultant's skill, expertise, and knowledge in preparing the plans and specifications or any other documentation. As such, said approval shall not be a defense to a claim or cause of action for contribution or indemnification by the County.
- 7.3.10. Consultant covenants and agrees that all persons connected with Consultant directly in charge of the professional work are duly registered and licensed under Florida law and pursuant to this Contract.

- 7.3.11. Consultant covenants and agrees that it shall be liable for all negligent acts, errors, or omissions proximately caused by Consultant, if any, in judgment relative to the Work or Services of any Task Assignment under which Consultant provides Work or Services.
- 7.3.12. Consultant covenants and agrees to call to County's attention anything of any nature in any deliverables, reports, studies, bulletins, schedules, designs, drawings, documentation, plans, specifications, requirements or instructions prepared by Consultant or data supplied to Consultant by the County or any other party that Consultant regards in Consultant's professional opinion as unsuitable, improper, or inaccurate in connection with the purposes for which such data is furnished in the Project.
- 7.3.13. Consultant covenants and agrees to furnish efficient business administration of the Project and perform all Work or Services in the most expeditious and economical manner consistent with the standard of care applicable to a Consultant with the degree of skills and diligence.
- 7.3.14. Consultant covenants and agrees that it shall, at its own cost, make good any defects in its Work or Services as soon as Consultant becomes aware of such defects or is notified of such defects. Should Consultant refuse or neglect to make good such defects within a reasonable time after receiving notice requesting such remedial work, then County, pursuant to Section 6., shall be entitled to make good such defective Services at the expense of Consultant and/or terminate this Contract and the Task Assignment. This commitment by Consultant is in addition to, and not in substitution for, any other remedy for defective Work or Services that County may have at law or in equity.
- 7.3.15. Consultant covenants and agrees to provide all necessary and required plans for the successful design or completion of a Project as agreed to in the Task Assignment's Scope of Work and as governed by this Contract. Written Deliverables shall be made and delivered in accordance with this Contract or Task Contract. Each written Deliverable shall be accurate, legible and suitable for public bidding purposes. For recommendations concerning the plan preparation of studies, plans, or specifications, the Consultant should refer to the latest applicable manuals as determined by the County Project Manager. All studies, plans, drawings or specifications must meet the County's requirements to obtain permits or government documents, licenses and certificates as applicable in a Task Assignment. In addition the Consultant shall have the following responsibilities:
 - 7.3.15.1. Consultant shall be responsible for preliminary coordination with the County and other appropriate regulatory agencies so that design efforts are properly directed towards permit approval;
 - 7.3.15.2. If applicable in a Task Assignment, prepare permit packages based on preliminary coordination with the County and other appropriate regulatory agency's requirements at the time of submittal. The permit packages shall include site and system design information required by the County and other regulatory agencies, applicable sketches and calculations as set forth in the Task Assignment;
 - 7.3.15.3. Consultant shall respond to the requests of the County and other regulatory agencies concerning the submitted information. The Consultant shall report

to the County any requests for information not required at the time of permit submittal, as made known during preliminary coordination, reproductions in excess of requirements, or regulation changes requiring permit resubmission:

- 7.3.15.4. The County shall provide the permitting fees, but shall not pay an additional fee to the Consultant when the Consultant is required to resubmit a permit package to a regulatory agency so as to address deficiencies, omissions, or corrections to the original permit package that were the responsibility of the Consultant and that are not attributable to changes in rules made by the regulatory agency since submission of the original permit package:
 - 7.3.15.5. Consultant shall review all design and shop drawings and other data that the contractor is required to submit to the County or any state, local or federal agency. These drawings shall be reviewed for general conformance with the design concept of the Project and scope of work of the Task Assignment and general compliance with the information given in the Contract Documents;
 - 7.3.15.6. Consultant shall make final review of Project Deliverables to determine if Work or Services were completed in general conformance with the Contract Documents; and
 - 7.3.15.7. Consultant shall prepare and submit a schedule or time line of each task listed in a Task Assignment.
- 7.3.16. **Annual Statement of Qualifications.** Annually, the Consultant shall submit to the County's Contracts Administrator statements of qualifications and performance data confirming that Consultant is a duly licensed and registered professional Architect, Engineer, Landscape Architect, or Surveyor and Mapper as applicable in connection with Consultant's professional practice and the Services or Work provided to the County under this Contract.
- 7.3.17. **Design Phase.** As required by the County, Consultant shall submit a certain number of sets of design development documents and/or estimates as specified in the Task Assignment to the County for review. The plans and specifications shall be of sufficient detail indicating, e.g., floor plan layout, elevations, outline specifications to fix and illustrate the size and character of the entire Project in its essentials as to kinds of material, type of structure, mechanical and electrical systems, site work, and such other work as may be necessary for a completely functioning Project or completed design drawings and specification. As requested by the County Project Manager, the Consultant shall submit a unit cost or opinion of cost estimate for this phase of the Work or Services for review and approval of County. This estimate or opinion shall include, e.g., identification of costs for heating, ventilation, plumbing, air conditioning, and electrical lighting and power, and other items applicable to the Project or Task Assignment.
- 7.3.18. **Final Review of Plans, Specifications, and Estimates.**
- 7.3.18.1. As requested by the County or as set forth in a Task Assignment, Consultant shall submit to County for review copies of the Project plans and specifications, and copies of the latest detailed cost estimate.
 - 7.3.18.2. Upon completion and final approval by County of the Project plans,

specifications, other Contract Documents, and cost estimates (if required in the Task Assignment), Consultant shall deliver to County as part of the contract obligation or as set forth in the Task Assignment, unless otherwise noted completed plans, designs, drawings, specifications, documents, and cost or opinion estimates.

7.3.18.3. Consultant shall submit to County original drawings and specifications that shall reflect all amendments to the Contract Documents.

7.3.18.4. Consultant agrees to furnish all services, materials, labor, and all other items required to undertake and complete all Work or Services required by this Contract or any Task Assignment in accordance with the drawings, plans, and specifications submitted to the County by Consultant or relied upon by the Consultant to complete the Project or Task Assignment.

7.4. **Assurance.** Consultant gives County its assurance that all Work or Services performed under this Contract shall be timely performed, pursuant to Section 7.3.5., and in accordance with the specifications and requirements of the Contract Documents and of any inspections (if applicable), tests (if applicable) or approvals required under the Contract Documents. All Work not conforming to the specifications and requirements of the Scope of Work of a Task Assignment or of the inspections, tests (if applicable) or approvals in a Task Assignment shall be considered materially defective and constitute a breach of this Contract or the Task Assignment.

7.5. **Tests and Inspections.** If the Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any Work to specifically be inspected and tested, and Consultant has agreed in a Task Assignment to perform such services, Consultant shall furnish the County's Project Manager with the required certificates of inspection, testing or approval. All tests shall be in accordance with the methods prescribed by the American Society for Testing and Materials or such other applicable organization that may be required by law or the Contract Documents.

7.6. The Consultant shall be responsible for the professional and technical accuracy and the coordination of all data, reports and any other service furnished by the Consultant under this Contract or any Task Assignment. The Consultant shall, without additional cost to the County, correct or revise any errors or deficiencies in its Work or Service for which it is responsible.

7.7. All Work performed by Consultant including all general provisions, special provisions, job specifications, drawings, Addendum, Amendments to Task Assignments, written interpretations, and written orders for minor changes in Work, shall comply with the Scope of Work of a Task Assignment and all applicable local laws, codes, ordinances and statutes and the performance criteria in Section 3.2. Otherwise, if Consultant is an Architect or Engineer, only work certified by said consultant, which in whole or part constitutes, a Deliverable in a Task Assignment shall comply with the Scope of Work in a Task Assignment and all applicable local laws, codes, ordinances and statutes. Work not covered by Contract Documents in a Task Assignment shall not be required in a Project unless the County in its sole discretion determines that it is required by reasonable inference as being necessary to produce the intended Deliverable(s).

7.8. If applicable in a Task Assignment, Consultant will supervise and direct all Work or Services efficiently and pursuant to Section 7.3.5. As such, Consultant shall be solely responsible for the means, methods, techniques, sequences and procedures for the design or development of a Deliverable. Further, Consultant shall be responsible for assuring the County that finished Deliverables complies accurately with the Contract Documents or plans and specifications of

the Scope of Work in the applicable Task Assignment.

- 7.9. Consultant will make periodic visits as delineated in the Task Assignment to the site to observe the progress and quality of the executed construction Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents or Task Assignment. The efforts of the Consultant shall be directed toward providing assurance for the County that all Work completed in a Task Assignment shall conform to the requirements of the Scope of Work of the Task Assignment. On the basis of Consultant's observations, skills and experience, Consultant shall keep the County informed of the progress of all Work and shall endeavor to guard the County against defects and deficiencies in the Work. As required in the Task Assignment, each site visit will be followed by a report to the client of known deviations from the Contract Documents or plans and specifications in the Scope of Work of a Task Assignment.
- 7.10. Consultant shall issue with reasonable promptness all written clarifications or interpretations of a Task Assignment (in the form of drawings or otherwise as requested by the County) that Consultant may determine are necessary, which shall be consistent with or reasonably inferable from the overall intent of the Task Assignment.

7.11. Concerning Subconsultants.

- 7.11.1. Consultant shall not employ any subconsultant, other person or organization against whom the County may have reasonable objection, nor shall Consultant be required to employ any subconsultant against whom it has reasonable objection. Consultant shall not make any substitution for any subconsultant who has been accepted by the County without the County's approval.
- 7.11.2. County's disapproval or requirement of removal or replacement of Consultant's employee or subconsultant shall be deemed for lawful reasons if in County's reasonable judgment, such Consultant's employee or subconsultant poses a threat or causes harm to the health, welfare, safety or morale of the County or its agencies, personnel or property or who fails any drug test administered in connection with this Contract, or who has been convicted of a felony or a misdemeanor involving "moral turpitude" or has been released or dishonorably discharged or separated under other than honorable conditions from any of the Armed Forces of the United States.
- 7.11.3. Consultant shall be fully responsible for all negligent acts and omissions of its subconsultant or sub-subconsultants and of persons directly or indirectly employed by them and of persons for whose negligent acts any of them may be liable to the same extent that it is responsible for the negligent acts and omissions of persons directly employed by it. Nothing in the Contract Documents shall create any contractual relationship between any subconsultant and the County or any obligation on the part of the County to pay or to see to the payment of any moneys due any subconsultant, except as may otherwise be required by law. County may furnish to any subconsultant to the extent practicable, evidence of amounts paid to Consultant on account of specific work done in accordance with the schedule of values.
- 7.11.4. Consultant agrees to bind specifically every subconsultant to the applicable terms and conditions of the Contract Documents and the terms and conditions of Section 1-3 and 16 of this Contract for the benefit of the County.
- 7.11.5. The Consultant shall require all subconsultants or sub-subconsultants or outside associates employed in connection with the performance of this Contract to comply fully with the terms and conditions of this Contract between the County and the

Consultant.

- 7.11.6. Any subcontractors or subconsultants and/or outside associates required by the Consultant in connection with the services covered by the Contract will be limited to such individuals or firms as are specifically identified for each Project assigned under this Contract. Any substitution of such subcontractors, subconsultants or associates will be subject to the prior written approval of the County Project Manager.
- 7.11.7. Consultant shall save and hold the County harmless from any and all claims or actions by Consultant's subconsultants or sub-subconsultants for payment of monies such subconsultant or sub-subconsultants claims to be owed by Consultant for Work performed under this Contract or a Task Assignment, provided that the County has paid Consultant in accordance with the terms of this Contract.
- 7.11.8 Nothing in this Contract or a Task Assignment shall create any obligation on the part of the County to pay directly to any subconsultants or sub-subconsultants of Consultant any monies due to such subconsultant or sub-subconsultants or claims of a subconsultant or sub-subconsultant for amounts owed by Consultant to subconsultant or sub-subconsultant for Work performed under this Contract or Task Assignment.

8. AUTHORIZATION FOR SERVICES.

- 8.1. **No Guarantee to Perform Projects.** The County makes no covenant or promise as to the number of available Projects, nor that the Consultant will perform any Project for the County during the life of this Contract. The County reserves the right to contract with other parties for the services contemplated by this Contract as determined in the County's sole and absolute discretion.
- 8.2. **Certifications for Completed Work.** Consultant shall sign and seal (hereinafter "Certification") all completed Work under a Task Assignment as required as a licensed professional or under Florida law; otherwise, the County Project Manager shall not have the authority to approve completed Work or Services and Consultant shall not be entitled to payment for the Work or Services covered by uncertified Work. In the event the County Project Manager accepts and approves completed Work bearing no such certification by the Consultant, such acceptance and approval shall not relieve Consultant or its subconsultants or agents of any liability for any defects, omissions or errors in the Deliverables of completed Work of a Task Assignment until such work is certified by Consultant.

9. INDEMNIFICATION.

- 9.1. **Indemnification.** The Consultant shall indemnify and hold harmless the County including its districts, authorities, separate units of government established by law, ordinance or resolution, partners, elected and non-elected officials, employees, agents, volunteers, and any party with whom the County has agreed by contract to provide additional insured status and the State of Florida, including its officers and employees, from and against all liabilities, damages, losses and costs, including, but not limited to, reasonable attorney's fees, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the Consultant or its subcontractors, agents, employees, or any persons employed or utilized by the Consultant in the performance of the Consultant's obligations or services under this Contract. Such obligations or services shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exhaust as to a party or person described in this Contract.

- 9.1.1 In all claims against County, Consultant's indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or any benefits payable by or for Consultant, or its employees, agents, Consultants, or subconsultants.

9.1.2 IN ACCORDANCE WITH FL STATUTE 558.0035:

- (1) A DESIGN PROFESSIONAL EMPLOYED BY A BUSINESS ENTITY OR AN AGENT OF THE BUSINESS ENTITY IS NOT INDIVIDUALLY LIABLE FOR DAMAGES RESULTING FROM NEGLIGENCE OCCURRING WITHIN THE COURSE AND SCOPE OF A PROFESSIONAL SERVICES CONTRACT IF:
- (A) THE CONTRACT IS MADE BETWEEN THE BUSINESS ENTITY AND A CLAIMANT OR WITH ANOTHER ENTITY FOR THE PROVISION OF PROFESSIONAL SERVICES TO THE CLAIMANT;
 - (B) THE CONTRACT DOES NOT NAME AS A PARTY TO THE CONTRACT THE INDIVIDUAL EMPLOYEE OR AGENT WHO WILL PERFORM THE PROFESSIONAL SERVICES;
 - (C) THE BUSINESS ENTITY MAINTAINS ANY PROFESSIONAL LIABILITY INSURANCE REQUIRED UNDER THE CONTRACT; AND
 - (D) ANY DAMAGES ARE SOLELY ECONOMIC IN NATURE AND THE DAMAGES DO NOT EXTEND TO PERSONAL INJURIES OR PROPERTY NOT SUBJECT TO THE CONTRACT.
- (2) AS USED IN THIS SECTION, THE TERM "BUSINESS ENTITY" MEANS ANY CORPORATION, LIMITED LIABILITY COMPANY, PARTNERSHIP, LIMITED PARTNERSHIP, PROPRIETORSHIP, FIRM, ENTERPRISE, FRANCHISE, ASSOCIATION, SELF-

EMPLOYED INDIVIDUAL, OR TRUST, WHETHER FICTITIOUSLY NAMED OR NOT, DOING BUSINESS IN THIS STATE.

- 9.2. **Confidential Information and Indemnification.** If Consultant is licensing or developing software (including derivative works) for use by the County, Consultant grants County a perpetual, fully-paid, non-assignable, non-exclusive, royalty-free license to use Consultant's software deliverables developed or licensed under a Task Assignment. Said license includes software owned by Consultant which is furnished under this Contract or a Task Assignment, for County's internal use with such use to include the right to modify such deliverable(s) and to create derivative works for such internal use including, without limitation, the right to use such deliverable(s).
- 9.3. Confidential Information and/or Trade Secret do not include the following:
- 9.3.1. Information already known or independently developed the party in possession; or
 - 9.3.2. Information in the public domain through no wrongful act of the party in possession; or
 - 9.3.3. Information received by the party in possession from a third party who was free to disclose it; or
 - 9.3.4. Information regularly disclosed to third parties without restriction on disclosure, or
 - 9.3.5. Information required to be disclosed by law or an order of a court of competent jurisdiction.
- 9.4. If Consultant is licensing, providing or developing software, including derivative works for use by the County, Consultant agrees to protect and indemnify and hold harmless the County, its agents, elected officials and employees of the County from and against any and all claims, demands, actions, and causes of action which may arise asserting that all or any part of the Consultant licensed applications provided under any software owned by Consultant and licensed to County or provided by Consultant for use thereof by the County, infringes or misappropriates any third party's United States patent, copyright or any trade secret protected under United States law.
- 9.4.1. In addition to the foregoing indemnification provision, Consultant shall also take the following steps to assure that County can continually use the software which Consultant has directly licensed to County or provided for use thereof by the County in substantially the same manner delivered or subsequently enhanced or modified by:
 - 9.4.1.1. Promptly replace the allegedly infringing or misappropriated item or items with compatible, functionally equivalent items which are not alleged to be infringing or misappropriated; or
 - 9.4.1.2. Promptly modify the alleged infringing or misappropriated item or items to eliminate the alleged infringement or misappropriation without impairing County's intended use of the licensed applications and/or sublicensed applications in any manner; or
 - 9.4.1.3. Promptly procure the right for the County to continue to use the licensed applications and/or sublicensed applications without modification; and

9.4.1.4. Unless otherwise agreed by the parties, promptly shall mean that the events described herein shall occur in no less than sixty (60) days from the date that notice of the claim is received by Consultant unless otherwise agreed by the Parties.

9.5 In the event that Consultant does not enable the County to use that which Consultant has delivered through accomplishing one or more of the alternatives set forth in above within aforementioned time period set forth herein during the term of this Contract, Consultant shall be in material default of this Contract and subject to Section 6 - Termination.

9.6. If Consultant is granting a license or develops software for the County under this Contract, it hereby warrants and represents that:

9.6.1. Consultant is the sole owner of all right, title, and interest in and to the Consultant licensed software, user manuals and documentation, including all patents, copyrights, copyright rights, trade secrets, trademarks, trade names and all proprietary and intellectual rights and confidential information contained therein, and that it is authorized to enter into this Contract and grant County a perpetual license; and

9.6.2. No portion of any licenses or right granted to the County to use Consultant's software pursuant to the terms of the applicable software license Contract of Consultant for any work performed under this Contract violates or is protected by right, title, interest or similar right of any third person or entity.

9.7 **Indemnification for Grant Funded Projects.** For any agreements that are funded or may in future be funded by Federal Emergency Management Agency (FEMA) Public Assistance grants or other Federal or State grants or program, the following shall apply: Consultant/contractor shall indemnify and hold harmless the Florida Department of Emergency Management, its employees and/or their Consultants (FDEM) and the government of the United States, its employees and/or their Consultants (US), from and against all claims, damages, losses, and expenses, including, but not limited to, attorney's fees to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the Consultant or its subcontractors, agents, employees, or any persons employed or utilized by the Consultant in the performance of the Consultant's obligations or services under this Agreement, unless such injury or damage is occasioned solely by the fault, negligence, or willful misconduct of the FDEM, or US.

9.8 In all claims against FDEM or US, Consultant/contractor's indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or any benefits payable by or for Consultant/contractor, or its employees, agents, Consultants, or Subconsultants/subcontractors.

10. LIMITATION OF LIABILITY.

10.1. **Sovereign Immunity.** The County expressly retains all rights, benefits and immunities of sovereign immunity in accordance with section 768.28, Florida Statutes (as amended). Notwithstanding anything set forth in any section of this Contract to the contrary, nothing in this Contract shall be deemed as a waiver of immunity or limits of liability of the County beyond any statutory limited waiver of immunity or limits of liability which may have been or may be adopted by the Florida Legislature and the cap on the amount and liability of the County for damages, regardless of the number or nature of claims in tort, equity, or contract, shall not exceed the dollar amount set by the legislature for tort. Nothing in this Contract shall inure to the benefit of any third party for the purpose of allowing any claim against the

County, which claim would otherwise be barred under the doctrine of sovereign immunity or by operation of law.

11. COUNTY REPRESENTATIVE.

- 11.1. The Work or Services shall be provided by the Consultant under the direction of the authorized County Representative, except as limited by the County's Purchasing and Contracts Procedures (see www.volusia.org/purchasing), who shall have decision authority subject to the requirements of the County's Purchasing Procedures Manual for all phases of the Work, including general direction, review and approval of the Work or Services.
- 11.2. Neither the County Representative's review, approval or acceptance of, nor payment for any of the services required under this Contract shall be construed to operate as a waiver of any rights under this Contract or of any cause of action arising out of the performance of this Contract, and the Consultant shall be and remain liable to the County for all costs of any kind which were incurred by the County as a result of the Consultant's negligent performance of the services furnished under this Contract.

12. REUSE AND OWNERSHIP OF DOCUMENTS.

- 12.1. Provided that Consultant has been paid by County for all completed Work in the applicable Task Assignment in accordance with the terms of this Contract, the County shall have unlimited rights, for the benefit of the County, in all reports, statistical data, specifications, notes and other Consultant's work produced in the performance of this Contract, including right to copy plans for any purpose including for the use and maintenance of the Deliverable(s) of a Project. If County determines to reuse or adapt plans signed and sealed by Consultant, Consultant shall be entitled to further reasonable compensation at rates agreed upon by County and Consultant prior to executing and commencing any Work in a Task Assignment. Said rates shall be incorporated in the Task Assignment. Further, all documents prepared by Consultant pursuant to this Contract are instruments of service in respect of the Project or Task Assignment. The Consultant shall not be liable for the negligent reuse by the County of said documents.
- 12.2. All deliverables analyses, reference data, survey data, plans and reports or any other form of written instrument or document that may result from the Consultant's Work or Services or that have been created during the course of the Consultant's performance under this Contract shall become property of the County and/or "works made for hire" (as defined under the 1976 Copyright Act (Title 17 of the United States Code) as amended) after final payment is made to the Consultant.

13. EXPERT WITNESS

- 13.1. If requested by the County, the Consultant shall serve as an expert or professional witness for the County in any legal proceedings arising in connection with this Contract. The expert or professional witness fee for Consultant shall be a reasonable rate negotiated at the time the Consultant is called for such a duty.

14. AUDIT RIGHT AND RETENTION OF RECORDS

- 14.1. County shall have the right to audit the books, records, and accounts of Consultant and its Subconsultants that are related to this Contract. Consultant and its Subconsultants shall keep such books, records, and accounts as may be necessary in order to record complete and correct entries related to the Contract. Consultant shall preserve and make available, at reasonable times for examination and audit by County, all financial records, supporting

documents, statistical records, and any other documents pertinent to this Contract for a retention period of five (5) years after completion or termination of this Contract, and any renewals, as required by Item 65, General Records Schedule GS1-SL for State and Local Government Agencies, effective February 19, 2015 and the Florida Public Records Act (Chapter 119, Florida Statutes). Consultant shall, by written Contract, require its Subconsultants to agree to the requirements and obligations of this Section 14.1. Audits will be subject to applicable privacy and confidentiality laws and regulations and Consultant's privacy and confidentiality policies and procedures. All audits must be performed at Consultant's home office in Boca Raton, Florida. Nothing in this section shall require Consultant to violate any laws applicable to Consultant as a provider of stormwater and environmental engineering services.

15. E-VERIFY.

15.1 The Consultant covenants and agrees to the following provisions, as required by law:

- 15.1.1 If and to the extent the Agreement meets the criteria set forth at 48 C.F.R. § 52.222-54(e), the criteria of 48 C.F.R. § 52.222-54 are hereby incorporated by reference into this Agreement as if fully set forth herein.
- 15.1.2 Consultant and any of Consultant's Subconsultants shall register with and utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility and work authorization status of all new employees hired by Consultant (or Consultant's Subconsultants) on or after the effective date of this Agreement and thereafter during the remaining term of the Agreement.
- 15.1.3 In the event Consultant enters into a subcontract, Consultant shall require, via written contract, the Subconsultant agree to: (i) register with and utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired on or after the effective date of the subcontract and thereafter during the remaining term of the subcontract; and (ii) provide Consultant with an affidavit stating that the Subconsultant does not employ, contract with, or subcontract with an unauthorized alien. Consultant shall maintain a copy of such affidavit for the duration of this Agreement or the subcontract, whichever is longer. The Consultant shall provide a copy of such affidavit to the County before the Subconsultant begins any work associated with the Agreement. If the County has a good faith belief that a Subconsultant knowingly violated the requirements set forth in this Section 15 or Sections 448.09(1) or 448.095 of the Florida Statutes, but also has a good faith belief Consultant otherwise complied with this Section 15 and applicable law, the County shall promptly notify Consultant and order Consultant to immediately terminate its contract with the Subconsultant. Failure to comply with said order shall constitute a material breach of this Agreement.
- 15.1.4 If the County has a good faith belief Consultant has knowingly violated, or if Consultant is found to have violated, this Section 15; Section 448.09(1), Florida Statutes; Section 448.095, Florida Statutes; or the presidential Executive order and subsequent Federal Acquisition Regulation (FAR) rule requiring federal Consultants to use E-Verify, if applicable, then the following shall be true: (i) such violation shall be a material breach of this Agreement by Consultant; (ii) Consultant shall indemnify, defend, and hold harmless the County from any resulting costs or expenses, including fines or penalties levied by a government agency and the County's loss or repayment of grant funds; (iii) the County may terminate this Agreement immediately and without penalty and such termination

shall not be or be considered a breach of this Agreement; and (iv) Consultant shall be liable for any additional costs incurred by the County as a result of the termination of the Agreement. Consultant acknowledges and understands that if the County terminates this Agreement in accordance with this Section 15, Consultant shall be ineligible for award of a public contract for at least 1 year after the date on which the Agreement was terminated.

16. INSURANCE REQUIREMENTS. The Consultant shall purchase and maintain at its own expense, during the term of this Contract the types and amounts of insurance with limits no less than those shown on Exhibit "B", in the form and from companies satisfactory to the County. For purposes of Exhibit "B", the term "County" shall be defined as the County of Volusia a body corporate and politic and a subdivision of the state of Florida, including its districts, authorities, separate units of government established by law (constitutional), ordinance or resolution, partners, elected and non-elected officials, employees, agents, volunteers, and any party with whom the County has agreed by contract to provide additional insured status.

17. LOCAL GOVERNMENT POLICIES.

17.1. Public Records Law. Pursuant to section 119.0701(2)(a), Florida Statutes, the County is required to provide Consultant with this statement and establish the following requirements as contractual obligations pursuant to the Agreement:

IF THE CONSULTANT HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONSULTANT'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT 386-736-5935, purchasing@volusia.org, by mail, Purchasing and Contracts Division, Attn: Public Records Custodian, 123 W. Indiana Ave. RM 302 DeLand, FL 32720.

By entering into this Contract, Consultant acknowledges and agrees that any records maintained, generated, received, or kept in connection with, or related to the performance of services provided under, this Contract are public records subject to the public records disclosure requirements of section 119.07(1), Florida Statutes, and Article I, section 24 of the Florida Constitution. Pursuant to section 119.0701, Florida Statutes, any Consultant entering into a contract for services with the County is required to:

- 17.1.1 Keep and maintain public records required by the County to perform the services and work provided pursuant to this Contract.
- 17.1.2 Upon request from the County's custodian of public records, provide the County with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes, or as otherwise provided by law.
- 17.1.3 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 Consultant does not transfer the records to the County.
- 17.1.4 Upon completion of the Contract, transfer, at no cost, to the County all public records in the possession of the Consultant or keep and maintain public records required by the County to perform the service. If the Consultant transfers all public records to the County upon completion of the Contract, the Consultant shall destroy any duplicate public records that are exempt or confidential and exempt

from public records disclosure requirements. If the Consultant keeps and maintains public records upon completion of the Contract, the Consultant shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the County, upon request from the County's custodian of public records, in a format that is compatible with the information technology systems of the County.

17.1.5 Requests to inspect or copy public records relating to the County's Contract for services must be made directly to the County. If Consultant receives any such request, Consultant shall instruct the requestor to contact the County. If the County does not possess the records requested, the County shall immediately notify the Consultant of such request, and the Consultant must provide the records to the County or otherwise allow the records to be inspected or copied within a reasonable time.

17.1.6 Consultant acknowledges that failure to provide the public records to the County within a reasonable time may be subject to penalties under section 119.10, Florida Statutes.

17.1.7 Consultant further agrees not to release any records that are statutorily confidential or otherwise exempt from disclosure without first receiving prior written authorization from the County.

Consultant shall indemnify, defend, and hold the County harmless for and against any and all claims, damage awards, and causes of action arising from the Consultant's failure to comply with the public records disclosure requirements of section 119.07(1), Florida Statutes, or by Consultant's failure to maintain public records that are exempt or confidential and exempt from the public records disclosure requirements, including, but not limited to, any third party claims or awards for attorneys' fees and costs arising therefrom. Consultant authorizes County to seek declaratory, injunctive, or other appropriate relief against Consultant from a Circuit Court in Volusia County on an expedited basis to enforce the requirements of this section.

17.2. **Financial Records.** The Consultant agrees to maintain such financial records and other records as may be prescribed by the County or by applicable federal and state laws, rules, and regulations. The County shall have the right to audit the books, records, and accounts of the Consultant that are directly related to this Contract. The Consultant shall keep such books, records, and accounts as may be necessary in order to record complete and correct entries related to this Contract. The Consultant shall preserve and make available, at reasonable times for examination and audit by the County, all financial records, supporting documents, statistical records, and any other documents pertinent to this Contract for a minimum period of three (3) years after termination of this Contract. If any audit has been initiated and audit findings have not been resolved at the end of the retention period of three (3) years, the books, records, and accounts shall be retained until resolution of the audit findings; provided, however, that it shall be the County's responsibility to notify the Consultant of the pendency of such audit. Any incomplete or incorrect entry in such books, records, and accounts shall be a basis for the County's disallowance and recovery of any payment upon such entry.

17.3. **Payments Subject to Appropriation.** Notwithstanding any other term or provision of this Contract, the continuation of this Contract or Task Assignment beyond a single fiscal year of County is subject to the appropriation and availability of funds in accordance with Chapter 129, Florida Statutes. If at any time funds are not appropriated for the Services and Deliverables provided or to be provided under this Contract or Task Assignment,

cancellation shall be accepted by Consultant with thirty (30) days prior written notice, but failure to give such notice shall be of no effect. Termination by the County due to non-appropriation shall be without a termination charge by Consultant. County shall not be obligated to pay Consultant under this Contract beyond the date of termination except as set forth in Section 6 – Termination. County’s obligation to pay Consultant is limited to the budgeted amount for a fiscal year approved by the Volusia County Council for the then current fiscal year of this Contract and is otherwise limited to legally available non-ad valorem tax revenues. Consultant shall have no right to compel the Volusia County Council to appropriate funds for any fiscal year to pay the compensation set forth in Section 5 – Contract Price and Compensation. The parties agree to review the Project Work plan and remaining Work to be performed in advance of each new fiscal year for the County to compare the funding allocated for the next fiscal year to the cost of the remaining Scope of Work of the Project or Task Assignment, to determine whether or not the allocated funding will be adequate to cover all Work to be completed in the next fiscal year. The cost of the remaining Project shall be the fixed fee/lump sum or price, maximum-not-to-exceed compensation less all amounts paid and less all amounts on pending undisputed invoices. Unless the parties agree that the funding allocated for the next fiscal year is adequate for the next fiscal year’s Work, either party may terminate this Contract in accordance with the provisions of Section 6 – Termination.

- 17.4. **Truth-in-Negotiations.** Consultant’s signature on this Contract or a Task Assignment shall act as execution of a truth-in-negotiation certificate stating that wage rates and other factual unit costs supporting the compensation set forth in this Contract or a Task Assignment are accurate, complete, and current at the time of contract. The certification shall also constitute an affirmation that Consultant has disclosed all debts or fees owed to or that are pending before the County prior to the execution of this Contract or a Task Assignment.
- 17.5. **No Code Violation or Past Due Debt.** The Consultant warrants and represents that neither the business, nor any officer or significant stakeholder of the business is in violation of the County of Volusia Code of Ordinances, and does not owe the County any past due debt. Any breach of the foregoing warranty and representation shall be a material breach of this Contract and the County shall have the right to terminate this Contract as set forth herein.
- 17.6. **Changes Due to Public Welfare.** The County and Consultant agree to enter into good faith negotiations regarding modifications to this Contract which may be required in order to implement changes in the interest of the public welfare or due to change in law or Ordinance.
- 17.7. **Compliance with Applicable Laws.** Consultant shall perform its obligations hereunder in accordance with all applicable federal, state and local laws, ordinances, rules, regulations, and all orders and decrees of bodies or tribunals having jurisdiction or authority which in any manner affect the performance of this Contract. Additionally, Consultant shall obtain and maintain at its own expense all applicable licenses and permits to conduct business pursuant to this Contract from the federal government, State of Florida, County of Volusia or municipalities when legally required and maintain same in full force and effect during the term of this Contract.
- 17.8. **Nondiscrimination and Americans with Disabilities Act.** Contractor shall not unlawfully discriminate against any person in the operations and activities in the use or expenditure of the funds or any portion of the funds provided by this Agreement or in the provision of goods or Services pursuant to this Agreement. Contractor agrees it shall affirmatively comply with all applicable provisions of the Americans with Disabilities Act (ADA) in the course of providing all goods and Services funded or paid for by County, including Titles I, II and III of the ADA (regarding nondiscrimination on the basis of disability), and all applicable regulations, guidelines, and standards. For internet/web Services: For the purposes of this

paragraph, any Services or products offered to public via the internet or online must comply with the requirements set forth in the USDOJ Final Rule pertaining to services, programs, and activities offered by state and local government entities to the public through the web and mobile applications, published at 89 FR 31320, regardless of the effective date of same, in order to be deemed ADA compliant. The County will provide Contractor with prompt written notice with respect to any ADA deficiencies of which the County is aware and Contractor will promptly correct such deficiencies. If the County, the Department of Justice or other governmental entity tasked with the enforcement of the ADA (“Enforcement Agency”) notes any deficiency in the facilities, practices, services, or operations of Contractor furnished or provided in connection with this Agreement, Contractor shall, at no additional charge or cost to the County, immediately cure any such deficiencies without delay to the satisfaction of such Enforcement Agency. Contractor further agrees that it shall, to the extent permitted by law, indemnify and hold harmless the County against any and all claims, sanctions, or penalties assessed against the County, which claims, sanctions, or penalties arise or otherwise to the extent caused by the negligent acts with the Contractor’s failure to comply with the ADA as required by this paragraph. In performing under this Agreement, Contractor agrees that it shall not commit an unfair employment practice in violation of any state or federal law and that it shall not discriminate against any member of the public, employee or applicant for employment for work under this Agreement because of race, color, religion, gender, sexual orientation, age, national origin, political affiliation, or disability and will take affirmative steps to ensure that applicants are employed and employees are treated during employment without regard to race, color, religion, gender, sexual orientation, age, national origin, political affiliation, or disability.

- 17.9. **Drug Free Workplace.** The County of Volusia is a drug-free and smoke-free workplace. Consultant agrees that it shall provide a drug-free environment to its personnel during the term of this Contract and will comply, subject to the prior receipt thereof, with the County’s policies on drug-free and smoke-free work place during the term of this Contract.
- 17.10. **Background Checks.** Consultant and County understand that certain areas of the County’s premises may not be available to Consultant’s personnel without background checks and that such access is not required to perform the services contemplated by this Contract.
- 17.11. **Employment of Illegal Aliens.** Consultant certifies that it does not knowingly or willingly and will not during the performance of the Contract employ illegal alien workers or otherwise violate the provisions of the Federal Immigration Reform and Control Act of 1986, as amended.
- 17.12. **Prohibition Against Contingent Fees.**
- 17.12.1. The Consultant warrants that he or she or it has not employed or retained any company or person, other than a bona fide employee working solely for the Consultant to solicit or secure this Contract and that he or she or it has not paid or agreed to pay any person, company, corporation, individual, or firm, other than a bona fide employee working solely for the Consultant any fee, commission, compensation, percentage, gift, or other consideration contingent upon or resulting from the award or making of this Contract. For the breach or violation of this provision, the County shall have the right to terminate this Contract or Task Assignment without liability and, at its sole discretion, to deduct from the contract price or compensation, or otherwise recover, the full amount of such fee, commission, percentage, gift, or consideration.

- 17.12.2. Consultant understands and acknowledges that any individual, corporation, partnership, firm, or company, other than a bona fide employee working solely for the Consultant, who offers, agrees, or contracts to solicit or secure County contracts for professional services for any other individual, company, corporation, partnership, or firm and to be paid, or is paid, any fee, commission, percentage, gift, or other consideration contingent upon, or resulting from, the award or the making of a contract for professional services shall, upon conviction in a competent court of this State, be found guilty of a first degree misdemeanor, punishable as provided in Sections 775.082 or 775.083 of the Florida Statutes (as amended).
 - 17.12.3. Any Architect, professional Engineer, or registered Surveyor and Mapper, or any group, association, company, corporation, firm, or partnership thereof that is a Consultant under this Contract, who offers to pay, or pays, any fee, commission, percentage, gift, or other consideration contingent upon, or resulting from, the award or making of any agency contract for professional services shall, upon conviction in a state court of competent authority, be found guilty of a first degree misdemeanor, punishable as provided in Sections 775.082 or 775.083 of the Florida Statutes (as amended).
 - 17.12.4. Any County official, agent or employee who offers to solicit or secure, or solicits or secures, a contract for professional services and to be paid, or is paid, any fee, commission, percentage, gift, or other consideration contingent upon the award or making of such a contract for professional services between the County and any individual person, company, firm, partnership, or corporation shall, upon conviction by a court of competent authority, be found guilty of a first degree misdemeanor, punishable as provided in Sections 775.082 or 775.083 of the Florida Statutes (as amended).
- 17.13. **EQUAL OPPORTUNITY; DISADVANTAGED BUSINESS ENTERPRISES:** During the performance of this Contract, the Consultant agrees as follows:
- 17.13.1. The Consultant will not discriminate against any employee or applicant for employment because of race, creed, color, sex or national origin. The Consultant will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, sex or national origin. Such action shall include, but not be limited to the following: employment, up-grading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
 - 17.13.2. Municipal Code section 2-269, County Ordinance No. 90-20, § 9,5-17-90 of the County Council of the County of Volusia, establishing policies and procedures for the Disadvantaged and Women's Business Enterprises program shall be part of this Contract and the Consultant shall endeavor to fulfill the goals and policies of this Resolution as applicable to this Contract.

18. DISPUTE RESOLUTION.

- 18.1. The parties to this Contract shall exercise their best efforts to negotiate and settle promptly any dispute that may arise with respect to this Contract in accordance with the provisions set forth in this Section. The Consultant and County Project Manager shall use reasonable efforts to arrange personal meetings and/or telephone conferences as needed, at mutually convenient times and places, to address and work toward resolution of issues that arise in performance of this Contract or Task Assignment and any applicable Scope of Services.

Issues shall be escalated to successive management levels as indicated in Section 18.3.

- 18.2. If a dispute develops between the parties concerning any provision under this Contract or Task Assignment, or the interpretation thereof, or any conduct by the other party under these Contracts, and the parties are unable to resolve such dispute within ten (10) days, that party, known as the Invoking Party, through its applicable Project Manager, shall promptly bring the disputed matter to the attention of the non-Invoking Party’s Project Manager or designated representative, as the case may be, of the other party in writing (“Dispute Notice”) in order to resolve such dispute.
- 18.3. Upon issuance of a Dispute Notice, the Project Managers or designated representative(s) shall furnish to each other all non-privileged information with respect to the dispute believed by them to be appropriate and germane. The Project Managers or designated representative(s) shall negotiate in an effort to resolve the dispute without the necessity of any formal proceeding. If such dispute is not resolved by the Project Managers or designated representative(s) within ten (10) business days, the Project Managers or designated representative(s) shall escalate the dispute as indicated below.

Business Days	Consultant’s Representative	County Representative
10	Consultant	Project Manager
10	Consultant’s Local Officer	Director of Purchasing and Contracts
20	Consultant’s COO or President	Deputy County Manager

- 18.4. **Formal Dispute Resolution.** At any point after issuance of a Dispute Notice under this Section, either party may initiate formal non-binding mediation before a single mediator, which mediation shall be completed within thirty (30) days of initiation in accordance with the rules of practice and procedure adopted by the Supreme Court of Florida for court-ordered mediation, Rule 1.700 et seq. of the Florida Rules of Civil Procedure, and Chapter 44, Florida Statutes (as amended). If the dispute remains unresolved after conducting such mediation, then either party may proceed to finalize such termination remedies and commence litigation in a court of competent jurisdiction. If litigation is prematurely commenced, it shall be stayed until the mediator makes the required certification. Failure to comply with these dispute resolution procedures as set forth in this Article 18 Dispute Resolution, does not preclude a party from filing a claim or lawsuit in order to (i) preserve any rights or causes of action that may expire or otherwise lapse due to an applicable claims deadline or statute of limitations or repose or (ii) seek emergency or other injunctive relief as appropriate to preclude irreparable harm or damage. This paragraph survives termination, cancelation, or expiration of this Contract.

19. FORCE MAJEURE.

- 19.1. Neither party shall be liable for any failure or delay in the performance of its obligations under the Contract to the extent such failure or delay necessarily results from the occurrence of a Force Majeure Event beyond the control or reasonable anticipation of either party, including, but not limited to, compliance with any unanticipated government law or regulation not otherwise in effect at the time of execution of this Contract, acts of God, acts of domestic or international terrorism, any virus, bacterium, or other microorganism capable of inducing physical distress, illness, or disease, whether due to a pandemic or otherwise, unforeseeable governmental acts or omissions, fires, strikes, natural disasters, wars, riots, transportation problems, and/or any other unforeseeable cause whatsoever beyond the

reasonable control of the parties (and such cause being referred to as a “Force Majeure Event”). Accordingly, the parties further agree that:

- 19.1.1. Upon the occurrence of Force Majeure Event, the non-performing party shall be excused from any further performance of those obligations under this Contract that are affected by the Force Majeure Event for as long as (a) the Force Majeure Event continues; and (b) the non-performing party continues to use commercially reasonable efforts to recommence performance whenever and to whatever extent possible without delay.
- 19.1.2. Upon the occurrence of a Force Majeure Event, the non-performing party shall notify the other party of the occurrence of such event and describe in reasonable detail the effect(s) of such event upon the party’s performance of its obligations and duties pursuant to this Contract. Such notice shall be delivered or otherwise communicated to the other party within three (3) business days following the failure or delay caused by the Force Majeure Event, or as soon as possible after such failure or delay if the Force Majeure Event precludes the non-performing party from providing notice within such time period.
- 19.1.3. In the event of a Force Majeure Event, the time for performance by the parties under the applicable statement of work shall be extended for a period of time equal to the time lost by reason of such cause through execution of a Contract Amendment pursuant to the terms of the Contract.

20. CLAIMS NOTICE.

- 20.1. The Consultant shall timely report in writing to the County’s Director of Risk Management any incident which it believes might result in a claim or claims against the County under any of the coverages mentioned herein.

Name: County of Volusia
Human Resources Division/Risk Management
Address: 125 West New York Avenue, Suite 141
DeLand, Florida 32720
Telephone: (386) 736-5963
Fax: (386) 822-5006

21. SUCCESSORS AND ASSIGNS.

- 21.1. Consultant may not assign or otherwise convey Consultant’s rights and/or obligations under this Contract without obtaining County’s prior written consent, which consent County may withhold, limit and/or condition in County’s sole discretion, including, but not limited to posting a performance bond. Any consent by the County under this Section shall be by written amendment to the Contract in a form and substance specified by the County in its sole discretion. If Consultant desires to assign or otherwise convey its rights and/or obligations under this Contract, Consultant no less than thirty (30) days prior to the assignment’s proposed effective date, provide County with a written request for County’s consent. Failure to provide such notice may result in the County assessing a processing fee of Five Hundred Dollars (US \$500.00).

Failure by the Consultant to obtain the County’s consent in accordance with this Section prior to assignment or other conveyance shall: 1) constitute a material breach of the Contract; and 2) entitle the County to retain any and all legal rights, claims and defense to enforce this Section, including, but not limited to, injunctive, declaratory, damages and

attorney's fees and costs. Payment of any sum by the County in accordance with the Contract to the Consultant or any person or entity prior to the Consultant obtaining the County's consent to the assignment shall not constitute a waiver of the rights of the County under this Section.

Nothing herein shall preclude the right of the County to waive its rights under this Section but no waiver shall be granted by the County without amendment to the Contract.

- 22. ADDITIONAL RIGHTS AND REMEDIES.** The rights and remedies of the County provided for under this Contract are in addition to any other rights and remedies provided by law; the County may assert its right of recovery by any appropriate means including, but not limited to, set-off, suit, with-holding, recoupment, or counterclaim, either during or after performance of this Contract.
- 23. MBE.** This Contract is entered into by the County and Consultant pursuant to the minority business enterprise procurement goals under Section 287.09, F.S. (as amended).
- 24. CONTROLLING LAW.** This Contract or Task Assignment is to be governed by the laws of the State of Florida. Venue for any litigation between the parties to this Contract or Task Assignment shall be in the County of Volusia, Florida and any trial shall be non-jury. Each party agrees to bear its own costs and attorneys' fees relating to any dispute arising under the Contract, unless otherwise stated herein.
- 25. MODIFICATIONS TO CONTRACT.** This Contract or Task Assignment and any exhibits, amendments and schedules may only be amended, supplemented, modified or canceled by a written instrument duly executed by the parties hereto of equal dignity herewith.
- 26. NOTICE.** All notice required under this Contract or Task Assignment shall be in writing and shall be sent by certified United States Mail or national parcel service, postage prepaid, return receipt requested, or by hand-delivery with a written receipt of delivery, addressed to the party for whom it is intended at the place last specified. The place for giving notice shall remain the same as set forth herein until changed in writing in the manner provided in this section. For the present, the parties designate the following:

In the case of County:	with a copies of legal notices to:
County of Volusia Attn: Director of Purchasing and Contracts Address: 123 W. Indiana Ave., Room 302 DeLand, Florida 32720 Phone: (386) 736-5935 Fax: (386) 736-5972	County of Volusia Attn: County Attorney Address: 123 W. Indiana Ave., Room 301 DeLand, Florida 32720 Phone: (386) 736-5950 Fax: (386) 736-5990
In the case of Consultant:	with a copy of legal notices to:
Geosyntec Consultants, Inc. Attn: Mark Ellard, Vice President Address: 3504 Lake Lynda Drive, Suite 155 Orlando, FL 32817 Phone: 407-321-7030 E-mail: mellard@geosyntec.com	Geosyntec Consultants, Inc. Attn: Mark Ellard, Vice President Address: 3504 Lake Lynda Drive, Suite 155 Orlando, FL 32817 Phone: 407-321-7030 E-mail: mellard@geosyntec.com

27. COUNTY DATA.

- 27.1 Consultant agrees and understands that all files and other information and data created in connection with the administration of this Contract constitute a public record, except to the extent it is exempt or proprietary under Florida Law (Chapter 119, Florida Statutes)

from disclosure or as preempted by federal law. Consultant agrees to maintain for public record access such files and to maintain for public access such files after termination of this Contract to the extent required by the laws of the State of Florida.

27.2 Upon any termination or expiration of this Contract, Consultant, upon County's written request, shall promptly deliver, but not more than thirty (30) days after County's request, to County an extract of County's data hosted in the System in XML format or such other format as mutually agreed upon by County and Consultant.

27.3 THE ABOVE DUTIES AND OBLIGATIONS SHALL SURVIVE THE CANCELLATION OR TERMINATION OF THIS CONTRACT.

27.4 Location of County Data. Consultant shall not out-source any development and/or support for this Contract or transfer any County Data outside the territorial limits of the United States of America, without the written approval of the County.

28. CONFLICTS. Neither Consultant nor its employees shall have or hold any continuing or frequently recurring employment or contractual relationship that is substantially antagonistic or incompatible with Consultant's loyal and conscientious exercise of judgment related to its performance under this Contract. Consultant further agrees that none of its officers or employees shall, during the term of this Agreement, serve as an expert witness against County in any legal or administrative proceeding in which he, she, or Consultant is not a party, unless compelled by court process. Further, Consultant agrees that such persons shall not give sworn testimony or issue a report or writing, as an expression of his or her expert opinion, which is adverse or prejudicial to the interests of County in connection with any such pending or threatened legal or administrative proceeding unless compelled by court process. The limitations of this section shall not preclude Consultant or any persons in any way from representing themselves, including giving expert testimony in support thereof, in any action or in any administrative or legal proceeding. In the event Consultant is permitted pursuant to this Contract to utilize Subconsultants to perform any Services required by this Contract, Consultant agrees to require such Subconsultants, by written Contract, to comply with the provisions of this section to the same extent as Consultant.

29. REFERENCES TO COUNTY OR CONSULTANT. Consultant agrees that during the term of this Contract, except as provided herein, Consultant may not reference County in Consultant's website, and/or press releases, and, may not place County's name and logo on Consultant's Web site or in collateral marketing materials relating to Consultant's products and Services without prior review and written approval by County. Further, Consultant agrees that it may not use County's name, logo or any trademarks (including in any press releases, customer "case studies," and the like) without County's prior written consent. Termination or expiration of this Contract shall not affect Consultant's obligation in this regard and such obligation shall survive the termination or cancellation of this Contract.

30. BANKRUPTCY RIGHTS AND COUNTY. All rights and licenses granted under or pursuant to this Contract or any attachments hereto by Consultant to County are, and shall otherwise be deemed to be, for purposes of Section 365 (n) of the United States Bankruptcy Code (the "Code"), or replacement provision therefore, licenses to rights to "intellectual property" as defined in the Code. The parties agree that County, as licensee of such rights under this Contract, shall retain and may fully exercise all of its rights and elections under the Code. The parties further agree that, in the event of the commencement of a bankruptcy proceeding by or against Consultant under the Code, County shall be entitled to retain all of its rights under this Contract.

31. WAIVER OF BREACH AND MATERIALITY. Failure to enforce any provision of this Contract shall not be deemed a waiver of such provision or modification of this Contract. A waiver of any breach

of a provision of this Contract shall not be deemed a waiver of any subsequent breach and shall not be construed to be a modification of the terms of this Contract.

32. **SEVERANCE.** In the event this Contract or a portion of this Contract is found by a court of competent jurisdiction to be invalid, the remaining provisions shall continue to be effective to the extent practicable unless County or Consultant elects to terminate this Contract.
33. **ENTIRE CONTRACT.** This Contract contains the entire contract between Consultant and County. Any modifications to this Contract shall not be binding unless in writing and signed by both parties.
34. **APPLICABLE LAW, VENUE AND WAIVER OF JURY TRIAL.** This Contract shall be interpreted and construed in accordance with and governed by the laws of the state of Florida. Jurisdiction over and venue for any controversies or legal issues arising out of this Contract shall be exclusively in the state courts of the Judicial Circuit of County of Volusia, Florida, unless one or more causes of action are solely cognizable in federal court, in which case, venue for and jurisdiction over such dispute(s) shall be in the Middle District of Florida, Orlando Division. By entering into this Contract, Consultant and County hereby expressly waive any rights either party may have to a trial by jury of any civil litigation related to this Contract, and, unless otherwise expressly provided herein, each agrees to bear its own costs and attorney's fees relating to any dispute arising under this Contract.
35. **PRIOR CONTRACTS.** This document represents the final and complete understanding of the Parties and incorporates or supersedes all prior negotiations, correspondence, conversations, agreements, and understandings applicable to the matters contained herein. The Parties agree that there is no commitment, agreement, or understanding concerning the subject matter of this Contract that is not contained in this written document. Accordingly, the Parties agree that no deviation from the terms hereof shall be predicated upon any prior representation or agreement, whether oral or written.
36. This Contract or Task Assignment, together with any exhibits, schedules, attachments and amendments thereto constitute the entire Contract between County and Consultant and supersede all prior written or oral understandings.
37. **Scrutinized Companies-FL Statute Section 287.135 and 215.473.** Consultant must certify that the company is not participating in a boycott of Israel. For Contracts for goods or services of one million dollars or more, Consultant must also certify that Consultant is not on the Scrutinized Companies that Boycott Israel List, not on the Scrutinized Companies with Activities in Sudan List, and not on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or has not been engaged in business operations in Cuba or Syria. Subject to limited exceptions provided in state law. The County will not contract for the provision of goods or services with (i) any company participating in a boycott of Israel, and, (ii) for Contracts for goods or services of one million dollars or more, any other scrutinized company as described above. Consultant must have submitted the certification form with their response to County Solicitation 24-SQ-101KW. Submitting a false certification shall be deemed a material breach of contract. The County shall provide notice, in writing, to the Consultant of the County's determination concerning the false certification. The Consultant shall have five (5) Calendar days from receipt of notice to refute the false certification allegation. If such false certification is discovered during the active contract term, the Consultant shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination of false certification was made in error. If the Consultant does not demonstrate that the County's determination of false certification was made in error then the County shall have the right to terminate the Contract and seek civil remedies pursuant to Section 287.135, Florida Statutes, as amended from time to time.

IN WITNESS WHEREOF, the parties have made and executed this Contract for Professional Stormwater and Environmental Engineering Services, the day and year below written.

Vendor acknowledges that Mark Ellard, Vice President (the "Authorized Signatory") is authorized to execute contracts/agreements with the County of Volusia and any affixed electronic or conformed signature of the Authorized Signatory shall be the act of and attributable to the Authorized Signatory. By signing this Agreement electronically, the Authorized Signatory does thereby adopt the electronic or conformed signature as his or her own and designates a copy of same for use as an official record by the County of Volusia.

Attest:
Signed by:
George Recktenwald
2265F8E1E09043E...
George Recktenwald
County Manager
Date: 8/23/2024 | 21:38:40 EDT

COUNTY OF VOLUSIA
Signed by:
Jeffrey S. Brower
FF54388B81C439...
Jeffrey S. Brower
County Chair
Date: 8/23/2024 | 13:47:24 EDT

Attest:
Signed by:
Cathy Foerster
E29EEE2DCA734A8...
Signature
Cathy Foerster
Print Name
Senior Planner
Title
Date: 7/24/2024 | 09:52:13 EDT

GEOSYNTEC CONSULTANTS, INC.
Signed by:
Mark Ellard
9AAD963B672B492...
Signature
Mark Ellard
Print Name
Senior Principal
Title
Date: 7/24/2024 | 08:56:08 EDT

Approved 08/20/2024 ^{DS}
KW

- Exhibit "A" – Scope of Services/Solicitation
- Exhibit "B" – Insurance Requirements
- Exhibit "C" – Geosyntec Proposal

EXHIBIT A

Scope of Work

The County of Volusia is seeking the services of professional consultants to provide general stormwater and environmental engineering assistance to support the Stormwater Management Program. The scope of services shall consist of, but not be limited to, the following needs:

- National Pollutant Discharge Elimination System (NPDES) program assistance and implementation,
- Total Maximum Daily Load (TMDL) program assistance and implementation including, but not limited to, the evaluation and establishment of estuarine TMDLS and Numeric Nutrient Criteria (NNC), developing ecosystem goals and targets based on the requirements of the environmental and biological indicators, hydrodynamic modeling, water quality statistical analysis, natural systems analysis, and habitat analysis,
- Watershed management planning including, but not limited to, initial hydrologic and hydraulic modeling of the sixteen (16) watersheds in Volusia County, as well as pollutant loading modeling and updates to existing Stormwater Management Master Plans of the watersheds,
- Engineering analysis and design and permitting of capital improvement projects, including coordination with permitting agencies having jurisdictional oversight, and
- Other stormwater/environmental needs that may arise.

Exhibit B Insurance Requirements

Required Types and Limits of Insurance Chart

Figure 1:

TYPE OF INSURANCE		
WORKERS COMPENSATION <input checked="" type="checkbox"/> Waiver of Subrogation in favor of County	Florida Statutory Coverage	
COMMERCIAL GENERAL LIABILITY <input checked="" type="checkbox"/> Occurrence Basis <input checked="" type="checkbox"/> Contractual Liability <input checked="" type="checkbox"/> Waiver of Subrogation in favor of County <input checked="" type="checkbox"/> County Additional Insured	EACH OCCURRENCE	\$ 1,000,000
	GENERAL AGGREGATE	\$ 2,000,000
	Premises-Operations	\$ 1,000,000
	Products & Completed Ops	\$ 1,000,000
	Personal & Adv Inj.	\$ 1,000,000
AUTOLIABILITY <input checked="" type="checkbox"/> Any Auto	Combined Single Limit	\$ 300,000
	Bodily Injury (Per person)	\$
	Bodily Injury (Per accident)	\$
	Property Damage (Per Accident)	\$
Note: If contractor does not have Coverage Symbol 7, Any Auto, contractor is limited to use of covered autos only.		
PROFESSIONAL LIABILITY	\$ 1,000,000 per Claim \$ 1,000,000 Aggregate	
CANCELLATION: Thirty (30) days written notice of cancellation is required to the Certificate Holder:		
Certificate Holder: County of Volusia Purchasing & Contracts Division 123 W. Indiana Avenue, Room 302 DeLand, FL 32720 ATTN: <u>Kathy Williams</u>	Risk Management Division _____	

The Consultant shall purchase and maintain at its own expense, during the term of the Contract, the types and amounts of insurance with limits no less than those shown in *Figure 1*, in the form and from companies satisfactory to the County. *Figure 1* is a listing and general summary of insurance policies required and is not intended to be comprehensive as to the requirements of each specific policy. Contractors shall review the additional requirements in this section and ensure that the insurance policies comply with the specific terms and conditions therein.

For the purposes of indemnification of the County or an endorsement or insurance coverage under this Contract under which the County is a “named insured”, “additional named insured”, or “additional insured”, the term “County” includes the County of Volusia (a body corporate and politic and a subdivision of the State of Florida), including its districts, authorities, separate units of government established by law, ordinance or resolution, partners, elected and non-elected officials, employees, agents, volunteers, and any party with whom the County has agreed by contract to provide additional insured status.

Regardless of anything submitted as proof of insurance, Contractor shall comply with all requirements as stated in Contract documents.

1. Subconsultants and Independent Contractors

All subconsultants & independent contractors utilized by Consultant to provide services to County and its employees under this Contract shall be required to maintain all insurance policies with the same terms, conditions, and requirements required of the Consultant in *Figure 1* and described in this Exhibit B.

2. Claims Made Basis Insurance Policies

All insurance policies written on a Claims Made Form shall maintain a retroactive date prior to or equal to the effective date of the Contract. The Consultant shall purchase a Supplemental Extended Reporting Period (“SERP”) with a minimum reporting period of not less than three (3) years in the event the policy is canceled, not renewed, switched to occurrence form, or any other event which requires the purchase of a SERP to cover a gap in insurance for claims which may arise under or related to the Contract. The Consultant’s purchase of the SERP shall not relieve the Consultant of the obligation to provide replacement coverage. In addition, the Consultant shall require the carrier immediately inform the Consultant, the County Risk Manager, and the Purchasing and Contracts Division of any contractual obligations that may alter its professional liability coverage under the Contract.

3. Risk Retention Groups and Pools

Consultant shall not obtain an insurance policy required under this Contract from a Risk Retention Group or Pool.

4. Minimum Required Policies and Limits

Minimum underlying policies, coverages, and limits shall include all policies listed in *Figure 1*.

5. Additional Insured, Policies, Coverages, Limits, Primary and Non-Contributory Basis

Under all insurance policies where the County is required to be an additional insured, the coverage and limits provided to the County under Consultant's insurance policies shall be that listed in *Figure 1* or the Consultant's actual limits, whichever is higher. All coverage provided to the County as an additional insured by said policies shall be primary and shall not be additional to or contributing with any other insurance carried by or for the benefit of the County with any other insurance available to the County. The Consultant shall utilize ISO Form CG 20 38 and CG 20 37 or their equivalents to provide additional insured status to the County and any party to whom the County is contractually bound to provide additional insured status under a commercial general liability policy.

6. Workers' Compensation

Workers' Compensation insurance is required for all employees of the Consultant, employed or hired to perform or provide work or services under the Contract or that is in any way connected with work or services performed under the Contract, without exclusion for any class of employee, and shall comply fully with the Florida Workers' Compensation Law (Chapter 440, Florida Statutes, Workers' Compensation Insurance) and include Employers' Liability Insurance with limits no less than the statutory amount. Policy shall be endorsed with NCCI form WC 00 03 13 providing a waiver of subrogation in favor of the County. If Consultant is using a "leased employee" or an employee obtained through a Professional Employer Organization ("PEO"), Consultant is required to have such employees covered by workers' compensation insurance in accordance with Florida Workers' Compensation law. The PEO shall endorse its workers' compensation policy with NCCI form WC 00 03 13 providing a waiver of subrogation in favor of the County, its employees and insurers.

(1) Consultant and its Subconsultants, or any associated or subsidiary company doing work on County property or under the Contract must be named in the Workers' Compensation coverage or provide proof of their own Workers' Compensation coverage, without exclusion of any class of employee, and

with a minimum of the statutory limits per occurrence for Employer's liability coverage. Further, if the Consultant's Subconsultants fail to obtain Workers' Compensation insurance and a claim is made against the County by the uncovered employee of said Subconsultant of the Consultant, the Consultant shall indemnify, defend, and hold harmless the County from all claims for all costs including attorney's fees and costs arising under said employee(s) Workers' Compensation insurance claim(s).

7. Commercial General Liability Insurance

The Consultant shall obtain and maintain Commercial General Liability insurance, with limits of not less than the amounts shown in *Figure 1*. Consultant shall not obtain an insurance policy wherein the policy limits are reduced by defense and claim expenses. Such insurance shall be issued on an occurrence basis and include coverage for the Consultant's operations, independent Consultants, Subconsultants protecting itself, its employees, agents, Consultants or subsidiaries, and their employees or agents for claims for damages caused by bodily injury, property damage, or personal or advertising injury, and products liability/completed operations including what is commonly known as coverages A and B. Such policies shall include coverage for claims by any person as a result of actions directly or indirectly related to the employment of such person or entity by the Consultant or by any of its Subconsultants arising from work or services performed under the Contract. Policy shall include either contractual insurance or a designated contract contractual liability coverage endorsement, indicating expressly the Consultant's Contract to indemnify, defend and hold harmless the County as provided in the Contract. The commercial general liability policy shall provide coverage to County when it is required to be named as an additional insured either by endorsement or pursuant to a blanket additional insured endorsement, for those sources of liability which would be covered by the latest edition of the standard Commercial General Liability Coverage Form (ISO Form CG 00 01), as filed for use in the State of Florida by the Insurance Services Office, without the attachment of any endorsements excluding or limiting coverage for Bodily Injury, Property Damage, Products/Completed Operations, Independent Consultants, Property of County in Consultant's Care, Custody or Control or Property of County on which contracted operations are being performed, Explosion, Collapse or Underground hazards (XCU Coverage, Contractual Liability or Separation of Insureds).

For construction related projects County shall be added as additional insured to Consultant's policy by both ISO Endorsements CG 20 38 (Premises & Operations) and CG 20 37 (Products & Completed Operations) or their equivalents. If County has agreed by separate contract to require Consultant to name another party as an additional insured, Consultant shall add said party as an additional insured

to the commercial general liability policy by ISO Endorsement CG 20 38 and CG 20 37, or their equivalents.

For non-construction projects, Consultant shall add County as additional insured by both ISO Endorsements CG 20 10 (Premises & Operations) and CG 20 37 (Products & Completed Operations) or their equivalent. If County has agreed by separate contract to require Consultant to name another party as an additional insured, Consultant shall add said party as an additional insured to the commercial general liability policy by both ISO Endorsement CG 20 10 and CG 20 37 or their equivalents.

All commercial general liability policies shall be endorsed to provide a waiver of subrogation in favor of the County and any other party required by this Contract to be named as an additional insured.

8. Motor Vehicle Liability

The Consultant shall secure and maintain during the term of the Contract a motor vehicle liability policy with a combined single limit of no less than the amounts shown in *Figure 1* for bodily injury and property damage arising from the ownership, maintenance, or use of a motor vehicle. Policy shall be written with Coverage Symbol 1 (Any Auto), providing coverage for all autos operated regardless of ownership, or with Coverage Symbols 7, 8, & 9 (Scheduled, Hired, & Non-Owned vehicles). The County shall be an additional insured under this policy when required in Figure 1. If Motor Vehicle Liability is by endorsement to another policy required in Figure 1, then the limits for Motor Vehicle Liability shall be separate (they shall not be shared) and in addition to the underlying policy limits. If endorsed to another policy required in Figure 1, Motor Vehicle Policy Limits shall apply on a per occurrence basis and shall not have an aggregate limit.

9. Professional Liability

The Consultant shall ensure that it secures and maintains, during the term of the Contract, Professional Liability insurance with limits of no less than the amount shown in *Figure 1*. Such policy shall cover all the Consultant's or its Subconsultant's professional liabilities whether occasioned by the Consultant or its Subconsultants, or its agents or employees. For Consultants providing Architectural and Engineering related services, policy shall be broad enough to include errors and omissions specific to Consultant's professional liability for direct and contingent design errors and Architect's/Engineers professional liability with no exclusions for design-build work.

If the Consultant fails to secure and maintain the professional liability insurance coverage required herein, the Consultant shall be liable to the County and agrees to indemnify, defend, and hold harmless the County against all claims, actions, losses or damages that would have been covered by such insurance. The County shall be an additional insured under this policy when required in Figure 1.

10. Primary and Excess Coverage

Any insurance required may be provided by primary and excess insurance policies.

11. Insurance Requirements

A. General Insurance Requirements:

(1) All insurance policies shall be issued by insurers licensed and/or duly authorized under Florida Law to do business in the State of Florida and all insuring companies are required to have a minimum rating of A- and a Financial category size of VIII or greater in the "Best Key Rating Guide" published by A.M. Best & Company, Inc.

(2) Approval by County of any policy of insurance shall not relieve Consultant from its responsibility to maintain the insurance coverage required herein for the performance of work or services by the Consultant or its Subconsultants for the entire term of the Contract and for such longer periods of time as may be required under other clauses of the Contract.

(3) Waiver of Subrogation. The Consultant hereby waives all rights against the County and its Subconsultants for damages by reason of any claim, demand, suit or settlement (including workers' compensation) for any claim for injuries or illness of anyone, or perils arising out of the Contract. The Consultant shall require similar waivers from all its Subconsultants. Consultant's insurance policies shall include a waiver of subrogation in favor of the County. This provision applies to all policies of insurance required under the Contract (including Workers' Compensation, and general liability).

(4) County Not Liable for Paying Deductibles. For all insurance required by Consultant, the County shall not be responsible or liable for paying deductibles for any claim arising out of or related to the Consultant's business or any Subconsultant performing work or services on behalf of the Consultant or for the Consultant's benefit under the Contract.

(5) Cancellation Notices. During the term of the Contract, Consultant shall be responsible for promptly advising and providing the County Risk Manager and the Purchasing and Contracts divisions with copies of notices of cancellation or any other changes in the terms and conditions of the original

insurance policies approved by the County under the Contract within two (2) business days of receipt of such notice or change.

(6) Consultant's obligations or services shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity or insurance defense of additional or named insureds which would otherwise exhaust or be unavailable as to a party or person described in this Contract.

12. Proof of Insurance

A. The Consultant shall be required to furnish evidence of all required insurance in the form of certificates of insurance, which shall clearly outline all hazards covered as itemized herein, the amounts of insurance applicable to each hazard and the expiration dates.

B. The Consultant shall furnish proof of insurance acceptable to the County prior to or at the time of execution of the Contract and the Consultant shall not commence work or provide any service until the Consultant has obtained all the insurance required under the Contract and such insurance has been filed with and approved by the County. Upon request from the County, the Consultant shall furnish copies of all required policies and any changes, endorsements, or amendments thereto, immediately, to the County, the County Risk Manager, and Purchasing and Contracts Divisions, prior to, and any time after the commencement of any contractual obligations. The Contract may be terminated by the County, without penalty or expense to County, if at any time during the term of the Contract proof of any insurance or copies of any insurance policies required hereunder are not provided to the County upon request.

C. All certificates of insurance shall clearly indicate that the Consultant has obtained insurance of the type, amount and classification required by this Exhibit. No work or services by Consultant or its Subconsultants shall be commenced until County has approved these policies or certificates of insurance. Further, the Consultant agrees that the County shall make no payments pursuant to the terms of the Contract until all required proof or evidence of insurance has been provided to the County. The Contract may be terminated by the County, without penalty or expense, if proof of any insurance required hereunder is not provided to the County.

D. The Consultant shall file replacement certificates with the County at the time of expiration or termination of the required insurance occurring during the term of the Contract. In the event such insurance lapses, the County expressly reserves the right to renew the insurance policies at the Consultant's expense or terminate the Contract but County has no obligation to renew any policies.

E. The provisions of these sections, Required Types of Insurance; Insurance Requirements; and Proof of Insurance, shall survive the cancellation or termination of the Contract.

EXHIBIT C



County of Volusia
Purchasing and Contracts
Pam Wilsky, Director
123 W. Indiana Ave., DeLand, FL 32720

[GEOSYNTEC CONSULTANTS, INC.] RESPONSE DOCUMENT REPORT

RSQ No. 24-SQ-101KW

Professional Stormwater and Environmental Engineering Services

RESPONSE DEADLINE: May 9, 2024 at 3:01 pm

Report Generated: Tuesday, May 21, 2024

Geosyntec Consultants, Inc. Response

CONTACT INFORMATION

Company:

Geosyntec Consultants, Inc.

Email:

mellard@geosyntec.com

Contact:

Mark Ellard

Address:

3504 Lake Lynda Drive

Suite 155

Orlando, FL 32817

Phone:

(407) 321-7030

Website:

N/A

Submission Date:

May 9, 2024 10:26 AM

[GEOSYNTEC CONSULTANTS, INC.] RESPONSE DOCUMENT REPORT
RSQ No. 24-SQ-101KW
Professional Stormwater and Environmental Engineering Services

ADDENDA CONFIRMATION

Addendum #1
Confirmed May 9, 2024 10:17 AM by Cathy Foerster

QUESTIONNAIRE

1. Termination Language Acceptance *

Pass

By checking yes, the Respondent agrees to the special conditions as contained in the section titled "Termination" of this solicitation.

Yes

2. Sample Contract/Agreement receipt*

Pass

By checking yes, the Respondent acknowledges that the firm has received and reviewed the sample contract/agreement attached.

Yes

3. Compliance with E-Verify Federal Requirements *

Pass

By checking yes, the Respondent agrees to comply with the E-verify requirements as described in the Compliance with E-Verify Federal Requirements herein.

Yes

4. Registration on SAM.gov*

Pass

[GEOSYNTEC CONSULTANTS, INC.] RESPONSE DOCUMENT REPORT
RSQ No. 24-SQ-101KW
Professional Stormwater and Environmental Engineering Services

For any federally funded project, respondent agrees to register on SAM.gov if awarded a contract under this solicitation.

Yes

5. Compliance with FEMA 2 CFR 200.318-326 and Appendix II Contract Provisions*

Pass

By checking yes, the Respondent agrees to comply with the FEMA federal contract provisions as described in section titled: .
Compliance with FEMA 2 CFR 200.318-326 and Appendix II Contract Provisions

Yes

6. Public Records*

Pass

By submitting this proposal or entering into this contract, Contractor/Proposer acknowledges that all documents submitted are public records and agrees that any records maintained, generated, received, or kept in connection with, or related to the performance of services or delivery of products provided under this proposal or contract are public records subject to the public records disclosure requirements of Florida Statutes sec. 119 et seq., and Article I, section 24 of the Florida Constitution.

Yes

7. Content of Solicitation Response *

Pass

By checking yes, the Respondent acknowledges the information provided in the General T's and C's titled Content of Solicitation Response regarding offer submission.

Yes

8. Name and Title of Authorized Agent of the firm (from General Terms and Conditions)*

Pass

[GEOSYNTEC CONSULTANTS, INC.] RESPONSE DOCUMENT REPORT
RSQ No. 24-SQ-101KW
Professional Stormwater and Environmental Engineering Services

Vendor acknowledges that the name and title of the signatory (the "Authorized Signatory"), as completed below, is authorized to execute contracts/agreements with the County of Volusia, and that submitting a bid via the County's eProcurement Portal shall be the act of and attributable to the Authorized Signatory to bind the company. By submitting this Agreement electronically, the Authorized Signatory does thereby adopt the electronic or conformed submittal as authorized firm commitment and for use as an official record by the County of Volusia.

If the below-named individual is not an authorized agent of the firm, as listed with the Florida Division of Corporations (Sunbiz), a Memorandum of Authority shall be uploaded giving that individual authorization to commit the firm to a contract.

Please provide the Complete Name and Title which shall indicate acknowledgment.

Mark Ellard, PE, CFM, BC.WRE, ENV SP, Vice President

9. Do you or any owner(s), principal(s), or officer(s) of your firm currently serve on any Volusia County board(s) or committee(s)?*

Pass

Please indicate response.

No

10. If you indicated YES to Volusia County board/committee question above...

Pass

If you indicated YES to the question above regarding owners, principals, or officers of the firm serving on any Volusia County board(s) or committee(s), please list the individual's full name(s) and the board(s) and/or committee(s) on which they serve.

NA

11. Scope of Services *

Pass

By checking yes, vendor acknowledges the above and/or included Scope of Services and will furnish said services according to the specifications or scope of services detailed within this RSQ if awarded.

[GEOSYNTEC CONSULTANTS, INC.] RESPONSE DOCUMENT REPORT
RSQ No. 24-SQ-101KW
Professional Stormwater and Environmental Engineering Services

Yes

12. REVISIONS | ADDENDA | QUESTIONS & ANSWERS *

Pass

By selecting YES below, participants are confirming that they have reviewed revisions and all answers to questions published and any addenda up until the bid closing date and have given consideration to all information in preparing the response to this solicitation. Selecting YES will serve as confirmation of acknowledgement.

Yes

13. Please provide Proof of Insurance*

Pass

Please provide Proof of Insurance - evidence of required insurance coverage or proof of insurability in the amounts indicated. If available, a properly completed ACORD Form is preferable. Upon award, final forms must contain the correct solicitation and/or project number and Volusia County contact person.

Firms that have owner/operators that have filed a "Notice of Election to be Exempt" shall submit a copy with the response

1_Sample-Certificat_Geosyntec-Consu_24-25.pdf

14. Hold Harmless Agreement.

Pass

Please download the below documents, complete, and upload.

Only upload if applicable in accordance with Florida Law.

- [Volusia Hold Harmless Agree...](#)

5_Volusia_Hold_Harmless_Agreement(492425).pdf

[GEOSYNTEC CONSULTANTS, INC.] RESPONSE DOCUMENT REPORT
RSQ No. 24-SQ-101KW
Professional Stormwater and Environmental Engineering Services

15. Forms

PROPOSAL FORM *

Pass

Please download the below documents, complete, and upload.

- [RSQ Proposal Form\(499041\).pdf](#)

3_RSQ_Proposal_Form(499041).pdf

LETTER OF INTEREST

Pass

Respondents submitting letter of interest from an authorized representative shall provide additional documentation from the corporate officer or principal authorizing the representative to bind the firm to a contract. Joint ventures shall submit a statement of participation by a principal of each member of the joint venture with their proposal.

2_October-2023---Officers-of-Geosyntec-Consultants-Inc.pdf

W9*

Pass

Please attach current W-9 Form.

6_Geosyntec_W9_Executed.pdf

CONFLICT OF INTEREST *

Pass

The award of this solicitation is subject to Chapter 112, Florida Statutes. All respondents must disclose with their response the name of any officer, director, or agent who is also an employee of the County of Volusia. Further, all respondents must disclose the name of any County of Volusia employee who owns, directly or indirectly, an interest of the Respondent's/Supplier's firm or any of its subsidiaries associated with this project. I certify that this proposal is made without prior understanding, agreement or connection

[GEOSYNTEC CONSULTANTS, INC.] RESPONSE DOCUMENT REPORT
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Professional Stormwater and Environmental Engineering Services

with any corporation, firm or person submitting a proposal for the same services, and is in all respects fair and without collusion or fraud.

Respondent shall select 'No' if a conflict of interest as defined in this question does NOT exist. Please select 'Yes' if a conflict of interest as defined in this question DOES exist and shall be further described in the explanation below.

No

ENTER EXPLANATION OF THE CONFLICT OF INTEREST AS INDICATED ABOVE.

Pass

If you answered YES to Conflict of Interest Question please provide your explanation here:

NA

PROHIBITION AGAINST CONTINGENT FEES *

Pass

Please download the below documents, complete, and upload.

Respondent shall properly complete, notarize and upload the attached disclosure statement certifying that he or she has not employed or retained any company or person, other than a bona fide employee working solely for the respondent to solicit or secure this contract and that he or she has not paid or agreed to pay any person, company, corporation, individual, or firm, other than a bona fide employee working solely for the respondent any fee, commission, percentage, gift, or other consideration contingent upon or resulting from award or making of this contract.

- [RSQ Prohibition Against Con...](#)

4_RSQ_Prohibition_Against_Contingent_Fees(499042).pdf

PUBLIC ENTITY CRIME *

[GEOSYNTEC CONSULTANTS, INC.] RESPONSE DOCUMENT REPORT
RSQ No. 24-SQ-101KW
Professional Stormwater and Environmental Engineering Services

Pass

Public Entity Crimes - Pursuant to Section 287.133(12)(a) of the Florida Statutes, 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 Submittal Package (Bid Response) on a contract to provide any goods or services to a public entity, may not submit a bond on a contract with a public entity for the construction or repair of a public building or public work, may not submit Submittal Package (Bid Response) 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 in excess of the threshold amount provided in Section 287.017 for Category Two (\$25,000) for a period of 36 months from the date of being placed on the convicted vendor list. Respondent should read carefully all provisions of 287.133 and 287.134, Florida Statutes (2005).

By selecting 'Yes', the Respondent represents and warrants that the submission of its response/proposal does not violate Section 287.133, Florida Statutes (2005), nor Section 287.134, Florida Statutes (2005) or their successor. In addition to the foregoing, the Respondent represents and warrants that Respondent, Respondent's subcontractors and Respondent's implementer, if any, is not under investigation for violation of such statutes.

Yes

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION *

Pass

By selecting 'Yes', the Respondent certifies to the best of its knowledge and belief, that the firm and any subcontractor/supplier in accordance with a response to this solicitation:

- are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency
- have not within a three-year period preceding this bid proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.

[GEOSYNTEC CONSULTANTS, INC.] RESPONSE DOCUMENT REPORT
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Professional Stormwater and Environmental Engineering Services

- are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in the previous paragraph of this certification.
- have not within a three (3) year period preceding this bid proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

Yes

EXPLANATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

Pass

Enter explanation of the 'No' response to the Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion.

NA

SCRUTINIZED COMPANIES CERTIFICATION *

Pass

Per State of Florida Statute s. 287.135(5) Suppliers (companies) must acknowledge and agree to the 'Certification Regarding Prohibition Against Contracting with Scrutinized Companies' paragraph listed below. Respondents shall agree by marking the option below. Respondents neglecting to respond may be disqualified from consideration of award and deemed non-responsive.

I hereby certify that neither the responding entity, nor any of its wholly owned subsidiaries, majority-owned subsidiaries, parent companies, or affiliates of such entities or business associations, that exists for the purpose of making profit have been placed on the Scrutinized Companies That Boycott Israel List created pursuant to s. 215.4725 of the Florida Statutes, or are engaged in a boycott of Israel.

In addition, if this solicitation is for a contract for goods or services where the total contract value is one million dollars (\$1,000,000) or more, I hereby certify that neither the responding entity, nor any of its wholly owned subsidiaries, majority-owned subsidiaries, parent companies, or affiliates of such entities or business associations, that exists for the purpose of making profit are on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector

[GEOSYNTEC CONSULTANTS, INC.] RESPONSE DOCUMENT REPORT
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List, created pursuant to s. 215.473 of the Florida Statutes, or are engaged in business operations in Cuba or Syria as defined in said statute.

I understand and agree that the County may immediately terminate any contract resulting from this Solicitation upon written notice if the responding entity (or any of those related entities of respondent as defined above by Florida law) are found to have submitted a false certification or any of the following occur with respect to the company or a related entity: (i) it has been placed on the Scrutinized Companies that Boycott Israel List, or is engaged in a boycott of Israel, or (ii) for any contract for goods or services of one million dollars (\$1,000,000) or more, it has been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or it is found to have been engaged in business operations in Cuba or Syria.

By selecting 'Yes', the respondent acknowledges and agrees to the 'Certification Regarding Prohibition Against Contracting with Scrutinized Companies.'

Yes

DRUG-FREE WORKPLACE *

Pass

By selecting "Yes", Respondent hereby acknowledges it has implemented the requirements of Florida statute 287.087 and is in compliance with the requirements of a drug-free workplace program.

Yes

16. Proposal

Proposals shall be clear, concise and submitted per the solicitation requirements. Documents shall be uploaded by the Respondent to the appropriate section.

Failure to provide the required information may result in the proposal not being considered.

[GEOSYNTEC CONSULTANTS, INC.] RESPONSE DOCUMENT REPORT
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QUALIFICATIONS OF THE FIRM AND THE EMPLOYEES THAT WILL BE ASSIGNED TO THE COUNTY*

Pass

Proposers shall upload qualifications of the firm and the employees that will be assigned to the County as requested in the Evaluation Phases Section of this solicitation. This documentation shall include all information requested in Section 7.3, Project Team.

2_Project_Team_Final.pdf

FIRM QUALIFICATION DATA*

Pass

Proposers shall upload submittal letter and all documentation requested in Section 7.2

1_Firm_Qualification_Data_Volusia_Final.pdf

EXPERIENCE*

Pass

Proposers shall upload documentation of experience as requested in the Evaluation Phases Section of this solicitation.

3_Project_Experience_Final.pdf

PROJECT APPROACH*

Pass

Proposers shall upload documentation of their project approach as requested in the Evaluation Phases Section of this solicitation and Section 7.4.

4_Project_Approach_Final.pdf

FINANCIAL STABILITY*

Pass

Respondent shall upload documentation of financial stability as detailed in Section 7.5.

[GEOSYNTEC CONSULTANTS, INC.] RESPONSE DOCUMENT REPORT
RSQ No. 24-SQ-101KW
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5_Financial_Stability_Final.pdf

HOLD HARMLESS AGREEMENT

I, Mark Ellard, PE, Vice President, (*print owner's name*), am the owner of Geosyntec Consultants, Inc. (*print company name*), an incorporated/unincorporated business operating in the State of Florida. As such, I am bound by all laws of the state of Florida, including but not limited to those regarding the workers' compensation law.

I hereby affirm that I or [the above-named business] employs fewer than four employees, all of whom are listed below, including myself, and therefore, the business is exempt from the statutory requirement for workers' compensation insurance for its employees. I certify that I will provide the County of Volusia with the name of each new employee together with all required waivers and releases for each prior to any employee being allowed to work to provide services under the Contract set forth below. If any such employee is allowed to work without a signed waiver and release, such action will be a material breach of this Agreement. All signed waivers and releases shall be furnished before the commencement of any work by an employee or the undersigned to the County Project Manager or designated county representative.

On June 18, 2019, the County of Volusia and I or (*the above-named business*) entered into a Contract for Prof. Stormwater and Environmental Engineering Svcs (*please insert name of Contract*) (hereinafter "Agreement") which is incorporated by reference herein.

On behalf of myself, my business, and the employees listed below, I and they hereby agree to waive and release any and all workers' compensation claims or liens under Chapter 440, Florida Statutes, against the County of Volusia and its agents, officials and employees, arising from any work or services provided under the Agreement whether or not it shall be alleged or determined that the act was caused by intention, or through negligence or omission of the County of Volusia or its agents, officials and employees or subcontractors.

In the event that a workers' compensation claim or lien is made against the County of Volusia and/or its agents, officials or employees by myself or my employees or agents as a result of any work or services performed under the Agreement, I agree to indemnify, keep and hold harmless the County of Volusia, Florida, its agents, officials and employees, against all injuries, deaths, losses, damages, claims, liabilities, judgments, costs and expenses, direct, indirect or consequential (including, but not limited to, fees and charges of attorneys and other professionals) arising out of the Agreement with the County of Volusia, whether or not it shall be alleged or determined that the act was caused by intention or through negligence or omission of the County of Volusia or its employees, agents, or subcontractors. I or the above-named business shall pay all charges of attorneys and all costs and other expenses incurred in connection with the indemnity provided herein, and if any judgment shall be rendered against the County of Volusia in any action indemnified hereby, I or the above-named business shall, at my or its own expense, satisfy and discharge the same. The foregoing is not intended nor should it be construed as, a waiver of sovereign immunity of the COUNTY OF VOLUSIA under Section 768.28, Florida Statutes.

Owner: Mark Ellard (signature) Mark Ellard, PE, Vice President (print name)

Employee 1: _____ (signature) _____ (print name)

Employee 2: _____ (signature) _____ (print name)

Employee 3: _____ (signature) _____ (print name)

STATE OF Florida

COUNTY OF Orange

Sworn to and subscribed before me this 6th day of May, 20 24, by Mark Ellard, who is/are personally known to me or who has/have produced _____ as identification.

Cathleen E. Foerster

NOTARY PUBLIC – STATE OF Florida

Type or print name: Cathleen E. Foerster

Commission No.: HH 317811

Commission Expires: 1-29-27

(Seal)



PROPOSAL FORM

The undersigned hereby declare(s) that [firm name] Geosyntec Consultants, Inc. has carefully examined the specifications to furnish the products and/or services detailed in the technical specifications or scope of work and will furnish said product or services according to the specifications or scope of work detailed within this RSQ.

I hereby certify that I have read and understand the requirements of this Request for Statement of Qualifications and that I, as the proposer, will comply with all requirements, and that I am duly authorized to execute this proposal/offer document and any contract(s) and/or other transactions required by award of this RSQ.

Vendor hereby acknowledges that the submittal has been approved by an authorized signatory with the firm who is authorized to execute contracts/agreements with the County of Volusia. Vendor further agrees that by submitting the proposal electronically, the authorized signatory does thereby accept and acknowledge use as an official record with Volusia County.

Further, as attested to by below signature, I will provide the required insurance, per the *Required Types of Insurance*, upon notification of recommendation of award.

The County reserves the right to negotiate with the award vendor(s) for additional items similar in nature not known at time of closing.

The vendor acknowledges that information provided in this proposal is true and correct:

x 

Signature / Authorized Signatory

Mark Ellard, PE, CFM, BC.WRE, ENV SP

Printed Name

Vice President

May 6, 2024

Title

Date

Geosyntec Consultants, Inc.

Company Name

3504 Lake Lynda Drive, Suite 155, Orlando, FL 32817

Full Address

407-321-7030

407-321-7031

mellard@geosyntec.com

Telephone

Fax

E-mail Address

12-249-2390

59-2355134

Dun & Bradstreet #

Federal I.D. #

Resolution Electing Officers
October 1, 2023

WRITTEN CONSENT OF THE
BOARD OF DIRECTORS OF
GEOSYNTEC CONSULTANTS, INC.

The undersigned, Board of Directors ("Board") of GEOSYNTEC CONSULTANTS, INC., a Florida corporation (the "Company"), did hereby consent in writing, effective as of October 1, 2023, to the following:

Powers and Duties of Officers as Conferred by the Board:

WHEREAS, pursuant to the by-laws, the officers of the Company shall consist of a President, Secretary and other such officers, including a Chairman of the Board and one or more Vice Presidents, which are appointed by the Board;

WHEREAS, each Chairman of the Board, President, Secretary, Assistant Secretary, Treasurer, Executive Vice President, and Vice President shall have the authority to execute contracts and bind the Company;

WHEREAS, on April 21, 2017 the Board adopted a Resolution establishing an additional category of officer referred to as a Practice Officer;

NOW, THEREFORE, BE IT RESOLVED, that until the next election of officers, the Board appoints the officers as follows:

Name of Officer	Position
Melissa Asher	Vice President
Marlaina Auger	Vice President
Matthew Bardol	Vice President
Michael Berman	Vice President
Rudolph Bonaparte	Executive Vice President
Randy Brandt	Vice President
Maygan Cline	Vice President
Greg Corcoran	Executive Vice President & Assistant Secretary
Evan Cox	Executive Vice President
Kirk Craig	Vice President
Mike D'Alessandro	Vice President
Mary DeFlaun	Vice President
Peter de Haven	Vice President
Lucas deMelo	Vice President & Treasurer
Rebecca Daprato	Vice President
Jon Dickinson	Chief Financial Officer & Executive Vice President

Jim Deitsch	Vice President
Jamey Dotson	Vice President
Neal Durant	Vice President
Mark Ellard	Vice President
Scott Forbess	Vice President
Stefanie Fountain	Vice President
Timothy Flynn	Vice President
Cuneyt Gokmen	Vice President
Leslie Griffin	Vice President
Aimee Grossman	Vice President
Mark Hanna	Vice President
Henry Haselton	Vice President
Brian Hitchens	Vice President
Terry Holman	Vice President
Mike Houlihan	Vice President
Ron Johnson	Vice President
Todd Kafka	Vice President
Karen Kosiarek	Executive Vice President
Eric Kovich	Vice President
Michael Lambert	Vice President
Jim Langenbach	Vice President & Assistant Secretary
Daniel Lanier	Vice President
Doug Larson	Executive Vice President & Assistant Secretary
Ray McDirmit	Vice President
Lynn McGuire	Vice President
Leah MacKinnon	Vice President
Michaye McMaster	Vice President
Brent Miller	Vice President
Michael Minch	Vice President
Elaina Modlin	Vice President
Andrew Montgomery	Vice President
Majdi Othman	Executive Vice President & Assistant Secretary
Chriso Petropoulou	Vice President
Brian Petty	Vice President
W. Samuel Phlegar	Vice President
Jennifer Plauché Brown	Executive Vice President & Human Resources Director
Steve Poirier	Vice President
Sean Ragain	Vice President
Thomas Ramsey	Vice President
Jordan Rattray	Executive Vice President, General Counsel & Secretary
Chris Robb	Vice President
Jeff Roberts	Vice President

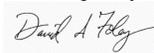
Paul Sabatini	Vice President
Rodolfo Sancio	Vice President
Michael Scrafford	Vice President
Ken Susilo	Vice President
John Van Benschoten	Vice President
Lisa Van Tassel	Vice President
Nandra Weeks	Vice President
Christopher Wessel	Vice President
Peter Zeeb	Chairman of the Board, Chief Executive Officer & President
Gary Bazemore	Practice Officer
Chad Bird	Practice Officer
Dan Dowdy	Practice Officer
Heath Hansell	Practice Officer
Lisa Hall	Practice Officer
Jerko Kocijan	Practice Officer
Amer Hussain	Practice Officer
Austin Orr	Practice Officer
Eric Smalstig	Practice Officer
Derek Morley	Practice Officer
Scott Graves	Practice Officer
Ian Richardson	Practice Officer
Adrienne Nemura	Practice Officer
Jesse Varsho	Practice Officer
John Seymour	Practice Officer
Regan Welch	Practice Officer
Jessica Yeager	Practice Officer

IN WITNESS WHEREOF, the undersigned Directors of the Company have executed this unanimous written consent effective October 1, 2023.

DocuSigned by:

 86D238FD22464A0

Peter Zeeb

DocuSigned by:

 33B8C141C3044D7

David Foley

Form **W-9**
(Rev. October 2018)
Department of the Treasury
Internal Revenue Service

**Request for Taxpayer
Identification Number and Certification**

**Give Form to the
requester. Do not
send to the IRS.**

► Go to www.irs.gov/FormW9 for instructions and the latest information.

Print or type.
See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.
Geosyntec Consultants, Inc.

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only **one** of the following seven boxes.

Individual/sole proprietor or single-member LLC

C Corporation

S Corporation

Partnership

Trust/estate

Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ► _____

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is **not** disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

Other (see instructions) ► _____

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.
900 Broken Sound Parkway NW, Suite 200

6 City, state, and ZIP code
Boca Raton, FL 33487

7 List account number(s) here (optional)

Requester's name and address (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

				-					
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or

Employer identification number

5	9	-	2	3	5	5	1	3	4
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Part II Certification

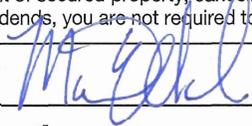
Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here

Signature of U.S. person ►



Date ► **03/08/24**

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.

PROHIBITION AGAINST CONTINGENT FEES:

In accordance with Florida Statute 287.055(6)(a), the following statement, duly signed and notarized, must be included in each proposal:

The firm, Geosyntec Consultants, Inc., warrants that he or she has not employed or retained any company or person, other than a bona fide employee working solely for the respondent to solicit or secure this agreement and that he or she has not paid or agreed to pay any person, company, corporation, individual, or firm, other than a bona fide employee working solely for the respondent any fee, commission, percentage, gift, or other consideration contingent upon or resulting from award or making of this agreement.

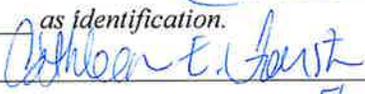
By 
(Signature)

Date May 6, 2024

By Mark Ellard, PE, CFM, BC.WRE, ENV SP, Vice President
Corporate Officer Name & Title

STATE OF Florida
COUNTY OF Orange

Sworn to/affirmed and subscribed before me this 6th day of May, 2024, by Mark Ellard, who is personally known to me or who has produced


as identification.
NOTARY PUBLIC – STATE OF Florida

Type or print name: Cathleen E. Foerster
Commission No.: HH 317811
Commission Expires: 1-29-27

(Seal)





**QUALIFICATIONS FOR RFQ #24-SQ-101KW
 PROF. STORMWATER AND ENV. ENGINEERING SERVICES
 COUNTY OF VOLUSIA, FLORIDA**

PROJECT TEAM

TEAM OVERVIEW

Geosyntec has assembled experts (internal and four subconsultants) with the resources and capacity to provide the services outlined below.

Consultant	Expertise /Services	Overview
<p>Geosyntec (Prime Consultant) 3504 Lake Lynda Drive Suite 155 Orlando, FL 32817</p>	<p>Stormwater (SW) and Environmental Engineering Services</p> <ul style="list-style-type: none"> • SW Conveyance/ Drainage Improvement/ Retrofit Analysis, Engineering, Design, and Permitting • Modeling and Analysis – Hydraulic, Hydrologic, and Hydrodynamic • Floodplain/Watershed Modeling and Analysis • Water Quality/Pollutant Loading Modeling and Analysis • SW Master Plans and Updates • NPDES Program Implementation and Compliance • TMDL/NNC/BMAP Implementation and Compliance • Regulatory Compliance/Permitting • Ecosystem Goals and Targets • SW and Surface Water Sampling and Monitoring • Climate Change/Sea Level Rise (SLR) Evaluations and Mitigation Design • Construction Administration 	<p>Founded in 1983, Geosyntec is a specialized consulting and engineering firm that works with private and public sector clients to address complex problems involving the environment, natural resources, and civil infrastructure. With headquarters in Boca Raton, FL, Geosyntec has a staff of more than 2,400 engineers, scientists, and related technical and project support staff located in more than 100 offices throughout the U.S., including 11 offices in Florida. For this solicitation, services will be provided primarily from the Geosyntec office in Orlando.</p> <p>Geosyntec is a recognized national innovator in water resources engineering, specializing in stormwater, surface water, and groundwater. Our specialties include watershed management, master planning, inventory and assessment of drainage structures and natural systems, evaluation of drainage infrastructure level of service (LOS), floodplain delineation and mapping, surface water resources assessment, water quality best management practice (BMP) design, National Pollutant Discharge Elimination System (NPDES)/total maximum daily load (TMDL)/basin management action plan (BMAP) compliance support, and the development of conceptual improvement strategies and engineering designs, including retrofits to address stormwater management, flooding, water quality, and climate resiliency. We are fully versed in hydrologic and hydraulic modeling of highly urbanized areas and the utilization of geographic information systems (GIS) data management resources.</p> <p>It has been our pleasure to provide stormwater-related services to the County on four projects since 2019 (North Beach Street Grade Raise, Pooser Pond Stormwater Improvements, Spring Hill Green Infrastructure Resiliency Assessment, and Tractor Way Oil Water Separator).</p>



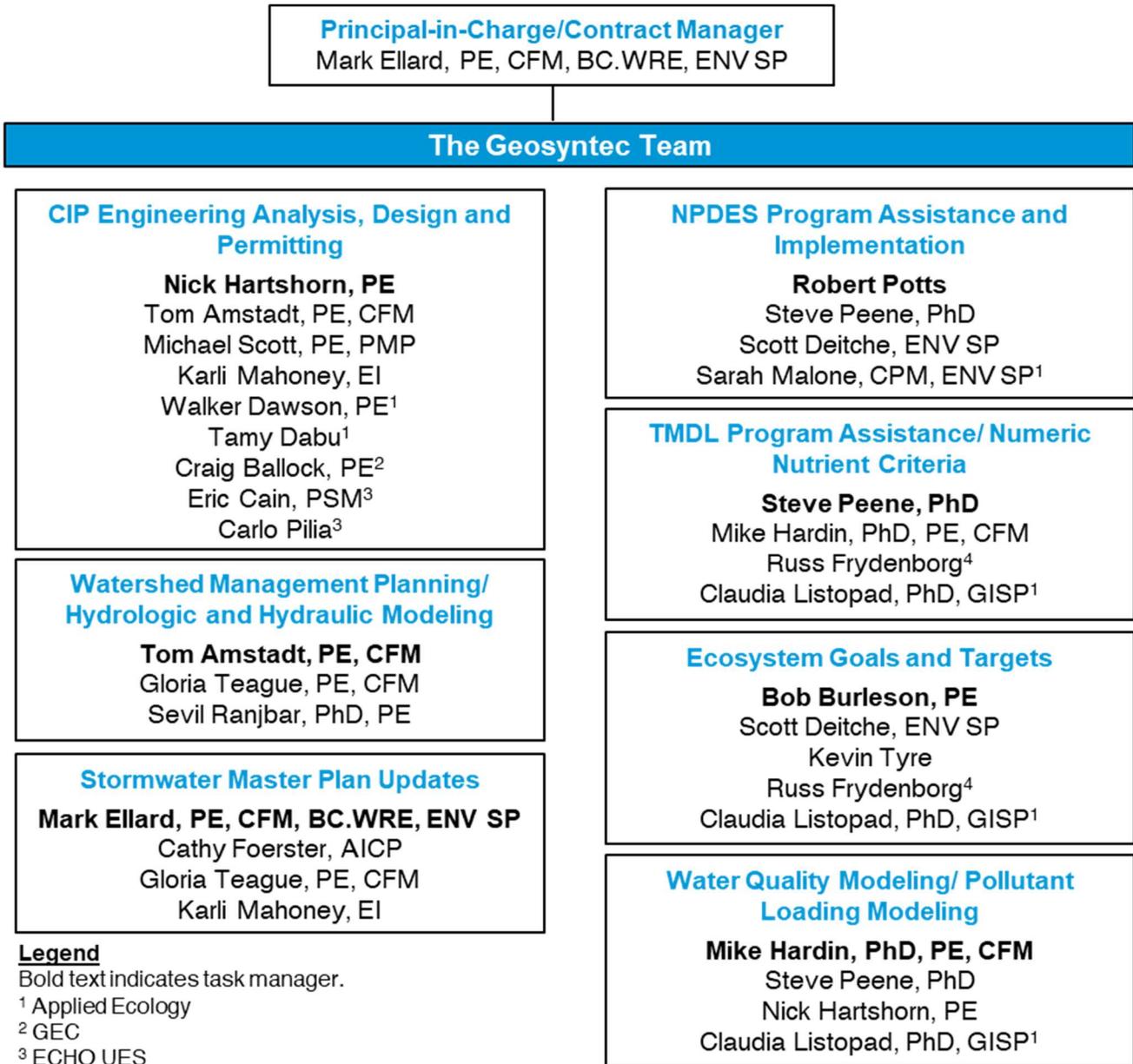
**QUALIFICATIONS FOR RFQ #24-SQ-101KW
 PROF. STORMWATER AND ENV. ENGINEERING SERVICES
 COUNTY OF VOLUSIA, FLORIDA**

Consultant	Expertise /Services	Overview
<p>Geotechnical and Environmental Consultants (GEC) 919 Lake Baldwin Lane Orlando, FL 32814</p>	<ul style="list-style-type: none"> • Geotechnical Testing and Support 	<p>GEC’s core professional services include geotechnical engineering, contamination assessment, ground penetrating radar, and construction materials testing for public works infrastructure and utilities projects. GEC has provided services to Geosyntec on numerous stormwater-related projects in Florida.</p>
<p>Applied Ecology, Inc. (AEI) 2200 Front Street Suite 300 Melbourne, FL 32901</p>	<ul style="list-style-type: none"> • TMDL Implementation • Regulatory Compliance/Permitting • Ecosystem Goals and Targets • Ecological Assessments 	<p>AEI is an 8(a), woman- and minority-owned small business providing specialized experience in environmental program management, environmental monitoring, geospatial analysis, and remote sensing. AEI has collaborated with Geosyntec on more than 20 projects throughout Florida, including support on the Volusa County North Beach Street Grade Raise project.</p>
<p>Frydenborg EcoLogic 5016 Crestwood Court Tallahassee, FL 32311</p>	<ul style="list-style-type: none"> • TMDL Implementation • Numeric Nutrient Criteria (NNC) • Ecosystem Goals and Targets 	<p>Led by Russ Frydenborg who developed the Impaired Waters Rule and NNC while with FDEP, Frydenborg EcoLogic performs a wide range of physical, chemical, and biological measurements in Florida ecosystems. Frydenborg interprets these measurements with univariate and multivariate statistical methods, and other models to establish baseline targets and ecosystem goals. We have collaborated with Frydenborg EcoLogic on eight projects since 2014.</p>
<p>ECHO UES 400 SR 434 Suite 1024 Oviedo, FL 32765</p>	<ul style="list-style-type: none"> • Land Surveying • Subsurface Utility Exploration 	<p>ECHO UES specializes in upland surveying and mapping services (boundary, topographic, as-builts, etc.) and subsurface utility exploration services. Since 2018, ECHO UES has provided surveying and/or subsurface utility location services on more than 30 projects in Orange, Seminole, Pasco, Pinellas, and Volusia counties for Geosyntec.</p>

**QUALIFICATIONS FOR RFQ #24-SQ-101KW
PROF. STORMWATER AND ENV. ENGINEERING SERVICES
COUNTY OF VOLUSIA, FLORIDA**

ORGANIZATIONAL CHART

Our team organizational chart is below, followed by a key personnel matrix that identifies roles, years' experience, tenure with firm, and availability to serve the County. Resumes are provided on subsequent pages.





QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

KEY PERSONNEL MATRIX

Our 22 professionals assigned to provide services on this contract are identified in the preceding organizational chart and in the below matrix. **Our professionals are committed to providing exceptional and timely services for the length of the contract.** Personnel in bold text will serve as task managers under this contract.

No.	Name	Role(s)	Unique Attribute	Highest Degree Earned	Total Years' Exper.	Years with Firm	% Avail.
1	Mark Ellard, PE, CFM, BC.WRE, ENV SP	<ul style="list-style-type: none"> Contract Manager Senior Principal Engineer Stormwater Master Plan Updates 	Completion of more than 300 surface water-related assessments, plans, and/or project designs, including several in and for Volusia County.	MS	34	14	60%
2	Tom Amstadt, PE, CFM	<ul style="list-style-type: none"> Principal Engineer CIPs Watershed Management Planning/H&H Modeling 	H&H modeling expertise, including over 1,000 square miles modeled using ICPR, on more than 30 watershed management plans.	MS	20	13	40%
3	Mike Hardin, PhD, PE, CFM	<ul style="list-style-type: none"> Principal Engineer Water Quality Modeling/Pollutant Loading Modeling TMDLs 	Specialist in green infrastructure BMPs and co-developer of the BMPTRAINS pollutant model.	PhD	18	9	50%
4	Bob Burleson, PE	<ul style="list-style-type: none"> Senior Engineer Ecosystem Goals and Targets 	Expertise in ecosystem goals and targets through more than 30 assessments for the Florida water management districts.	MS	39	26	60%
5	Nick Hartshorn, PE	<ul style="list-style-type: none"> Professional Engineer CIPs Water Quality 	Design and permitting specialist on more than 50 projects, including several in and for Volusia County.	MS	7	7	70%



**QUALIFICATIONS FOR RFQ #24-SQ-101KW
 PROF. STORMWATER AND ENV. ENGINEERING SERVICES
 COUNTY OF VOLUSIA, FLORIDA**

No.	Name	Role(s)	Unique Attribute	Highest Degree Earned	Total Years' Exper.	Years with Firm	% Avail.
6	Steve Peene, PhD	<ul style="list-style-type: none"> Senior Principal Scientist TMDLs/NNC Water Quality 	Completion of more than 100 evaluations of impacts to surface waters, including development of TMDLs and minimum flows and levels (MFLs).	PhD	36	27	40%
7	Robert Potts	<ul style="list-style-type: none"> Principal Scientist NPDES Program Assistance 	Extensive experience with NPDES MS4 permitting and evaluation of non-point and point source pollution.	MBA	19	1	50%
8	Scott Deitche, ENV SP	<ul style="list-style-type: none"> Senior Principal Scientist NPDES Ecosystem Goals and Targets 	Comprehensive experience in water quality regulatory compliance, environmental management, environmental monitoring programs, and estuarine studies.	BS	29	2	50%
9	Cathy Foerster, AICP	<ul style="list-style-type: none"> Senior Land Planner Stormwater Master Plan Updates 	Certified land planner who has served as lead on more than 30 regional planning activities, including five stormwater master plan/updates.	BA	30	6	60%
10	Michael Scott, PE, PMP	<ul style="list-style-type: none"> Senior Engineer CIPs 	Civil engineer specializing in design, permitting and construction administration of infrastructure projects.	MS	16	9	40%
11	Gloria Teague, PE, CFM	<ul style="list-style-type: none"> Senior Engineer Watershed/H&H Modeling Stormwater Master Plan Updates 	H&H modeling specialist who quantifies impacts and forecasts future conditions to propose adaptive management strategies.	MS	12	4	60%



**QUALIFICATIONS FOR RFQ #24-SQ-101KW
 PROF. STORMWATER AND ENV. ENGINEERING SERVICES
 COUNTY OF VOLUSIA, FLORIDA**

No.	Name	Role(s)	Unique Attribute	Highest Degree Earned	Total Years' Exper.	Years with Firm	% Avail.
12	Kevin Tyre	<ul style="list-style-type: none"> • Scientist • Ecosystem Goals and Targets 	Specializes in surface water and microbial source tracking studies to address water quality challenges.	MS	11	1.5	60%
13	Sevil Ranjbar, PhD, PE	<ul style="list-style-type: none"> • Project Engineer • Watershed/H&H Modeling 	H&H modeling and floodplain analysis specialist on more than 10 projects.	PhD	3	3	70%
14	Karli Mahoney, EI	<ul style="list-style-type: none"> • Project Engineer • CIPs • Stormwater Master Plan Updates 	H&H modeling, GIS, and pollutant loading analysis on stormwater retrofit projects.	BS	2	2	70%
15	Craig Ballock, PE (GEC)	<ul style="list-style-type: none"> • Senior Geotech. Engineer • CIPs (Geotech.) 	Performs geotechnical engineering and construction materials testing services on infrastructure-related municipal public works projects.	MS	20	19	35%
16	Claudia Listopad, PhD, GISP (Applied Ecology)	<ul style="list-style-type: none"> • Principal Scientist • Water Quality • TMDLs • Ecosystem Goals and Targets 	Specializes in water quality projects, developing techniques to streamline holistic hydrologic and water quality assessments of complex systems.	PhD	24	15	35%
17	Tamy Dabu (Applied Ecology)	<ul style="list-style-type: none"> • Senior Scientist • CIPs (Permitting) 	Extensive regulatory permitting experience with expertise in wetland determinations, environmental functional assessments, and threatened and endangered species evaluations.	BS	35	2	45%



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 PROF. STORMWATER AND ENV. ENGINEERING SERVICES
 COUNTY OF VOLUSIA, FLORIDA**

No.	Name	Role(s)	Unique Attribute	Highest Degree Earned	Total Years' Exper.	Years with Firm	% Avail.
18	Sarah Malone, CPM, ENV SP (Applied Ecology)	<ul style="list-style-type: none"> • Scientist • NPDES Program Assistance 	Extensive NPDES experience in both wastewater and stormwater including monitoring and reporting and pollutant source tracking,	MS	18	1	45%
19	Walker Dawson, PE (Applied Ecology)	<ul style="list-style-type: none"> • Senior Engineer • CIPs 	18 years of diverse experience in governmental management, water quality, coastal and waterfront engineering.	BS	18	1	55%
20	Russ Frydenborg (Frydenborg EcoLogic)	<ul style="list-style-type: none"> • Principal Scientist • TMDLs/NNC • Ecosystem Goals and Targets 	Led the development of FDEP bioassessment methods, water quality standards, and quality assurance protocols.	BS	45	15	25%
21	Eric Cain, PSM (ECHO UES)	<ul style="list-style-type: none"> • Senior Surveyor • CIPs (Surveying) 	More than 19 years' experience conducting subsurface explorations and upland land surveys.	BS	19	5	35%
22	Carlo Pilia (ECHO UES)	<ul style="list-style-type: none"> • Senior Subsurface Specialist • CIPs (Subsurface) 	A licensed engineer in Arizona, Italy and Ireland, specializes in subsurface exploration.	BS	20	7	35%

QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

MARK ELLARD, PE, CFM, BC.WRE, ENV SP

PRINCIPAL-IN-CHARGE | 34 YEARS EXPERIENCE | 14 YEARS WITH FIRM

Areas of Specialization

- Green Stormwater Infrastructure
- Low Impact Design
- Watershed Management
- Water Quality Assessment & Improvement
- Flood Protection
- Restoration
- Hydrologic & Hydraulic (H&H) Modeling
- Best Management Practices (BMPs)
- Resiliency & Adaptation

Education

- MS, Water Resources Engineering, University of Central Florida, 1995
- BS, Civil Engineering, Georgia Institute of Technology, 1989

Professional Registrations

- Professional Engineer, FL #48073, 1994
- ASFPM Certified Floodplain Manager, #US-09-04415
- AAWRE Board Certified, Water Resources Engineer, #00611
- FDEP Cert. Stormwater Erosion & Sediment Control Inspector, #22318
- ISI – ENVISION Sustainability Professional, #17515

Summary of Experience

Mr. Ellard has provided project management and senior engineering on over 300 water resources-related projects including watershed assessments, basin studies, stormwater retrofits, water quality assessments, BMP design, floodplain mapping, erosion control measures, and stormwater master planning. He provides technical direction and engineering associated with QA/QC of field data collection and inventory, hydrologic and hydraulic modeling, GIS data analysis, CADD production, permitting, public involvement, and construction inspection.

Relevant Project Experience

North Beach Street Grade Raise Resiliency Improvements, Volusia County, FL. To remedy a portion of North Beach Street that is subject to overtopping due to intense rainstorms and increasing high tide events, evaluating, designing and permitting the installation of a new roadway base layer utilizing a water resistant material, an asphaltic concrete surface, and several culvert pipes to provide equalizing between the drainage systems and the Tomoka River. Integral tasks are topographical surveying, geotechnical analysis, and ecological investigation. A feasibility analysis established the design parameters, identified implementation constraints, and confirmed permitting requirements.

Pooser Pond Stormwater Improvements, Volusia County, FL. Completing design, permitting, and construction documents for the installation of a permanent pump station and pipeline that will allow for the lowering of the level in Pooser Pond in advance of significant forecast storm events. Tasks associated with the design include: topographical surveying, geotechnical investigation, ecological investigation, hydrogeological investigation, and hydrologic and hydraulic (H&H) assessment utilizing ICPR computer model to evaluate pumping strategies.

Spring Hill Green Infrastructure Resiliency Assessment, Volusia County, FL. Performed a green stormwater infrastructure assessment of the residential areas within the Spring Hill Community Redevelopment Area (SHCRA) to identify opportunities for the application of green infrastructure. The assessment focused on opportunities that residents can implement as part of a community redevelopment resiliency strategy as well as general green infrastructure recommendations that may benefit the entire SHCRA area to manage stormwater.

Stormwater Master Plan, Ormond Beach, FL. Addressed stormwater management throughout the city to reflect current conditions, regulatory challenges, and impacts from climate change. Developed a clear, comprehensive, and forward-looking (10 years) stormwater master plan. The plan incorporated resilience concepts into all aspects of the design and operations of the stormwater management system to reduce flooding, improve water quality, and provide long-term sustainability of the system and management plan.

Orlo Vista Flood Mitigation, Orange County, FL. Developed watershed model and updated floodplains through Letter of Map Revision (LOMR) process. Evaluated five alternatives to mitigate flooding. The alternatives evaluation included proposed conditions modeling and preliminary design and detailed cost estimates. The selected alternative was designed to provide a 100-year flood LOS. The design included pond vertical expansion, pump station and force main design and associated structural and electrical design elements. Final design included permitting, construction plans, specifications, and cost estimates. Currently providing post-design services including shop drawing review, responses to requests for additional information, and construction oversight.

MARK ELLARD, PE, CFM, BC.WRE, ENV SP
PAGE 2 OF 2

Casselton Drive Improvements, Casselberry, FL. Completed a stormwater and transportation improvements project on a 0.5-mile-long collector road. Designed a "road diet" solution that will narrow Casselton Drive while increasing the open space and promote pedestrian accessibility, sustainability, and livability for the adjacent neighborhoods. Stormwater BMPs were proposed to improve flooding LOS of the road as well as increase water quality benefit. A base flood elevation analysis of the existing road and drainage area was performed since the area is within a FEMA Zone A floodplain.

Lake Harney Basin Watershed Flood Resiliency Plan, Seminole County, FL. Established 100-year floodplains, assessed flood LOS of drainage infrastructure, and evaluated improvement alternatives to address flooding. Tasks included developing an H&H flood model using ICPR version 4 and submitting a Letter of Map Revision for FEMA floodplain update.

Stormwater Infrastructure Criticality Analysis, Pinellas County, FL. Performed a criticality analysis of stormwater infrastructure assets to assess general resiliency and prioritize system maintenance, repair, and upgrades. Custom GIS tools were developed to calculate individual criticality scores for nearly 100,000 stormwater infrastructure assets.

Stormwater Management and Resiliency Master Plan, Cocoa Beach, FL. Developed a clear, comprehensive, forward-looking master plan that encompasses the City's stormwater management program, presents a detailed investigation into key stormwater assets, and provides a foundation for future policy decisions. Flooding, infrastructure, and water quality were assessed through extensive analysis utilizing the EPA SWMM model and compared to level of service criteria specifically developed for the City. Project prioritization was completed to maximize the use of the city's economic and land resources, while providing the maximum benefit to water quality. Developed a comprehensive capital improvement program with administration and maintenance recommendations to provide a cost-of-service basis for the City's future stormwater management program.

Mullet Creek Channel B Erosion Control, Pinellas County, FL. Designed, permitted, and developed construction documents to address erosion and severe bank failures caused by Hurricane Hermine in 2016 along a 1,000-foot section of Mullet Creek Channel B. Included in the design is a vertical wall (gabion baskets) on one side and a sloped bank (to be lined with Flexamat®) along the other side of the creek.

Courthouse Judges Parking and Stormwater Control, Orange County, FL. Retrofitted the judges parking entrance (sallyport entrances) to address drainage issues. Prepared construction bid documents for the drainage retrofit improvements consisting of a proposed StormTrap system and trench drain for each sallyport ramp. StormTrap is a stormwater management device used to store stormwater during large rain events and slowly release the water downstream, alleviating demand on the existing trench drains and storm sewer system.

Howell Creek Water Control Structure Replacement, Seminole County, FL. To replace a deteriorating concrete structure, designed a structure consisting of sheet piles with a concrete cap to form the overflow weir. Performed H&H modeling to ensure replacement structure provided the same hydraulic control of Howell Creek without causing any significant upstream or downstream flooding impacts.

Stormwater Outfall Resiliency Master Plan, St. Augustine, FL. Evaluated City's stormwater outfalls for combined impacts from storm events and future tidal conditions. Inundation maps were prepared, and problem areas examined to develop a priority list of outfalls with the most urgent need for backflow prevention. Developed an outfall master plan to implement measures to protect coastal properties, city infrastructure, historic and cultural resources, and the natural environment from flooding caused by sea level rise.

Shingle Creek Basin Study Stormwater Management Plan, Osceola County, FL. Developing a comprehensive master plan to manage surface water in the Osceola County portion of Shingle Creek, covering an area of 29,000 acres using the GWIS 2.1 geodatabase and ICPR4. This involves conducting a thorough drainage inventory, creek bathymetry, bridge scans and structure survey to inform the model network and parametrization. This also includes floodplain mapping, water quality assessments, and a detailed final report that supports the development of stormwater capital improvements to relieve flooding.

QUALIFICATIONS FOR RFQ #24-SQ-101KW

PROF. STORMWATER AND ENV. ENGINEERING SERVICES

COUNTY OF VOLUSIA, FLORIDA

TOM AMSTADT, PE, CFM

TASK LEAD – WATERSHED/H&H | 20 YEARS EXPERIENCE | 13 YEARS WITH FIRM

Areas of Specialization

- Watershed Management
- Flood Impact Analysis
- Critical Infrastructure Analysis
- Stormwater Management & Design
- Design, Engineering & Permitting
- H&H Modeling
- Construction Administration
- BMPs

Education

- ME, Environmental Engineering Sciences, University of Florida, 2014
- BS, Civil Engineering, University of Central Florida, 2003

Professional Registrations

- Professional Engineer, FL #69032, 2009
- ASFPM Certified Floodplain Manager, #US-09-04404
- FDEP Certified Stormwater Erosion & Sedimentation Control Inspector, #22296

Summary of Experience

Mr. Amstadt has served as project manager on water resources projects for state and local government clients since 2004. His areas of expertise include watershed management plans, stormwater retrofits, stormwater master plans, floodplain analyses, hydrologic and hydraulic modeling, pollutant load analyses, BMP concepts, construction plans, and environmental resource permitting. He has extensive experience using ArcGIS for geoprocessing of spatial data, mapping, and data representation. He has developed numerous stormwater models using ICPR (versions 3 and 4), EPA SWMM (version 5), and HEC-RAS (version 5).

Relevant Project Experience

Orlo Vista Flood Mitigation, Orange County, FL. Developed watershed model and updated floodplains through LOMR process. Evaluated five alternatives to mitigate flooding. The alternatives evaluation included proposed conditions modeling and preliminary design and detailed cost estimates. The selected alternative was designed to provide a 100-year flood level of service. The design included pond vertical expansion, pump station and force main design and associated structural and electrical design elements. Final design included permitting, construction plans, specifications, and cost estimates. Currently providing post-design services including shop drawing review, responses to requests for additional information (RFI), and construction oversight.

Bowlees Creek Flood Mitigation and Resilience, Manatee County, FL. Utilized an existing model of the Bowlees Creek watershed to conduct an alternative analysis to find solutions to lower the water levels in 34 ponds and increase the amount of available flood storage within the watershed. A final report was developed that provides the client with a detailed solution and operation directions to enhance the flood storage availability within the basin and reduce street and structural flooding within the county.

Shingle Creek Basin Study Stormwater Management Plan, Osceola County, FL. Developing a comprehensive master plan to manage surface water in the Osceola County portion of Shingle Creek, covering an area of 29,000 acres using the GWIS 2.1 geodatabase and ICPR4. This involves conducting a thorough drainage inventory, creek bathymetry, bridge scans and structure survey to inform the model network and parametrization. This also includes floodplain mapping, water quality assessments, and a detailed final report that supports the development of stormwater capital improvements to relieve flooding.

Pearce Drain Flood Mitigation and Resilience, Manatee County, FL. Utilized an existing model of the Pearce Drain watershed to conduct an alternative analysis to find solutions to lower the water levels in 35 ponds and increase the amount of available flood storage within the watershed. A final report was developed that provides the client with a detailed solution and operation directions to enhance the flood storage availability within the basin and reduce street and structural flooding within the county.

Highlands County Water Quality and Drainage Study, Highlands County, FL. Developed a detailed model of three subwatersheds within Highlands County to identify flooding and water quality areas of concern and develop BMPs and associated benefit-cost calculations to address these issues.

TOM AMSTADT, PE, CFM**PAGE 2 OF 2**

Stormwater Infrastructure Criticality Analysis, Pinellas County, FL. Performed a criticality analysis of stormwater infrastructure assets to assess general resiliency and prioritize system maintenance, repair, and upgrades. Custom GIS tools were developed to calculate individual criticality scores for nearly 100,000 stormwater infrastructure assets.

Lake Harney Basin Watershed Flood Resiliency Plan, Seminole County, FL. Established 100-year floodplains, assessed flood LOS of drainage infrastructure, and evaluated improvement alternatives to address flooding. Tasks included developing an H&H flood model using ICPR version 4 and submitting a Letter of Map Revision for FEMA floodplain update.

Sebring Watershed Management Plan, Southwest Florida Water Management District, Highlands County, FL. Developed a detailed H&H model to characterize runoff responses throughout the watershed, developed updated floodplain maps, determined FPLOS for basins in the watershed, and developed best management practice alternatives to address flooding problems in the watershed. Tasks included identifying the drainage structures in the watershed and developing data acquisition plan, initial GIS processing using ArcHydro tools, and examining hydrologic characteristics of the watershed and watershed boundary.

Temple Drive Drainage Retrofit, Winter Park, FL. Developed cost-effective and feasible engineering alternatives to provide an acceptable flooding level of service (LOS). Three alternatives, which included combinations of additional inlets, upsizing pipes, and rerouting drainage systems, were evaluated within conceptual conditions ICPR model scenarios. Plan and profile sketches and cost estimates were developed. Other implementation considerations were topographic survey needs, geotechnical needs, maintenance, utility conflicts, land acquisition, wetland/ecological impacts, floodplain impacts, permitting, water quality, and cost.

Howell Branch Road Stormwater Pond Retrofit, Winter Park, FL. Developed alternatives to improve the pollutant removal performance and aesthetics of a stormwater pond on Howell Branch Road. Evaluated existing conditions and improvement alternatives by assessing the pond's contributing area, flood LOS and pollutant removal capability. Designed modifications to the pond control structure. A proposed conditions SWMM 5 model was developed to ensure the pond would continue to provide an adequate flood LOS. Simulations were executed to evaluate the pond volume recovery and peak discharge rates.

Big Sand Lake Outfall Improvement Design, Orange County, FL. To retrofit the existing lake outfall pipe to provide relief for high stages in Big Sand Lake, developed a concept that consisted of lowering the pipe's profile, straightening the alignment, and sizing pipes appropriately. The existing and proposed conditions stages and flows were compared to evaluate potential benefits and downstream impacts from the proposed retrofit. Developed construction plans and drainage report; submitted permit applications to SFWMD, USACE, and Valencia Water Control District while coordinating with FDOT and Osceola County. Modeling of the downstream Shingle Creek watershed was required to demonstrate that the project would not impact peak stages in Shingle Creek.

Sawmill Pond Stormwater Pump Station Evaluation, Orange County, FL. Conducted an assessment of the watershed, including level of service analysis of primary infrastructure, floodplain delineation for future LOMR application, a detailed assessment of pump station performance, and evaluation of the pump station capacity for future land use/build out conditions.

Community Redevelopment Area (CRA) Stormwater Master Plan, Winter Park, FL. Developed cost-effective and feasible engineering alternatives to mitigate flooding associated with Lake Mendsen and Canton Avenue. Water quality retrofit improvements were investigated to reduce nutrient loads discharged from the 9th Grade Center Pond to Lake Virginia. A detailed existing conditions analysis was performed to evaluate other potential flooding and water quality deficiencies within the CRA area.

QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

MIKE HARDIN, PHD, PE, CFM

TASK LEAD – WATER QUALITY | 18 YEARS EXPERIENCE | 9 YEARS WITH FIRM

Areas of Specialization

- Green Stormwater Infrastructure
- Low Impact Design
- BMP Performance Monitoring & Optimization
- Stormwater Management
- Pollutant Loading Analysis
- Surface Water Quality Analysis
- BMP Feasibility & Design
- Construction Oversight
- Lake Benthic Sediment Assessments
- Watershed Management
- H&H Modeling
- Surface & Groundwater Pollution Control
- Erosion & Sediment Control

Education

- PhD, Environmental Engineering, University of Central Florida, 2014
- MS, Environmental Engineering, University of Central Florida, 2006
- BS, Environmental Engineering, University of Central Florida, 2005

Professional Registrations

- Professional Engineer, FL #74749, 2012
- ASFPM Certified Floodplain Manager, #US-15-08372
- FDEP Qualified Stormwater Management Inspector, #47172

Summary of Experience

Dr. Hardin performs watershed assessments, H&H modeling, stormwater quality enhancement designs, stormwater sampling (grab and flow-weighted sampling), BMP/GSI/LID feasibility evaluations and design; optimization of non-structural BMPs for water quality improvement, GIS data analysis, evaluating BMP practices, microbial source tracking studies, surface water hydrologic and nutrient budget studies, water quality master plans, and water quality modeling.

Relevant Project Experience

Spring Hill Green Infrastructure Resiliency Assessment, Volusia County, FL.

Performed a green stormwater infrastructure assessment of the residential areas within the Spring Hill Community Redevelopment Area (SHCRA) to identify opportunities for the application of green infrastructure. The assessment focused on opportunities that residents can implement as part of a community redevelopment resiliency strategy as well as general green infrastructure recommendations that may benefit the entire SHCRA area to manage stormwater.

Flounder Creek and Johns Road Pond Retrofits, Brevard County, FL.

Prepared stormwater pond enhancement designs to minimize the nutrients that enter the Indian River Lagoon via stormwater and baseflow. For each retrofit, an existing-conditions H&H model was run to quantify the existing conditions hydraulic loading using ICPR4. The pond water quality enhancement is an innovative media upflow reactor that will take water from the existing pond and treat it for TN and TP prior to discharge. The BMPTRAINS Model was utilized to evaluate the pre- and post-conditions nutrient loading.

Burris Way Green Infrastructure Improvement Design, Cocoa Beach, FL.

Evaluated and designed a rain garden to capture runoff in the parking lot to the south of Burris Way and replace the alley asphalt with permeable pavers. Biosorption activated media enhancements were included to provide additional nutrient removal for water discharging into the river. Developed a detailed ICPR model to demonstrate no change in the provided level of service due to the proposed improvements. Developed a BMPTRAINS water quality model to evaluate the expected water quality benefit. Completed permitting, bidding phase management services, grant administration, and limited construction oversight.

Priority Basin 1329, Brevard County, FL.

This basin contributes significant nutrient loading via stormwater and baseflow to the Indian River Lagoon. A phase 1 evaluation determined the extent of the contributing area and location for a proposed BMP. The BMP was designed to remove TN and TP from stormwater and baseflow. Design plans were prepared, an engineer's estimate of probable construction costs was determined, appropriate permits were acquired, post-design services were performed, and limited construction oversight services were conducted.

Wekiva Watershed BMP Evaluation, Orange County FL.

Performed a watershed-wide water quality analysis to identify areas of elevated nutrient loading to the groundwater. Ran the SIMPLE Seasonal model and performed a pollutant loading "hot spot" analysis. Water quality improvement project opportunities were identified, and BMP concepts were developed. The top 10 BMP concepts were further developed including initial sketches, pollutant removal potential, and probable cost to implement the BMP.

MIKE HARDIN, PHD, PE, CFM**PAGE 2 OF 2**

Lake Butler Subbasin 10 BMP Evaluation, Orange County, FL. Evaluated a water quality improvement concept to help reduce the phosphorus loading to Lake Butler that involved adding a weir to the downstream side of an existing wetland system, thus increasing the residence time of the water in the wetland area. A detailed H&H model using ICPR v4 was developed to evaluate the existing and proposed conditions flood impacts as well as perform a pollutant loading analysis.

Lake Orlando Total Maximum Daily Load (TMDL) Review, Orlando, FL. Performed a peer review to determine if the TMDL provides reasonable and fair nutrient loading allocations to the City of Orlando. Reviewed the TMDL report and two computer models used by FDEP to develop the nutrient loadings and associated allocations. The computer models included the Pollutant Loading Screening Model (PLSM), which is used to assess pollutant loads from the contributing Lake Orlando watershed, as well as the BATHTUB model, which is used to assess eutrophication of lake systems. Identified several issues with the assumptions and data used by FDEP. These included incorrect contributing area delineation, inaccurate baseflow loading contributions, overestimation of TN and TP loading due to stormwater, and overestimation of TN and TP reduction requirements based on the BATHTUB modeling.

Parker Road Water Quality Improvement Project, Alachua County, FL. Developed improvement concept to expand an existing ditch to create a small retention area with a biosorption activated media (BAM) filter layer to provide treatment of water as it infiltrated into the ground. Developed a detailed ICPR v4 H&H model to demonstrate no change in the provided level of service due to the proposed improvements and developed a BMPTRAINS water quality model to evaluate the expected water quality benefit. Design plans were developed using AutoCAD Civil 3-D. Conducted pre-application meeting with SRWMD.

High Springs Library Water Quality and Drainage Improvement Feasibility Study and Design, Alachua County, FL. Performed a desktop analysis to evaluate the incorporation of previously suggested green stormwater infrastructure (GSI) in the library parking lot and retention pond for flood and water quality improvement. Drainage improvements were also examined to reduce nuisance flooding in the parking lot and promote drainage to the enhanced basin. Currently preparing full design plans and providing permitting support for the recommended GSI improvement that includes retention pond BAM enhancement, bioswale, and correcting deficient grading in the parking lot to better facilitate drainage to the pond and reduce nuisance flooding.

LID Manual, Orange County, FL. Developed manual that provides guidance and design information on the application of LID practices as a supplement to more traditional methods of stormwater management. Included in the manual are seven LID structural technologies: pervious pavements, bioretention, rain gardens, planter boxes, tree box filters, curb cuts, inverted medians, and stormwater harvesting.

Trout Street Green Stormwater Infrastructure (GSI) Feasibility and Design, Alachua County, FL. Performed a feasibility evaluation of GSI opportunities, including installing rain gardens in road rights-of-way, pervious pavements, and inlet baskets. The results of this evaluation were presented to the local community with County staff. Currently designing two concepts for construction. Permitting with SRWMD is ongoing.

Shakey Pond Water Quality Study, Tallahassee, FL. Shakey Pond is a shallow pond located in northeast Tallahassee characterized by degraded water quality due to high concentrations of nutrients and resultant algal blooms. The focus of this study was to determine potential restoration activities to improve water quality. To this end, a detailed assessment of the existing drainage infrastructure, contributing areas, and inflows/outflows to Shakey Pond was completed. Then, a pond stage monitoring program was conducted to assess pond stage response to storm events. Concurrently, a sediment assessment program was initiated to understand pond bathymetry, muck thickness, and nutrient content of the muck material and pore water. A hydrologic and hydraulic (H&H) model was developed to assess runoff and flows in the project area. The results from the H&H model were used to develop a hydrologic budget for the pond. A nutrient budget was also developed for the pond using the results from the H&H model combined with nutrient data obtained from the City and as part of the sediment assessment. Finally, several best management practices (BMPs) were identified to improve water quality in Shakey Pond.

QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

BOB BURLESON, PE

TASK LEAD – ECOSYSTEM TARGETS | 39 YEARS EXPERIENCE | 26 YEARS WITH FIRM

Areas of Specialization

- Water Resources Engineering
- Surface and Groundwater Hydrology
- Watershed Planning
- Hydrologic, Hydrodynamic, & Water Quality Modeling
- Stormwater Management
- Urban & Agricultural Best Management Practices
- Wetland Treatment Systems

Education

- ME, Agricultural Engineering, University of Florida, 1988
- BSE, Agricultural Engineering, University of Florida, 1984
- BSBA, Finance, University of Florida, 1979

Professional Registrations

- Professional Engineer, FL #42497, 1990

Summary of Experience

Mr. Burleson's areas of expertise include water resources engineering, surface and groundwater hydrology, watershed planning, surface water quality modeling, stormwater management, reclaimed water reuse, and urban and agricultural best management practices (BMPs). His professional experience includes hydrologic research and analysis, water quality assessments, stormwater master plans, floodplain analysis, watershed and water quality modeling, effluent disposal and wetland treatment system design, and wetland mitigation. He applies various hydrologic, hydrodynamic, and water quality models including SWMM, ICPR, POND5, HEC-HMS, HEC-RAS, MODFLOW, BASINS/HSPF, WASP, PLUMES, CORMIX, DHI-MIKE ECO Lab, ArcGIS, and Groundwater Vistas.

Relevant Project Experience

Wekiva River Basin Minimum Flows and Levels (MFLs), St. Johns River Water Management District [SJRWMD], Seminole and Orange Counties, FL.

Performing environmental, ecological, engineering, and hydrological services to determine MFLs for the Wekiva River System (Wekiva River, Little Wekiva River, Wekiwa Springs and Run and Rock Springs/Rock Run). Available hydrologic and water quality data, SJRWMD studies, and other related studies and recreational and economic information were gathered, collated, and are being used to perform supporting analyses and assessments.

Water Resource Values Assessment of Priority Springs (DeLeon, Gemini and Green Springs), SJRWMD, Volusia County, FL.

Provided environmental, ecological, engineering, and hydrological services to assess whether the hydrologic regime defined by the multiple MFLs recommended within the District protects water resource and human use values for priority springs within the District.

Environmental Evaluation of MFLs for the St. Johns River near Deland and Lake Monroe, SJRWMD, Volusia County, FL.

Performed technical evaluations of preliminary MFLs set by the District to determine if existing environmental values (water quality, sediment loads, transfer of detrital material, freshwater supply and storage, and absorption of nutrients and other pollutants) would be protected.

Water Resource and Human Use Values Assessment of MFLs for Volusia Blue Spring, SJRWMD, Volusia County, FL.

Performed a peer review of the water resource and human use values assessment of MFLs for Volusia Blue Spring. Tasks performed included a technical evaluation of methodologies used to perform the values assessment including developed metrics and the appropriate use of available data, both from the literature and from SJRWMD studies (EFDC simulation results and statistical studies).

St. Marks and Wakulla Rivers and Sally Ward Spring MFLs Determinations, NFWFMD, Wakulla and Leon Counties, FL.

Performed an MFL analysis of water resource value (WRV) metrics for the St. Marks River Rise MFL. The analysis evaluated specific WRVs along the St. Marks River, from the river rise to the confluence with the Wakulla River. Alternative methods for setting the MFL(s) including potential flow blocks defining specific allowable flow reductions for different ranges of hydrologic conditions were investigated. Worked with District staff on formulation of the MFLs for future rule adoption. Developed a calibrated unsteady flow HEC-RAS model of the St. Marks and Wakulla Rivers which was used to perform MFL analyses of the freshwater portions of the rivers.

**QUALIFICATIONS FOR RFQ #24-SQ-101KW
PROF. STORMWATER AND ENV. ENGINEERING SERVICES
COUNTY OF VOLUSIA, FLORIDA**

NICK HARTSHORN, PE

TASK LEAD – CAPITAL IMPROVEMENTS | 7 YEARS EXPERIENCE | 7 YEARS WITH FIRM

Areas of Specialization

- Green Stormwater Infrastructure
- Low Impact Design
- Design, Engineering & Permitting
- Feasibility Analyses
- Field Investigations
- Sampling/Monitoring
- Regulatory Coordination & Permitting
- Cost Estimates
- Technical Specifications & Bid Support
- Construction Administration
- Resiliency & Adaptation

Education

- MS, Environmental Engineering, University of Central Florida, 2016
- BS, Environmental Engineering, University of Central Florida, 2014

Professional Registrations

- Professional Engineer, FL #90368, 2020

Summary of Experience

Mr. Hartshorn performs a variety of tasks, including field investigations and sampling, creating computer-based models, using AutoCAD and GIS applications, design, technical specifications, construction observation and oversight, and technical report writing. He participates in projects ranging from large-scale watershed studies to citywide analyses of street sweeping and pollution control device programs, site infrastructure retrofit projects.

Relevant Project Experience

North Beach Street Grade Raise Resiliency Improvements, Volusia County, FL. To remedy a portion of North Beach Street that is subject to overtopping due to intense rainstorms and increasing high tide events, evaluating, designing and permitting the installation of a new roadway base layer utilizing a water resistant material, an asphaltic concrete surface, and several culvert pipes to provide equalizing between the drainage systems and the Tomoka River. Integral tasks are topographical surveying, geotechnical analysis, and ecological investigation. A feasibility analysis established the design parameters, identified implementation constraints, and confirmed permitting requirements.

Pooser Pond Stormwater Improvements, Volusia County, FL. Completing design, permitting, and construction documents for the installation of a permanent pump station and pipeline that will allow for the lowering of the level in Pooser Pond in advance of significant forecast storm events. Tasks associated with the design include: topographical surveying, geotechnical investigation, ecological investigation, hydrogeological investigation, and hydrologic and hydraulic (H&H) assessment utilizing ICPR computer model to evaluate pumping strategies.

Burriss Way Alley West Stormwater LID Improvement Project, Cocoa Beach, FL. Developed design and construction plans to provide treatment of stormwater prior to discharge to the Banana River as well as reduce nuisance flooding in the project area. Prepared models using ICPR and BMPTRAINS.

Hansel Stormwater Pond Improvements, Orange County, FL. Provided construction observation services during the construction of the pond improvements. The project included erosion improvements, the creation of a trash and sediment capture area, and maintenance accessibility improvements. Conducted site visits during construction to monitor construction activities. Created weekly observation reports summarizing construction progress, project schedule, and potential safety concerns. Attended field meetings with County and contractor.

High Springs Library Water Quality and Drainage Improvement Feasibility Study and Design, Alachua County, FL. Performed a desktop analysis to evaluate the incorporation of previously suggested green stormwater infrastructure (GSI) in the library parking lot and retention pond for flood and water quality improvement. Drainage improvements were also examined to reduce nuisance flooding in the parking lot and promote drainage to the enhanced basin. Currently preparing full design plans and providing permitting support for the recommended GSI improvement that includes retention pond BAM enhancement, bioswale, and correcting deficient grading in the parking lot to better facilitate drainage to the pond and reduce nuisance flooding.

**QUALIFICATIONS FOR RFQ #24-SQ-101KW
PROF. STORMWATER AND ENV. ENGINEERING SERVICES
COUNTY OF VOLUSIA, FLORIDA****NICK HARTSHORN, PE****PAGE 2 OF 2**

Corrections Facility Stormwater Improvements, Orange County, FL. Analyzed existing conditions, assessed infrastructure integrity, and considered operational concerns to produce a retrofit design that addresses the onsite flooding issues. The retrofit design included removal, abandonment, or replacement of existing deficient paved areas, underground stormwater infrastructure, and stormwater management systems and implementation of new design components that better serve the contributing areas.

Courthouse Judges Parking and Stormwater Control, Orange County, FL. Retrofitted the judges parking entrance (sallyport entrances) to address drainage issues. Assisted in preparing construction bid documents for the drainage retrofit improvements consisting of a proposed StormTrap system and trench drain for each sallyport ramp. StormTrap is a stormwater management device used to store stormwater during large rain events and slowly release the water downstream, alleviating demand on the existing trench drains and storm sewer system.

Fairvilla Drainage Improvements, Orange County, FL. Provided observation services during the construction of the stormwater wet detention pond and drainwell improvements. The project included diverting flows from a drainage well to a new wet detention pond and a new piped outfall from the pond to a nearby roadway drainage system. Conducted site visits during construction to monitor construction activities. Created weekly observation reports summarizing construction progress, project schedule, and potential safety concerns.

Mullet Creek Channel B Erosion Control, Pinellas County, FL. Designed, permitted, and developed construction documents to address erosion and severe bank failures caused by Hurricane Hermine in 2016 along a 1,000-foot section of Mullet Creek Channel B. Included in the design is a vertical wall (gabion baskets) on one side and a sloped bank (to be lined with Flexamat®) along the other side of the creek.

Starkey M10 Pond Outfall Improvements, Pinellas County, FL. Prepared final design, permitting, and construction documents for improvements to a stormwater management facility (SMF). The SMF is a historical drainage ditch that was retrofitted by expansion into the overbank to create a wetland mitigation area. The SMF provides little attenuation for the removal of nutrients. Enhancement of the SMF will be achieved by providing additional residence time and storage that will improve water quality treatment, along with maintaining existing upstream flooding level of service.

1st Avenue and 58th Street North Intersection Storm Drainage Improvements, St. Petersburg, FL. Performed a detailed existing conditions analysis to evaluate existing drainage infrastructure and validate reported drainage deficiencies. Utilized the existing conditions model (ICPR, Version 4.07.08) to develop a cost-effective and feasible engineering design to mitigate flooding and improve water quality in the study area. The recommended design consists of upsizing the existing drainage infrastructure at the intersection as well as the outfall pipe that discharges west along 1st Avenue North to Bear Creek. The existing asphalt parking spaces on both the north and south sides of 1st Avenue North are proposed to be replaced with pervious pavers.

Hudson Avenue/Club Wildwood Conceptual Flood Abatement Design, Pasco County, FL. In follow up to the 2021 flood abatement study, analyzed five additional improvement concept alternatives that utilize Parcel 27-24-16-0000-00200-00N0 for flood abatement, as well as recalculated the benefit-cost ratio of Improvement Alternative 2 from the previous study. Assessed the flood abatement benefits within the Club Wildwood subdivision, which was not included in the previous study. The engineering alternatives considered different outfall configurations, including a tidal outfall under US-19, outfall to the existing US-19 drainage system, and no outfall.

Pine Castle GSI Plan, Orange County, FL. Developed ICPR4 H&H model and regional stormwater management concepts to allow more intense redevelopment while reducing flooding in the project area, improving stormwater quality, and utilizing GSI/LID techniques to meet project objectives.

QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

STEVE PEENE, PHD

TASK LEAD – TMDLS | 36 YEARS EXPERIENCE | 27 YEARS WITH FIRM

Areas of Specialization

- TMDL/BMAP Implementation
- NPDES Compliance
- Hydrodynamic Modeling (Coastal, Tidal, Estuarine, Riverine, and Freshwater)
- Coastal Risk Assessments
- Surge Studies
- Vulnerability Assessments
- Public Involvement/Outreach

Education

- PhD, Coastal and Oceanographic Engineering, University of Florida, 1995
- MS, Coastal and Oceanographic Engineering, University of Florida, 1987
- BS, Civil Engineering, Lehigh University, 1982

Professional Affiliations

- Florida Stormwater Association
- Southeast Stormwater Association
- The Water Research Foundation

Summary of Experience

Dr. Peene is involved in the national and local evaluation of impacts to surface waters, including development of total maximum daily loads (TMDLs), minimum flows and levels (MFLs), environmental impact assessments, ecosystem restoration projects, and NPDES support throughout the southeast U.S. with emphasis on the state of Florida. He has extensive experience in water resources analysis including watershed planning, stormwater management planning, NPDES/MS4 permitting, evaluation of non-point and point source pollution in surface water systems, hydrologic, hydrodynamic, sediment transport and water quality modeling for lakes, rivers, estuaries, coastal embayments, and offshore; evaluation of impacts to ecological resources in surface waters; design and implementation of monitoring in surface water systems; and hydrologic and water quality restoration.

Relevant Project Experience

Indian River Lagoon TMDL Revision, SJRWMD, Brevard County, FL. Prepared a study that resulted in a revised TMDL for the Northern Indian River Lagoon, Banana River Lagoon, and the Central Indian River Lagoon. Tasks included development of the total loads to the system, including atmospheric deposition, development of transport, and exchange between the various lagoon segments, and support on the development of relationships between loads and response of seagrasses in the system. The work was conducted for a consortium of stakeholders including, Brevard County, FDOT, City of Titusville, City of Cocoa, City of Cocoa Beach, and City of Melbourne.

Lake Orlando TMDL Review, Orlando, FL. Performed a peer review to determine if the TMDL provides reasonable and fair nutrient loading allocations to the City of Orlando. Reviewed the TMDL report and two computer models used by FDEP to develop the nutrient loadings and associated allocations. The computer models included the Pollutant Loading Screening Model which is used to assess pollutant loads from the contributing Lake Orlando watershed, as well as the BATHTUB model, which is used to assess eutrophication of lake systems. Identified several issues with the assumptions and data used by FDEP. These included incorrect contributing area delineation, inaccurate baseflow loading contributions, overestimation of TN and TP loading due to stormwater, and overestimation of TN and TP reduction requirements based on the BATHTUB modeling.

Lake Talquin TMDL Support, Leon County, FL. Provided technical and legal support to Leon County for the development of a TMDL for Lake Talquin. Support included review of model input files and output, technical advice to Florida Department of Environmental Protection (FDEP) and the Environmental Protection Agency (EPA) on the development of the watershed, hydrodynamic and water quality models, and support to FDEP (through Leon County) in a legal challenge of the model by BASF Industries. The models included an LSPC watershed hydrologic and loading model, an Environmental Fluid Dynamics Code hydrodynamic model of the lake, and a WASP model of the lake.

Kasey Lake and Lake Fairhope TMDL Reviews, Orlando, FL. Reviewed the TMDL report, supporting documentation, and receiving water model (BATHTUB) developed by FDEP for Kasey Lake and Lake Fairhope. The review included detailed assessment of the model inputs and results. Provided detailed comments to the City of Orlando for submittal to FDEP.

TMDL and NPDES Support, Pasco County, FL. Through a continuing services contract, providing general water quality, NPDES, impairment listing, TMDL, and BMAP support to the County's Stormwater Department. Tasks include review and comments on Phase I MS4 permit, TMDL reviews on numerous waterbodies, and development of a prioritization plan under the Phase I permit requirements.

QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

ROBERT POTTS

TASK LEAD – NPDES | 19 YEARS EXPERIENCE | 1 YEAR WITH FIRM

Areas of Specialization

- NPDES Permitting and Compliance
- TMDL/BMAP Implementation
- Environmental Resource Permitting
- Wetland Assessment
- Facilities Evaluation

Education

- MBA, University of Central Florida, 2020
- BS, Environmental Science and Earth Science, Central Michigan University, 2000

Professional Registrations

- FDEP Certified Stormwater, Erosion and Sedimentation Control Inspector, No. 7474
- FDEP Certified Stormwater, Erosion and Sedimentation Control Trainer, No. 198
- OSHA 40-Hour HAZWOPER
- FSA Stormwater Operator Level 1 and 2 Certification

Summary of Experience

Mr. Potts has experience with Occupational Safety and Health Administration and U.S. Environmental Protection Agency regulations, International Organization for Standardization-14001 Environmental Systems Management, chemical inventory, and soil and water sampling. He provides senior oversight for the development of erosion control and stormwater pollution prevention plans. He also develops and reviews environmental resource permits, construction site compliance inspections, stormwater facility compliance inspections and annual reporting activities. .

Relevant Project Experience

NPDES Consultant Services, Seminole County, FL. Providing technical support to develop annual reports for Seminole County's Phase I NPDES MS4 permit. Coordinate with County staff and co-permittees for required information to produce annual reports. Other services included the development of event mean concentrations and pollutant load analysis for major watersheds within Seminole County.

TMDL and NPDES Support, Pasco County, FL. Through a continuing services contract, providing general water quality, NPDES, impairment listing, TMDL, and BMAP support to the County's Stormwater Department. Tasks include review and comments on Phase I MS4 permit, TMDL reviews on numerous waterbodies, and development of a prioritization plan under the Phase I permit requirements.

TMDL/BMAP/NPDES Support, Lee County, FL. Through a continuing services contract, developed a countywide plan to address issues raised by TMDLs. Provide ongoing support on impairment listing, TMDL, BMAP, and NPDES Phase I MS4 permit issues throughout the county.

Districtwide NPDES Permit Compliance Contract, FDOT District One, FL. Provides oversight for all activities required for compliance with the Department's NPDES program, including scheduling and overseeing stormwater facility inspections; stormwater infrastructure mapping; high risk facility inventories; SOP development; TMDL monitoring and assessment plan development; BPCP development, and annual reporting for the Department's Phase I and Phase II MS4 permits.

Water Quality General Stormwater Support, FDOT Central Office, FL. Principal Provides technical support and coordination for the development of FDOT's statewide IDDE and Spill Prevention, Containment, and Response training program for personnel and maintenance contractors. The training program educates participants in identifying and reporting illicit discharges and spills as required by the NPDES Phase I and Phase II MS4 permits. Efforts under this task included coordination with NPDES leads at each FDOT District, the Turnpike, and Central Office to solicit feedback and training approach recommendations.

Districtwide NPDES Permit Compliance Contract, FDOT District Five, FL. Provided oversight for all activities required for compliance with the Department's NPDES program, including scheduling and overseeing stormwater facility inspections; outfall verification and mapping; development of event mean concentrations and pollutant load analysis for outfalls; high risk facility inventories; illicit discharge detection and elimination training and inspections; and annual reporting for the Department's Phase I and Phase II MS4 permits. Also conducted NPDES compliance inspections for FDOT construction projects throughout the District.

**QUALIFICATIONS FOR RFQ #24-SQ-101KW
PROF. STORMWATER AND ENV. ENGINEERING SERVICES
COUNTY OF VOLUSIA, FLORIDA**

SCOTT DEITCHE, ENV SP

SENIOR PRINCIPAL SCIENTIST | 29 YEARS EXPERIENCE | 2 YEARS WITH FIRM

Areas of Specialization

- NPDES/MS4 Reporting
- Environmental & Water Permitting
- Surface Water Quality Monitoring
- Surface Water Pollution Control
- Erosion & Sediment Control
- Resiliency & Sustainability

Education

- BS, Marine Science (Biology Concentration), Eckerd College, 1994

Professional Registrations

- FDEP Cert. Stormwater Erosion & Sediment Control Inspector
- ISI – ENVISION Sustainability Professional

Summary of Experience

Mr. Deitche has more than 29 years of experience in water quality monitoring and analysis, water quality regulatory compliance, resiliency, environmental management, marine science, environmental permitting, environmental monitoring programs, estuarine studies, and project management. He addresses all aspects of surface water quality, including water resource planning, evaluates BMPs, conducts lake studies, assesses water quality, including sampling and monitoring.

Relevant Project Experience

NPDES MS4 Annual Report and Water Quality Report Card, St. Petersburg, FL. Assisting the City of St. Petersburg in preparing their NPDES MS4 annual report for FDEP as well as preparing an annual water quality report card that analyzes water quality sampling data and a pollutant loading analysis across the City’s impaired waterbodies. Tasks include annual report preparation, gathering data from city departments and identifying areas for improvement in tracking of stormwater activities, data analysis, update of TMDL implementation plan, update of CIPs to address TMDLs, and coordination with FDEP. Also developing standard operating procedures to streamline and maximize efficiency of the stormwater program.

NPDES/TMDL Support, Charlotte County, FL. Supported Charlotte County’s Phase II MS4 NPDES permit and TMDL compliance. Specific tasks included general permit compliance activities, annual reporting, FDEP sediment and erosion control and illicit discharge training, facility inspections, stormwater management plan development, educational material development and distribution, and an assessment of pending TMDL regulations in the county.

NPDES/TMDL Program Support, Punta Gorda, FL. Supported the City’s Phase II MS4 NPDES permit and TMDL compliance. Tasks included illicit discharge training, facility inspections, educational material development and distribution, and an assessment of potential, relevant TMDL regulations.

FDOT Statewide Stormwater Management Plan Development, Various Counties, FL. Developed a statewide stormwater management plan that defines the statewide protocols for all FDOT districts in relation to stormwater management under FDOT’s NPDES Phase I MS4 permits, including inspection and maintenance, public education, stormwater treatment, TMDL, and BMAP compliance.

Stormwater BMP Design Manual, Lakeland, FL. Developing a comprehensive stormwater design manual for the City that includes integrating and updating codes and policies to support the intent of the manual and assess resiliency of such practices given hydrological uncertainties in the coming decades.

Tampa Bay Water Alafia River Watershed Model Enhancement, Hillsborough County, FL. Supporting Tampa Bay Water in building on an existing Hillsborough County watershed model to develop a tool to facilitate quantitative assessment of Alafia River water quality concentrations and loading for fluoride; evaluate load reduction approaches at multiple watershed locations; and evaluate improvements on downstream water quality conditions at Tampa Bay Water’s intake.

QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

CATHY FOERSTER, AICP

SENIOR LAND PLANNER | 30 YEARS EXPERIENCE | 6 YEARS WITH FIRM

Areas of Specialization

- Stormwater Master Planning
- BMAP Implementation
- Resiliency & Adaptation
- Vulnerability Assessments
- Public Involvement/Outreach
- Stakeholder Coordination
- Grant Support & Compliance

Education

- BA, Legal Studies, University of Central Florida, 1993

Professional Registrations

- Certified Land Planner, US, AICP #016300, 2000

Summary of Experience

Ms. Foerster is a certified land planner with 30 years professional experience in water resources planning, environmental planning, and community planning. Her expertise includes the preparation of adaptation strategies, vulnerability assessments, water quality improvement plans, coastal management plans, and stormwater master plans. Ms. Foerster conducts numerous public meetings and facilitates community engagement on resilience, water resources, coastal, and community redevelopment initiatives. She assists clients in the preparation of grant applications as well as compliance and reporting activities associated with awarded grants.

Relevant Project Experience

Stormwater Master Plan, Flagler County, FL. Conducted review of the County's comprehensive plan, land development code, ordinances, and public works manual to ascertain existing stormwater management policies and regulations. Reviewed and commented on subconsultant deliverables, including growth projections and a resilience assessment. Identified grant funding opportunities specific to Florida projects through the FDEP Resilient Florida Program. Participated in three public meetings and two BOCC presentations to present preliminary findings and recommendations.

Outstanding Florida Springs (OFS) Basin Management Action Plans (BMAPs), Florida Department of Environmental Protection, Various Counties, FL. Over a two-year period, conducted or participated in more than 20 public meetings as well as additional individual stakeholder meetings to prepare BMAPs for OFS within the following watersheds: Crystal River/Kings Bay, Weeki Wachee Spring and Magnolia-Aripeka Springs, Homosassa and Chassahowitzka Springs, Suwannee River Basin and Jackson Blue Spring. Served as the primary author and was responsible for stakeholder coordination, creation of project metrics workbook, pollutant calculation workbook, project credit work workbook, and BMAP document.

Stormwater Master Plan (SWMP) Update, Pasco County, FL. Updating the 2006 stormwater master plan to address the following priorities: flood abatement, effective drainage, stormwater operations and maintenance, regulatory compliance, and capital improvement projects, programs, and strategies. The final SWMP update report will include a list of stormwater areas of concern that identifies geographic or infrastructure concerns with 5- and 10-year implementation strategies and projects.

North Fort Myers Feasibility Study, Lee County, FL. Reviewed and ranked 27 projects within five subwatersheds in proximity to an Florida Power and Light easement in the north Fort Myers area for flood abatement and water quality improvements. Projects were ranked using 14 weighted criteria.

Vulnerability Assessment, Welaka, FL. Assisted in the preparation of a successful Resilient Florida grant application. Currently preparing the grant funded vulnerability assessment in compliance with FDEP guidelines that will result in the identification of focus areas and recommended adaptation strategies. Coordinating public engagement and stakeholder involvement throughout the planning process.

Vulnerability Assessment, Apopka, FL. Currently preparing the grant funded vulnerability assessment in compliance with FDEP guidelines that will result in the identification of focus areas and recommended adaptation strategies. Managing the grant on behalf of the City and coordinating public engagement and stakeholder involvement throughout the planning process.

QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

MICHAEL SCOTT, PE, PMP

SENIOR ENGINEER | 16 YEARS EXPERIENCE | 9 YEARS WITH GEOSYNTEC

Areas of Specialization

- Civil Engineering & Design
- Stormwater Retrofits
- Water & Wastewater Design
- Regulatory Permitting
- Construction Administration

Education

- MS, Civil Engineering, University of South Florida, 2009
- MS, Engineering Management, University of South Florida, 2006
- BS, Mechanical Engineering, University of South Florida, 2006

Professional Registrations

- Professional Engineer, FL #72475, 2011
- Project Management Professional, #1646482

Summary of Experience

Mr. Scott is a professional engineer with more than 16 years of experience providing civil engineering design services focused on power/utility facilities, port and marine facilities, manufacturing facilities, and landfills. His primary areas of practice include complete civil site design; local, state, and federal permitting; construction support services; and project management. His experience in complete civil site design includes stormwater management system design, water resources management, surface water modeling, and environmental permitting.

Relevant Project Experience

Stoneybrook Hills Parkway Drainage Improvement Study, Orange County, FL. The main objective was to evaluate the likely causes of a reported washout adjacent to the sidewalk and retaining wall next to the northern stormwater pond near the intersection of Stoneybrook Hills Parkway and State Road 441. Field reconnaissance and geotechnical investigation were completed as well as a hydrologic and hydraulic model (ICPR v3). Based on the model results and field observations, two alternatives with associated cost estimates were prepared to improve erosion and slope stability.

John Young Parkway Erosion Control Study, Orange County, FL. Performed an embankment erosion investigation due to portions of the parkway experiencing multiple severe erosion/washout incidents. Extensive geotechnical and ecological investigations were completed to assess the possible causes for the reported erosion/washout incidents. This project involved significant coordination with the geotechnical subconsultant, surveyor, and ecological subconsultant.

Upton Drive Drainage Design, Orange County, FL. Prepared design plans, technical specifications, engineer's estimates of costs, and permitting services.

Duke Energy Crystal River Energy Complex, Citrus County, FL. Designed, reviewed, and permitted additional impervious surfaces associated with the facility. This included modeling the entire facility's stormwater management system (SWMS) to evaluate its capacity for additional runoff. Also provided SWMS design for the closure of a portion of the ash disposal area and developed a stormwater pollution prevention plan for use during construction. Throughout the project, provided general environmental consulting and coordinated overall permitting and regulatory submittals.

Duke Energy Stormwater System, St. Petersburg, FL. Redesignated and modified an existing stormwater management system to alleviate localized flooding that included modifying the facility's environmental resource permit to include a wet detention pond. The proposed modifications to the pond included resizing an outfall structure, installing an orifice to bleed down the retained treatment volume, and adding a littoral zone to the existing pond. The stormwater management system consisted of ditches, storm sewer pipes, and a wet detention pond.

Puraglobe Redevelopment, Tampa, FL. Redevelopment of a 12-acre site at Port Tampa Bay that was used as an oil refinery. Tasks included site surveying; civil engineering (stormwater management system, parking, ingress/egress, and foundation recommendations); local, state, and federal permitting; building permitting; construction oversight; as-built certification; and final site closeout. The project posed several technical challenges, including water quality treatment for stormwater, green space requirements, and satisfying the US Coast Guard access requirements for the fuel oil unloading arm.

QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

GLORIA TEAGUE, PE, CFM

SENIOR ENGINEER/MODELER | 12 YEARS EXPERIENCE | 4 YEARS WITH FIRM

Areas of Specialization

- Hydraulic & Hydrologic (H&H) Modeling
- Integrated Water Management
- Feasibility Analyses
- Water Quality Assessments
- Best Management Practices (BMPs)
- Infrastructure Inventory & Assessment
- Stormwater Management
- Floodplain Management

Education

- MS, Agricultural and Biological Engineering, University of Florida, 2012
- BS, Agricultural Operations Management, University of Florida, 2006

Professional Registrations

- Professional Engineer, FL #81868, 2016
- ASFPM Certified Floodplain Manager, #US-22-12199

Summary of Experience

Ms. Teague is a water resources engineer with more than 12 years' experience managing, designing, implementing, and evaluating water resources projects for public and private clients. She specializes in H&H modeling as well as development of software tools to support data analysis, visualization, and quality assurance/quality control. She is highly skilled in quantifying impacts and forecasting future conditions to propose adaptive management strategies.

Relevant Project Experience

Somerset at Lakeville Oaks Watershed Management Plan and Pump Station Evaluation, Orange County, FL. Performed a level of service analysis of primary infrastructure, floodplain delineation for future LOMR application, a detailed assessment of pump station performance, evaluation of the pump station capacity for future land use/build out conditions, and developed improvement alternatives to address potential flooding and pump station improvements. An ICPR model was developed to evaluate existing conditions and assess alternatives.

Black Lake Watershed BMPs Evaluation, Orange County, FL. To support selection of BMPs to improve water quality of constituents of concern (total nitrogen and total phosphorus), hydraulic and water quality impacts (e.g., flood extent, loading reduction) were evaluated for three proposed alternatives using ICPR.

Hydraulic Modeling of Development Alternatives to Mitigate Stormwater Runoff, Jacksonville, FL. Potential green infrastructure applications in the area were identified and sized with consideration of site-specific constraints such as seasonal high groundwater table elevations. The green infrastructure applications were supplemented by traditional wet detention pond treatment where required to ensure sufficient water quality treatment was provided. The BMPTRAINS model was used to assess the water quality benefits of the conceptual green infrastructure applications to identify the most effective water treatment solutions.

Stormwater Outfall Resiliency Master Plan, St. Augustine, FL. Evaluated City's stormwater outfalls for combined impacts from storm events and future tidal conditions. Inundation maps were prepared, and problem areas examined to develop a priority list of outfalls with the most urgent need for backflow prevention. Developed an outfall master plan to implement measures to protect coastal properties, city infrastructure, historic and cultural resources, and the natural environment from flooding caused by sea level rise.

CRA Stormwater Master Plan Update, Winter Park, FL. Updating the 2021 CRA Stormwater Master Plan to expand the study to include the contributing areas to Lake Killarney, Lake Bell, Lake Wilderness, and Lake Gem. Developing cost-effective and feasible engineering alternatives to mitigate flooding associated with the lakes. A detailed existing conditions analysis is being performed to evaluate flooding and water quality deficiencies within the expanded CRA area.

Stormwater Master Plan and Flood Resiliency Strategies Master Plan, Deerfield Beach, FL. Digitized the City's stormwater infrastructure and developed H&H model of the City's stormwater system using the Storm Water Management Model (SWMM). The model was used to evaluate impacts from past storm events and future conditions, prepare inundation maps, and examine problem areas to assist with the selection of capital improvement projects. Recommended projects will address current stormwater infrastructure deficiencies to reduce flood risk, improve stormwater management, and advance resiliency efforts.

QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

KEVIN TYRE

SCIENTIST | 11 YEARS EXPERIENCE | 2 YEARS WITH FIRM

Areas of Specialization

- Water Quality
- Microbial Source Tracking
- Nutrient Loading
- Biological Survey and Sampling
- Monitoring Plan Development and Implementation

Education

- MS, Environmental Science, Florida Gulf Coast University, 2018
- BS, Marine Science, Florida Gulf Coast University, 2011
- Certificate, Geographic Information Systems, Florida Atlantic University, 2022

Professional Registrations

- N/A

Summary of Experience

Mr. Tyre specializes in surface water and microbial source tracking studies to address water quality challenges related to excess nutrient loading and bacterial contamination. Sampling and monitoring experience includes microbial source tracking in Lee County waterways, blue-green algae blooms in Lake Okeechobee, nutrient enrichment in the Indian River Lagoon, and Sargassum inundation in the Florida Keys.

Relevant Project Experience

Review of Total Phosphorus Water-Quality Based Effluent Limit, Confidential Client, Oregon. To understand the drivers affecting excess algae growth in an Oregon river, nine monitoring locations were selected for biological survey and sampling. At each site, water and algae samples were collected for analysis of nutrients and elemental composition. Cross-stream transect surveys were performed to collect data of field parameters including stream flow, chlorophyll, turbidity, temperature, dissolved oxygen, and biological assessment of algae and macrophyte relative densities. Data were compiled and assessed to determine nutrient availability and limitation in the river.

Boggy Creek Assessment, Orange County, FL. Gathered and assessed available information to perform a bacterial source tracking assessment for the Boggy Creek watershed, consisting of historical fecal bacteria trend analysis and molecular source tracking (MST) of fecal sources of bacteria to the creek to develop fecal bacteria improvement projects. This included a 12+ month monitoring program.

Wekiva Groundwater Quality BMP Evaluation, Orange County, FL. Evaluated the feasibility of a groundwater nutrient treatment project to address nitrogen pollutant removal. Characterized site lithology and groundwater nitrate concentrations to refine the vertical and horizontal extent of the nitrate concentrations. The results of this analysis were used to evaluate a BMP concept that proposes to treat groundwater by pumping into an existing dry retention pond and allowing it to infiltrate back into the ground.

Wekiva BMAP Pond #6360 Retrofit Feasibility Study, Orange County, FL. Evaluated a potential retrofit for the treatment of stormwater prior to infiltration into groundwater. An autosampler with telemetry was installed to monitor flows and collect composite water quality samples of stormwater discharging to the pond. The collected data were used to refine the anticipated water quality benefit of the proposed BMP.

Shakey Pond Water Quality Study, Tallahassee, FL. Shakey Pond is a shallow pond located in northeast Tallahassee characterized by degraded water quality due to high concentrations of nutrients and resultant algal blooms. The focus of this study was to determine potential restoration activities to improve water quality. A detailed assessment of the existing drainage infrastructure, contributing areas, and inflows/outflows to Shakey Pond was completed. A pond stage monitoring program was conducted to assess pond stage response to storm events. Concurrently, a sediment assessment program was initiated to understand pond bathymetry, muck thickness, and nutrient content of the muck material and pore water. A H&H model assessed runoff and flows. A nutrient budget was also developed for the pond using the results from the H&H model combined with nutrient data obtained from the City and as part of the sediment assessment. Several BMPs were identified to improve water quality in Shakey Pond.

QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

SEVIL RANJBAR, PHD, PE

PROJECT ENGINEER | 3 YEARS EXPERIENCE | 3 YEARS WITH GEOSYNTEC

Areas of Specialization

- Hydraulic & Hydrologic (H&H) Modeling
- Watershed & Stormwater Management
- Floodplain Analysis
- GIS

Education

- PhD, Water Resources Engineering, University of Central Florida, 2020
- MS, Water Resources Engineering, University of Tabriz, 2015
- BS, Civil Engineering, University of Tabriz, 2012

Professional Registrations

- Professional Engineer, FL #97151, 2023

Summary of Experience

Dr. Ranjbar provides technical support on watershed assessments, hydrologic and hydraulic modeling, floodplain analysis, and stormwater sampling (grab and flow-weighted sampling). While acquiring her PhD, she researched 140 river basins across the U.S. located in different climatic conditions with differing physical characteristics. Her PhD research, using Python scripts, resulted in three journal publications and several conference presentations.

Relevant Project Experience

East Basins – Lake Jesup Watershed Master Plan, Seminole County, FL. Lead project engineer for a comprehensive watershed study to identify infrastructure LOS deficiencies, delineate floodplains, and identify capital project to address flooding and water quality.

Carter Creek Watershed Master Plan (WMP) Alternative Analysis, SWFWMD, Highlands County, FL. Updated an existing WMP by completing the floodplain level of service (FPLOS) and flood BMP alternatives analysis that included converting the existing ICPR3 model to ICPR4, and flood damage estimation for structures and roadways.

Sebring WMP, SWFWMD, Highlands County, FL. Developed a detailed H&H model to characterize runoff responses throughout the watershed, developed updated floodplain maps, determined FPLOS for basins in the watershed, and developed best management practice alternatives to address flooding problems in the watershed. Tasks included identifying the drainage structures in the watershed and developing data acquisition plan, initial GIS processing using ArcHydro tools, and examining hydrologic characteristics of the watershed and watershed boundary.

Jack Creek Watershed Management Plan, SWFWMD, Highlands County, FL. Tasks included watershed model parameterization, geodatabase development, and model calibration and validation for multiple simulations. Simulations included 100-year/1-day storm, 2.33-year/1-day storm, and no rainfall simulations. Flood plain plots were developed for initial conditions, 100-year/1-day floodplain, and 2.33-year/1-day floodplain.

Community Redevelopment Agency (CRA) Stormwater Master Plan, Winter Park, FL. Assisted with ICPR model parameterization, preparing report figures, developing improvement alternative concepts for roadway flooding, and conducted site visit to perform drainage investigation.

Little Wekiva River Watershed Model Execution and Validation, Orange County, FL. Updating the Little Wekiva River Watershed model by completing the model parameterization of three subwatersheds Tributaries H, I, and Main Stem and completing the model execution and validation of the combined watershed model.

Sawmill Pond Stormwater Pump Station Evaluation, Orange County, FL. Assisted in the assessment of the watershed including level of service analysis of primary infrastructure, floodplain delineation for future LOMR application, a detailed assessment of pump station performance, and evaluation of the pump station capacity for future land use/build out conditions.

Wekiva Watershed BMP Evaluation, Orange County, FL. Assisted with developing groundwater baseflow treatment concepts and their cost estimates.

QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

KARLI MAHONEY, EI

PROJECT ENGINEER | 2 YEARS EXPERIENCE | 2 YEARS WITH GEOSYNTEC

Areas of Specialization

- Hydraulic & Hydrologic (H&H) Modeling
- Watershed & Stormwater Management
- Floodplain Analysis
- GIS

Education

- BS, Environmental Engineering, University of Central Florida, 2022

Professional Registrations

- Engineer Intern, FL ##1100026126, 2022

Summary of Experience

Ms. Mahoney's areas of focus are stormwater management, water quality improvements and flood prevention for BMP feasibility evaluations, and ICPR H&H modeling. She has experience using ArcGIS (ArcMap and ArcPro) for geoprocessing of spatial data, mapping, and data representation and develops pollutant loading analyses using ICPR4. She uses AutoCAD Civil 3D to prepare grading plans, structure details, and construction plans.

Relevant Project Experience

Stormwater Master Plan, Titusville, FL. Gathered and digitized existing drainage infrastructure through as-built construction plans, preformed field recognizance, and delineated the subbasins for the project area.

Port St. John Master Plan, Brevard County, FL. Investigated the subject area, inventoried drainage features contributing to the outfalls, performed modeling and calculations to estimate H&H characteristics, and identified candidate site for BMP concepts.

Wekiva Watershed Management Plan, Seminole County, FL. Assisted on engineering assessments, developing H&H and water quality models, and conceptualizing BMPs and other improvement measures to meet the goals of the Wekiva River BMAP.

Killarney Drive Drainage Improvements, Orange County, FL. Developed practical improvement alternatives to address deficiencies associated with a collapsed 18-inch pipe. Assisted in data collection and desktop evaluation, developed the existing and proposed H&H model, and prepared the technical memorandum.

Whitcomb Drive Road and Drainage Improvements, Seminole County, FL. Assisted in the design of a road and drainage improvement concept that raises Whitcomb Drive approximately two feet to a minimum elevation of 9.1 feet and associated drainage improvements. Prepared the cut and fill calculations for construction plans in AutoCAD Civil 3-D as well as used ArcGIS to create the maps used in the technical memorandum.

Hudson Avenue/Club Wildwood Conceptual Flood Abatement Design Pasco County, FL. Parameterized the H&H model, developed the road inundation polygons and floodplains, and calculated the flood damages in both the existing and proposed conditions. Created GIS maps for the technical report.

Beacon Square Flood Abatement Concept Plan, Pasco County, FL. Aided in modeling the existing and proposed conditions, calculating the flood damages, and creating a benefit-cost analysis of the different improvement concepts.

1st Ave North and 58th Street North Storm Drainage Improvements, St. Petersburg, FL. Investigated the stormwater infrastructure in the area between 58th Street North and the stream crossing to the west to analyze available capacity, develop improvement alternatives to alleviate flooding, and including identification of possible water quality improvements.

Subbasin CON0270 Feasibility Study and Design, Orange County, FL. Compiling relevant GIS data, developing, and executing an existing condition H&H ICPR computing model, conceptual design of proposed water quality improvement, and technical memorandum.

**QUALIFICATIONS FOR RFQ #24-SQ-101KW
PROF. STORMWATER AND ENV. ENGINEERING SERVICES
COUNTY OF VOLUSIA, FLORIDA**

**CRAIG BALLOCK, PE
SENIOR GEOTECHNICAL ENGINEER | 20 YEARS EXPERIENCE | 19 YEARS WITH FIRM**

Areas of Specialization

- Geotechnical Engineering
- Geotechnical Investigations
- Construction Inspection
- Plans and Specifications Review
- Construction Materials Testing

Education

- MS, Civil Engineering, University of Central Florida, 2007
- BS, Civil Engineering, University of Central Florida, 2004

Professional Registrations

- Professional Engineer, FL #71571

Summary of Experience

Mr. Ballock has 20 years of experience in geotechnical engineering. He has performed geotechnical engineering services for numerous infrastructure-related public works projects for Osceola, Orange, Seminole, and Brevard counties and major transportation infrastructure projects for the Florida Department of Transportation (FDOT), Florida’s Turnpike Enterprise (FTE) and the Central Florida Expressway Authority (CFX).



Relevant Project Experience

Lake Apopka Habitat Creation, Orange County, FL. Creation of approximately 25 acres of suitable habitat by importing fill material to two acres of shoreline, totaling 10,000 ft long by 100 ft wide, on the north shore of Lake Apopka and placement of an average of 3 ft of fill material over existing lake bottom organic sediments to raise the existing lake bottom. A wave break system composed of geotextile fabric bags was designed in the habitat creation area to protect rooted aquatic vegetation from large waves. A limited contaminant screening of the site’s soils was also performed.

Orlo Vista Flood Mitigation Design, Orange County, FL. Conducted geotechnical data collection in support of Geosyntec for the development of a flood mitigation facility including a pump station, deepening of an existing stormwater pond, and associated new stormwater pipes. Performed SPT borings and installed 17 monitoring wells in support of the flood mitigation program.

Lake Adair Monitoring Well Installation and Sediment Sampling, Orange County, FL. Installed two monitoring wells at Lake Adair for use in groundwater water quality sampling. Performed sampling of lake bottom sediments for laboratory testing and performed measurements of unconsolidated organic sediment thicknesses across the lake bottom as part of the Lake Management Program for Lake Adair.

Lakeside Ranch, Martin County, FL. Provided inspection of construction activities on a 2,600-acre stormwater treatment area. Construction activities included large amounts of earthwork such as clearing, grubbing, and canal and levee construction, and the construction of inlet and outlet structures.

Continuing Professional Stormwater Management Services Contract, Orange County, FL. Assignments under this contract include geotechnical investigations for new stormwater management systems, evaluation of under-performing or failing stormwater facilities, erosion mitigation, sinkhole evaluation, drainage well design and repairs and construction inspection and testing. Geotechnical design services include groundwater and unconfined aquifer parameter recommendations for stormwater pond design, stormwater treatment volume recovery analyses, pavement assessments, underdrain analyses, chemical and grout injection program design, retaining wall design, slope stability analyses and settlement analyses.

QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

CLAUDIA LISTOPAD, PHD, GISP

PRINCIPAL SCIENTIST | 24 YEARS EXPERIENCE | 15 YEARS WITH FIRM

Areas of Specialization

- Ecological Restoration
- Natural Resource Project Management
- GIS Analysis and Remote Sensing
- Water Resources Modeling
- Multivariate, Univariate & Spatial Statistics
- Environmental Permitting

Education

- PhD, Conservation Biology, University of Central Florida, 2011
- MS, Ecology, Florida Tech, 2001
- BS, Ecology, Florida Tech, 1999
- BS, Marine Biology, Florida Tech, 1999

Professional Registrations

- GIS Certification Institute, Certified GIS Professional #91249

Summary of Experience

Dr. Listopad is a cross-disciplinary project manager, water resources ecologist, and certified GIS professional specializing in the application of modeling, ecological and hydrological field assessments, monitoring program design and implementation, statistical analyses, and remote sensing to complex data sets, particularly those related to natural resources, water resources, and restoration. Dr. Listopad specializes in the application of GIS, modeling, database development, statistical analyses, and remote sensing to complex data sets, particularly those related to natural resources, water resources, and utilities. Since founding Applied Ecology, Dr. Listopad provides stormwater, surface and groundwater quality monitoring, statistical analyses, modeling and ecological services to numerous local, state, and federal agencies.



Relevant Project Experience

North Beach Street Ecological Services and Permitting, Volusia County, FL. Delineated wetland and surface water limits conducted listed species survey, and a submerged aquatic vegetation (SAV) survey in the buffer zone of the project area. All findings and determinations, including maps of the wetland/surface waters and results of the listed species and SAV survey, were submitted to support the permit application.

Environmental Assessment, Turkey Creek Water Quality Restoration, Palm Bay, FL. Prepared a feasibility study, including an environmental assessment and project alternative analysis, to evaluate restoration of Turkey Creek to its pre-1950 condition. Removal of a sediment island (spoil island) within the waterway as well as muck, previously identified as a significant nutrient contributor, was evaluated for effectiveness on pollutant removal and benefit to the ecology and health of the creek. Upstream/watershed water quality improvement projects were identified targeting stormwater, baseflow, and wastewater sources. Responsible for watershed data assessment, generation of revised water quality modeling scenarios using a previously developed model, evaluation of ecological restoration opportunities, and a comprehensive evaluation matrix ranking restoration alternatives according to their feasibility and ability to meet the established restoration success criterion.

Spatial Watershed Iterative Loading (SWIL) Model Redevelopment for the Florida Department of Environmental Protection (FDEP), Brevard County, FL. The SWIL model was initially developed in 2012 to provide spatial and temporally accurate loading data (volume, TN, and TP estimates) for analysis in support of a refined TMDL for the Indian River Lagoon (IRL). Currently completing a full SWIL model revision, updating spatial input model layers and event mean concentrations using the latest available data for the North IRL and Central IRL. Other tasks under this model update include hydrological and water quality calibration, tool development for load allocations, natural background model run, and technology transfer.

FY23 Environmental Support Total Maximum Daily Load (TMDL), USACE Mobile District for Space Launch Delta 45, Patrick Space Force Base, Brevard County, FL. Implementing the TMDL requirements for total nitrogen (TN) and total phosphorus (TP) reductions to large portions of the IRL system. Tasks under this contract include providing Statewide Annual Report (STAR) submissions to FDEP; addressing technical issues associated with TMDL and Clean Waterways Act regulatory compliance and implementation; designing and implementing a Managed Aquatic Plant Systems (MAPS); assessing the canals on PSFB and developing a Canal Assessment Plan (CAP), performing a Shoreline Stabilization evaluation at CCSFS; and designing a living shoreline along the FamCamp at PSFB.

TAMY DABU

SENIOR SCIENTIST | 35 YEARS EXPERIENCE | 2 YEARS WITH FIRM

Areas of Specialization

- Regulatory Permitting and Coordination
- Environmental Assessments
- Wetland Delineations
- Threatened and Endangered Species
- NEPA

Education

- BS, Biology, Bridgewater College, 1986

Professional Registrations

- N/A

Summary of Experience

As an experienced environmental biologist, Ms. Dabu has worked for both the Florida Department of Environmental Protection (FDEP) and the U.S. Army Corps of Engineers (Corps) as a regulatory program manager. Her extensive wetland regulatory experience includes performing wetland jurisdictional determinations, conducting environmental functional assessments, threatened and endangered species evaluations, and reviewing and preparing compensatory mitigation proposals that adhere to all regulatory (state federal) requirements. Ms. Dabu exercises professional judgement in recognizing and resolving and/or recommending solutions to difficult or unusual environmental problems, provides policy review and guidance, program evaluation, site inspections, and environmental assessments.



Relevant Project Experience

North Beach Street Ecological Services and Permitting, Volusia County, FL. Delineated wetland and surface water limits conducted listed species survey, and a submerged aquatic vegetation (SAV) survey in the buffer zone of the project area. All findings and determinations, including maps of the wetland/surface waters and results of the listed species and SAV survey, were submitted to support the permit application.

Environmental Assessment, Turkey Creek Water Quality Restoration, Palm Bay, FL. Prepared a feasibility study, including an environmental assessment and project alternative analysis, to evaluate restoration of Turkey Creek to its pre-1950 condition. Removal of a sediment island (spoil island) within the waterway as well as muck, previously identified as a significant nutrient contributor, was evaluated for effectiveness on pollutant removal and benefit to the ecology and health of the creek. Upstream/watershed water quality improvement projects were identified targeting stormwater, baseflow, and wastewater sources. Responsible for watershed data assessment, generation of revised water quality modeling scenarios using a previously developed model, evaluation of ecological restoration opportunities, and a comprehensive evaluation matrix ranking restoration alternatives according to their feasibility and ability to meet the established restoration success criterion.

Crane Creek Stabilization Project, Brevard County, FL. Delineating and describing waters of the U.S. and state of Florida to support a jurisdictional determination pursuant to federal and state regulatory requirements at a proposed erosion control location. Reviewed existing documents, performed desktop analysis, and conducted site inspection to delineate wetland/surface water limits, listed species, photo document findings, and set GPS coordinates. Providing permitting support, including reviewing the permit application prior to submittal with the regulatory agencies as well as agency negotiation and coordination as necessary.

Orange County State of the Wetlands Assessment, Orange County, FL. Responsible for conducting an ecological assessment of wetlands utilizing remote sensing, field validation, and geospatial analysis techniques to support the evaluation of Orange County's wetland ordinances. Used existing aerial, satellite, land use/land cover, and other spatial data from the implementation of the County's 1987 wetland ordinance to establish baseline wetland extents and to create an estimate of change in distribution of wetlands across the county. A limited field validation effort (included UAS hyperspectral imaging) was performed using established methods such as the Florida Uniform Mitigation Assessment Method (UMAM) to inform the evaluation of wetland change. These efforts will be summarized in a final report that addresses the general trend in wetland quality, provides management recommendations, and identifies potential hot spots of future wetland degradation.

**SARAH MALONE, CPM, ENV SP
SENIOR SCIENTIST | 18 YEARS EXPERIENCE | 1 YEAR WITH FIRM**

Areas of Specialization

- Permit Compliance
- Feasibility Studies
- Environmental Studies
- Program Management
- Water Quality

Education

- MS, Environmental Science & Policy, University of South Florida
- BS, Biology, University of North Texas

Professional Registrations

- Certified Public Manager
- Envision Sustainability Professional

Summary of Experience

Ms. Malone has been working in Florida's water resources industry for 18 years in many different capacities, providing her with a comprehensive understanding of the complex water management issues currently facing our state. During her career, she has managed water resources including surface waters, stormwater, wastewater systems, and public water supply. She has successfully administered all aspects of a 1,640-acre constructed wastewater treatment wetland and conservation area, including directing operations, maintenance, capital programs, and compliance and process monitoring.



Relevant Project Experience

10-Year Water Quality and Flood Control Capital Plan, Pinellas County, FL. Led the development of a 10-year capital planning and budgeting effort for all county water quality, flooding, and erosion control projects that included creating a ranking system based on the County's comprehensive plan and Envision criteria. An inventory was developed that included project recommendations from every County watershed management plan or stormwater master plan. Using aerials, as-builts, and senior staff, a list of projects was developed that were recommended but had not been constructed. Oversaw the contract for field confirmations of project potential, finalization of the project list, and updated cost estimates. The efforts resulted in a final project list of nearly 100 projects for an estimated cost of over \$350M.

Groundwater Monitoring Design, St. Augustine, FL. Developing a groundwater monitoring network to assess changes in shallow groundwater elevations and water quality conditions to identify and prioritize septic systems in the City's service area based on their potential to impact water quality with current and future groundwater levels considering sea level rise predictions. Up to twelve shallow monitoring wells will be installed and monitored for water level, conductivity, field parameters, and nutrients. Data will be analyzed and a final report prepared summarizing the data collection, analysis, and results.

Ecological Monitoring and Assessment for the Morris Bridge Road Wellfield, Tampa Bay Water, Hillsborough County, FL. Monitoring and analyzing the hydrological and ecological conditions at 34 wetlands within the project area in relation to environmental factors that occur naturally (e.g., climatic events) as well as from human activity (e.g., wellfield production). Performing ecological monitoring of wetland vegetation and other environmental conditions and completes semi-annual analyses and reporting.

Wetland System Treatment Assessment, Lakeland, FL. The treatment wetland experienced elevated total suspended solids and algae blooms in the final 3 treatment cells consisting of deep open water lakes. This study included the analysis of 10 years of monitoring data to determine treatment efficiencies, bathymetry data collection, sediment core sampling, and laboratory testing of sediment inactivation treatments to provide recommendations for water quality improvement projects.

**QUALIFICATIONS FOR RFQ #24-SQ-101KW
PROF. STORMWATER AND ENV. ENGINEERING SERVICES
COUNTY OF VOLUSIA, FLORIDA**

**WALKER DAWSON, PE
SENIOR ENGINEER | 18 YEARS EXPERIENCE | 1 YEAR WITH FIRM**

Areas of Specialization

- Program/Project Management
- Contractor Management
- Project Prioritization
- TMDL Technical Support/Water Quality
- Regulatory Coordination
- Regulatory Compliance
- Stakeholder Coordination
- Construction Administration
- Grant Compliance

Education

- BS, Ocean Engineering, Florida Institute of Technology

Professional Registrations

- Professional Engineer, FL #72273

Summary of Experience

Mr. Dawson has over 18 years of diverse experience in local government management, water quality, coastal engineering, and waterfront engineering. A recent addition to AEI, he was previously served as the head of the City of Cocoa Beach Stormwater Utility Department, a role that encompassed a wide range of responsibilities, including budgeting and schedule management, contractor and consultant oversight, capital improvement projects, basin management action plan (BMAP) nutrient reduction projects planning/ implementation, environmental compliance, permitting, coordination with governmental agencies, and stakeholder and public engagement.



Relevant Project Experience

Environmental TMDL Program Support, U.S. Army Corps of Engineers Mobile District for Space Launch Delta 45, Patrick Space Force Base, FL. Providing updated Compliance Masterplans (CMPs) for all members of the SLD45; review ongoing projects for potential TMDL credits and obtain credit for USACE clients; assist FDEP with the recently initiated Spatial Watershed Iterative Loading (SWIL) model update; provide assistance with the FDEP Statewide Annual Report (STAR) submission and review/recommend potential projects that could receive TMDL credits; design shoreline erosion control and living shoreline projects; peer and quality assurance and quality control review of engineering reports and stormwater management designs; and assist in the performance of soil, submerged aquatic vegetation, and water quality sampling for the shoreline stabilization TMDL credit.

Ramp Road Park Stormwater and Parking Improvements, Cocoa Beach, FL. Responsible for management of engineering consultant and design effort for this \$1.3 million dollar stormwater and parking improvements project. Evaluated recommended design of stormwater facilities and improved parking configuration. Reviewed the stormwater design for existing conditions and proposed conditions. Provided guidance to consultant on changes to preferred alternative.

Mims Boat Ramp Muck Removal Project, Mims, FL. Responsible for management of overall design and construction of a muck removal project that included the dredging of more than 30,000 cubic yards of muck over approximately 10 acres of the North Indian River Lagoon. Managed the engineering consultant and construction contractor from bidding, through construction completion.

Save Our Indian River Lagoon Muck Removal Program, Brevard County, FL. Responsible for the management of muck removal projects under the Save Our Indian River Lagoon (SOIRL) Project Plan, collectively valued at over \$150 million. This included the prioritization and ranking of both funded and unfunded muck removal projects as identified in the SOIRL Project Plan Updates.

Grand Canal Muck Removal Project, Satellite Beach, FL. Responsible for management of overall design and construction of a muck removal project that included the dredging of more than 500,000 cubic yards of muck over 97 acres of residential canals in the Banana River Lagoon. Managed the engineering consultant and construction contractor from bidding, through construction which is currently ongoing.

RUSS FRYDENBORG

PRINCIPAL SCIENTIST | 45 YEARS EXPERIENCE | 15 YEARS WITH FIRM

Areas of Specialization

- Aquatic Studies
- Habitat Assessment
- Rapid Bioassessment
- Benthic Macroinvertebrates
- Phytoplankton and Periphyton
- Vascular Plants/Wetlands
- Fish Taxonomy
- Water Quality Standards
- Quality Assurance Protocol
- Expert Witness

Education

- BS, Biological Science, Florida State University, 1977

Professional Registrations

- N/A

Summary of Experience

Mr. Frydenborg has 45 years of experience in designing and implementing multidisciplinary aquatic studies and interpreting results in the context of regulatory requirements. He led the development of FDEP bioassessment methods, water quality standards, and quality assurance protocols. Mr. Frydenborg writes rule language, guidance documents, and performs studies associated with aquatic ecosystems, including TMDLs, NPDES permits, WQBELs, and SSACs.



Relevant Project Experience

Site-Specific Alternative Criteria (SSAC) for Transparency, Nutrients, and Chlorophyll a in Lake Brooklyn, SJRWMD, Clay County, FL. Collected water quality and biological data and provided statistical analyses and technical support documentation to meet FDEP SSAC requirements.

Urban Water Conveyances, Tallahassee, FL. Assessed physical, chemical, and biological characterization of 15 urban water conveyances. This involved an evaluation of a reclassification to Class-III limited.

Coastal Dune Lakes, Walton County, FL. Used the Lake Vegetation Index (disturbance study of 16 globally rare lakes). Included development of human disturbance gradient, vegetation analysis, regression analysis, and public presentation to stakeholders.

Main Street Water Reclamation Facility, Level II Water Quality Based Effluent Limits (WQBEL), Gainesville, FL. Performed WQBEL study of the reclamation facility to Paynes Prairie (wetlands treatment and discharge).

Arvah Hopkins Power Plant Compliance, Tallahassee, FL. Assessed compliance with numeric nutrient criteria (wetlands receiving waters, tanks-in-series model).

Stream Restoration and Mitigation Activities, BASF Complex A, Gadsden County, FL. Included soil analysis, habitat assessment, UMAM wetland assessment, BioRecon, and design of replacement stream morphology following Kiefer's methods.

Mussel (Unionidae) Survey, Florida Power and Light, Martin County, FL. Conducted mussel survey in wetlands culminating in site-specific total ammonia nitrogen criteria. Included study design to detect presence of a species with 95% confidence.

Telogia Power, Liberty County, FL. Level II WQBEL and site-specific alternative criteria for a blackwater stream.

**QUALIFICATIONS FOR RFQ #24-SQ-101KW
PROF. STORMWATER AND ENV. ENGINEERING SERVICES
COUNTY OF VOLUSIA, FLORIDA**

ERIC CAIN, PSM

SENIOR SURVEYOR | 19 YEARS EXPERIENCE | 5 YEARS WITH FIRM

Areas of Specialization

- Land Surveying
- Subsurface Utility Exploration (SUE)
- Utility Coordination

Education

- BS, Geomatics, University of Florida, 2016

Professional Registrations

- Professional Surveyor and Mapper, FL #LS 7131

Summary of Experience

Mr. Cain is a licensed professional surveyor with more than 19 years of experience on projects within central Florida. He specializes in topographic surveys, utility surveys, and utility investigations. He is a member of the Florida Surveying and Mapping Society, National Society of Professional Surveyors, and Florida Global Navigation Satellite Systems Users Group.



Relevant Project Experience

North Beach Street Improvements, Volusia County, FL. Provided topographical survey and subsurface utility engineering services in support of design services for the vertical realignment of North Beach Street along approximately 2,600 feet, from the bridge over the Halifax River to north of Pine Tree Dr.

Wekiva Watershed Study, Seminole County, FL. Provided field survey information consisting of surveying determined structures, pipes and channel cross-sections divided into three priority areas.

Black Lake Watershed BMP Alternatives Evaluation, Orange County, FL. Provided field survey information, including survey of culverts, roads, cross-sections and Seasonal High-Water Elevation.

Shingle Creek Watershed BMP Alternatives Evaluation, Orange County, FL. Provided field survey information, including survey of culverts, roads, cross-sections and Seasonal High-Water Elevation.

Lake Killarney Drainage Improvements, Orange County, FL. Within specified limits, performed a full topographical survey, inclusive of SUE investigation and reporting for utilities and an unknown buried structure. Additionally, within other specified limits performed only storm gravity systems survey.

Whitcomb Drive Drainage Improvements, Seminole County, FL. Prepared a topographical survey, drainage, and utility survey.

West Lydell Drainage, Kissimmee, FL. Provided a topographical survey, SUE services, utility survey, and utility coordination services for the construction of an underground stormwater pipe system to replace the existing swale drainage system located within the project limits.

Bill Fredrick Park Lift Stations Improvements, Orlando, FL. Provided subsurface utility engineering services, marking any detectable utility within the project limits for the engineering design and permitting of upgrades to six existing lift stations located within Bill Fredrick Park.

**QUALIFICATIONS FOR RFQ #24-SQ-101KW
PROF. STORMWATER AND ENV. ENGINEERING SERVICES
COUNTY OF VOLUSIA, FLORIDA**

CARLO PILIA

SENIOR SUE SPECIALIST | 20 YEARS EXPERIENCE | 7 YEARS WITH FIRM

Areas of Specialization

- Subsurface Utility Engineering (SUE)
- Civil Engineering
- Utility Coordination

Education

- BS, Structural-Building (Civil) Engineering, University of Cagliari (Italy), 2004

Professional Registrations

- Professional Engineer, AZ #58267

Summary of Experience

A licensed engineer in Arizona, Italy and Ireland, Mr. Pilia serves as the SUE lead. He is a member of the Florida Engineering Society, American Society of Civil Engineers (ASCE), and American Society of Highway Engineers. Mr. Pilia serves on the technical committee of the ASCE 38-22 "Standard Guideline for Investigating and Documenting Existing Utilities" and as member of the ASCE Utility Engineering & Surveying Institute, Utility Risk Management Division ExCom.



Relevant Project Experience

North Beach Street Improvements, Volusia County, FL. Provided topographical survey and subsurface utility engineering services in support of design services for the vertical realignment of North Beach Street along approximately 2,600 feet, from the bridge over the Halifax River to north of Pine Tree Dr.

Lake Killarney Drainage Improvements, Orange County, FL. Within specified limits, performed a full topographical survey, inclusive of SUE investigation and reporting for utilities and an unknown buried structure. Additionally, within other specified limits performed only storm gravity systems survey.

Whitcomb Drive Drainage Improvements, Seminole County, FL. Prepared a topographical survey, drainage, and utility survey.

Oak Park Road Drainage Improvements, Orange County, FL. Provided preliminary utility investigation to assess existing utilities within the limits and were potentially in conflict with the proposed improvements. ECHO also provided topographical survey to survey any miscellaneous items requested during the preliminary phase.

Orange Boulevard Outfall Survey, Seminole County, FL. Provided topographic survey and SUE services.

West Lydell Drainage, Kissimmee, FL. Provided a topographical survey, SUE services, utility survey, and utility coordination services for the construction of an underground stormwater pipe system to replace the existing swale drainage system located within the project limits.

Bill Fredrick Park Lift Stations Improvements, Orlando, FL. Provided subsurface utility engineering services, marking any detectable utility within the project limits for the engineering design and permitting of upgrades to six existing lift stations located within Bill Fredrick Park.



QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

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LICENSEE DETAILS 1:45:25 PM 9/5/2023

Licensee Information

Name:	GEOSYNTec CONSULTANTS, INC. (Primary Name)
Main Address:	900 BROKEN SOUND PKY NW #200 BOCA RATON Florida 33487-2775
County:	PALM BEACH

License Information

License Type:	Engineering Business Registry
Rank:	Registry
License Number:	4321
Status:	Current
Licenseure Date:	01/24/1986
Expires:	

Ron DeSantis, Governor
Melanie S. Griffin, Secretary

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ELLARD, MARK W
 1309 CARPENTER BRANCH CT
 OVIEDO FL 32765

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 353 STREAMVIEW WAY
 WINTER SPRINGS FL 32708

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HARDIN, MICHAEL D.
 1029 WINDING WATERS CIRCLE
 WINTER SPRINGS FL 32708

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TEAGUE, GLORIA LEONOR
 14149 HAMPTON FALLS DRIVE N.
 JACKSONVILLE FL 32224

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HARTSHORN, NICHOLAS AARON
 2360 MAJESTIC BAY LANE
 UNIT 408
 WINTER SPRINGS FL 32708

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**QUALIFICATIONS FOR RFQ #24-SQ-101KW
PROF. STORMWATER AND ENV. ENGINEERING SERVICES
COUNTY OF VOLUSIA, FLORIDA**

THE OFFICIAL SITE OF THE FLORIDA DEPARTMENT OF BUSINESS & PROFESSIONAL REGULATION

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Licensee Information

Name:	SCOTT, MICHAEL HUGH (Primary Name)
Main Address:	P O BOX 3917 LAKELAND Florida 33802
County:	POLK

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	72475
Status:	Current,Active
Licensure Date:	01/29/2011
Expires:	02/28/2025

Special Qualifications

Qualification Effective	
Civil	07/29/2010

Florida **dbpr** Department of Business & Professional Regulation

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Licensee Information

Name:	RANJBAR MOSHFEGHI, SEVIL (Primary Name)
Main Address:	525 ROCHESTER ST OVIDO Florida 32765
County:	SEMINOLE

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	97151
Status:	Current,Active
Licensure Date:	09/11/2023
Expires:	02/28/2025

Special Qualifications

Qualification Effective	
Civil	09/11/2023

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BURLESON, ROBERT WESLEY
356 TURKEY CREEK
ALACHUA FL 32615

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QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

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DAWSON, WALKER JAMES
119 DELFON ROAD
COCOA BEACH FL 32931

LICENSE NUMBER: PE72273
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BALLOCK, CRAIG GEORGE
400 SANDRINGHAM COURT
WINTER SPRINGS FL 32708

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Florida Department of Agriculture and Consumer Services
Division of Consumer Services
Board of Professional Surveyors and Mappers
2005 Apalachee Pkwy Tallahassee, Florida 32399-6500

License No.: **LS7131**
Expiration Date February 28, 2025

Professional Surveyor and Mapper License
Under the provisions of Chapter 472, Florida Statutes

ERIC CAIN
1009 TALON PL
WINTER SPRINGS, FL 32708-6594



WILTON SIMPSON
COMMISSIONER OF AGRICULTURE

This is to certify that the professional surveyor and mapper whose name and address are shown above is licensed as required by Chapter 472, Florida Statutes.



3504 Lake Lynda Drive, Suite 155
Orlando, FL 32817
407.321.7030
www.geosyntec.com

May 9, 2024

Kathy Williams, Procurement Manager
Volusia County
123 W. Indiana Avenue, Room 302
DeLand, FL 32720

**Re: Request for Qualifications #24-SQ-101KW
Professional Stormwater and Environmental Engineering Services**

Dear Ms. Williams:

To address water resource and environmental concerns, the County of Volusia (County) must achieve the most benefit from current programs and capital improvements, while also maximizing the value of new projects. **Geosyntec Consultants, Inc. (Geosyntec)**, through this qualifications submittal to provide stormwater and environmental engineering services, has assembled a team of subject matter experts to provide services for the County to proactively manage flooding, infrastructure, water quality, sustainability, and resiliency while maintaining regulatory compliance.

Geosyntec is a multidisciplinary consulting firm comprising engineers, scientists, and innovators with vast experience providing consultation in all aspects of professional stormwater management and engineering consulting services. We are fully versed in the application of cutting edge best management practices, hydrologic and hydraulic (H&H) modeling of highly urbanized areas and the utilization of geographic information systems data management resources. Our services include:

- Capital improvement strategies and engineering designs to address flooding, water quality, and erosion control issues
- Watershed management planning
- Stormwater management planning, design, and engineering
- Inventory and assessment of drainage facilities and natural systems
- Floodplain delineation and mapping
- Resiliency/vulnerability assessments
- Ecosystem restoration/enhancement
- National Pollutant Discharge Elimination System (NPDES) permit compliance
- Total maximum daily load (TMDL) compliance support
- Developing ecosystem goals and targets
- H&H and Water Quality Modeling
- Permitting services

Enhancing our expertise for this solicitation are the following subconsultants with whom we have current working relationships:

1. Applied Ecology (ecological and biological assessments; permitting)
2. Frydenborg EcoLogic (ecosystem goals and targets; TMDL/numeric nutrient criteria expertise)
3. Geotechnical and Environmental Consultants (geotechnical testing and support)
4. ECHO UES (land surveying and subsurface utility exploration)



Unique Qualifications of Geosyntec

- Direct knowledge of the County through our services under this contract on four projects since 2019:
 - North Beach Street Grade Raise
 - Pooser Pond Stormwater Improvements
 - Spring Hill Green Infrastructure Resiliency Assessment
 - Tractor Way Oil Water Separator
- Specialize in on-call stormwater engineering services (currently serve more than 20 Florida government entities)
- Assist clients in securing and administering grant funding (more than \$33M in the last 15 years)

Geosyntec Letter of Interest

May 9, 2024

Page 2 of 2

It has been our pleasure to serve the County under this contract since 2019. We continue to be available and committed to providing exceptional services to the County for the contract duration.

Sincerely,



Mark Ellard, PE, CFM, BC.WRE, ENV SP

Senior Principal/Vice President

Direct Telephone: 321.249.9360

mellard@geosyntec.com

Mr. Ellard is a corporate officer with authority to bind Geosyntec in all matters related to this solicitation.

QUALIFICATIONS FOR RFQ #24-SQ-101KW COUNTY OF VOLUSIA, FLORIDA



PROF. STORMWATER AND ENV. ENGINEERING SERVICES

FIRM PROFILE

BRIEF HISTORY



Incorporated in Florida on December 1, 1983, Geosyntec is a specialized consulting and engineering firm that works with private and public sector clients to address complex problems involving the environment, natural resources, and civil infrastructure. During our early years, Geosyntec primarily focused on geotechnical engineering and environmental consulting services, helping clients with soil and groundwater contamination and the design of civil infrastructure. The firm developed expertise in various environmental disciplines, including water resources, air quality, and ecological sciences. By the early 2000s, Geosyntec's work on major infrastructure projects, environmental assessments, and water resource management projects earned a strong reputation within the industry. Today, Geosyntec employs more than 2,200 engineers, scientists, and professionals in 100 offices throughout the United States and international locations, including 11 offices in Florida. [Engineering News-Record \(ENR\)](#), a longstanding industry publication, consistently ranks Geosyntec as one of the United States' top firms in several categories.

LEGAL ENTITY

Geosyntec is a large, professional services business entity with a C-corporation designation. Our certificate of status from the Florida Department of State is shown to the right.

SUNBIZ REPORT

A copy of the Geosyntec Florida Department of State, Division of Corporations' Sunbiz report is located at the end of this section.

OWNERSHIP INTERESTS

Geosyntec is a privately held firm with an employee ownership program. Geosyntec Holdings LLC owns 60% of Geosyntec Consultants, Inc. The remaining 40% is owned by individual employees, none of whom own 5% or more.

ACTIVE BUSINESS VENUES

Geosyntec maintains offices throughout the United States (11 offices in Florida) and within Canada, Europe, Australia, the United Arab Emirates, the United Kingdom, Sweden, Finland, and Iberia. Services are provided domestically and internationally.



QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

PRESENT STATUS AND PROJECTED DIRECTION OF BUSINESS

Geosyntec's mission is to help clients succeed by delivering exceptional service and best-value solutions for their endeavors involving the environment, natural resources, and infrastructure. We accomplish this mission by gaining a deep understanding of our clients' objectives, assembling the best teams, and developing and deploying innovative technical capabilities and designs that add value to our clients' projects and programs. In this, we aspire to deliver exceptional solutions without exception.

We are a vibrant, practice-centered business with a strong desire for continuous self-improvement and reinvention to meet the evolving needs of our clients and to productively engage with new ones. We are highly regarded in core markets for delivering tailored, best-value solutions and for partnering with our clients. We create exceptional career opportunities for our employees; we involve them in challenging projects, encourage mentoring relationships, and support them as they engage with clients in meaningful ways. Our professionals are team players who are generous with their time and knowledge.

We achieve our objective through developing, recruiting, and engaging practitioners distinguished by their exceptional expertise, creativity, entrepreneurial spirit and professionalism, and level of dedication to solving our clients' problems. Our most important advantage is our people, who are further distinguished by the effectiveness of their collaboration in serving our clients. We are also differentiated by the business model we have chosen that reinforces these attributes: our core operating model is Sell-Manage-Do, and we are employee-owned and practitioner-led.

Finally, we are large enough to have broad and deep technical talent and geographic coverage in our core markets, yet small and focused enough to provide our clients with a high level of customized and attentive service, bringing our exceptional resources to bear on their endeavors. We envision sustained moderate growth, while avoiding significant debt and a reduction in our quality quotient.

OVERALL QUALIFICATIONS TO PROVIDE REQUESTED SERVICES

Our team's exceptional expertise of direct relevance to the County for the services to be addressed under this contract includes the following elements.

ENGINEERING ANALYSIS AND DESIGN AND PERMITTING OF CAPITAL IMPROVEMENT PROJECTS

Feasibility and Project Conceptualization. As a core service area within our firm, we provide planning, engineering, and design services to help our clients address their infrastructure development, restoration, improvement, and revitalization projects. Our holistic approach to water resources engineering and design services is guided by safety, reliability, resilience, and environmental/social/governance principles. We assist municipal clients with the identification of new water-related projects or retrofits that improve water quality, management, flooding level of service (LOS), and/or provide infrastructure resiliency. Further, Geosyntec is unique in that we can design both innovative best management practices (BMPs) and conventional stormwater facilities. Our experts have performed key research that led to development of numerous innovative stormwater treatment BMPs, including underground storage, stormwater harvesting, pervious pavement systems, floating treatment wetlands, biosorption activated media, and green roofs. Conventional design includes stormwater pump stations and water control structures with special expertise on process controls, bulkhead, and sheet pile reinforcements.



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We prepare recommended project concepts to improve flooding, water quality, and infrastructure resiliency. Solutions are conceptualized and prioritized to address improvements in a reasonable, cost-effective manner based on relative benefit to flood reduction and increase in LOS. Items that are considered as part of the design:

- Design criteria included in the County's design standards
- Water quality treatment, infiltration opportunities, and other design factors that promote green infrastructure and/or low impact design (LID) principles
- Opportunities for source control
- Opportunities to address erosion issues
- Reduction in biological impacts (ex., fecal)
- The feasibility of the improvement alternatives is evaluated using the following criteria/factors:
 - Probable costs (including land acquisition, right-of-way, capital cost, etc.)
 - Constructability (utility conflicts, physical constraints, etc.)
 - Anticipated ecological and environmental impacts
 - Expected water quality impacts (surface and groundwater)
 - Implementation considerations (practicality)
 - Social acceptability
 - Expected reliability
 - Estimates of probable operation and maintenance costs
 - Permitting requirements/feasibility
 - Anticipated flood mitigation
 - Severity of the problem
 - Relative difficulty of routine maintenance
 - LOS improvements anticipated
 - Impacts of phases improvements, upstream or downstream
 - Special basin rule discharge limitations
 - Pollutant reduction benefit-cost (i.e., cost per pound TN, TP removed)
 - Future land use change impacts

Design. Geosyntec is a full-service design firm that develops complete construction plan packages and related specifications. Following Florida Department of Transportation (FDOT) standard specifications and/or County requirements, we will prepare plans for County review on appropriate intervals such as 60%, 90%, and 100% depending on the project requirements. We have a detailed and specific quality control and quality assurance review process to ensure defensible plans. This generally includes reviews by the engineer-of-record, with separate senior and peer reviews. A constructability review is also included. We have a depth of

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computer aided design (CAD) staff and resources to facilitate efficient plans production, and where necessary, apply additional resources to meet expedited project timeframes. Geosyntec also has the support of various ancillary engineers with expertise in mechanical, electrical, structural, and geotechnical engineering.

Permitting. Geosyntec has comprehensive experience in regulatory consultation and permitting of stormwater, water resources, waterfront, coastal, and restoration projects in Florida through regular, proactive engagement with the Florida Department of Environmental Protection (FDEP), water management districts, and US Army Corps of Engineers (USACE). In addition, we work closely with a range of ancillary regulatory entities, including the Florida Fish and Wildlife Conservation Commission, US Fish and Wildlife Service, State Historic Preservation Office, and National Marine Fisheries Service. Through numerous project interactions, we are very familiar with water management district permit review staff, particularly in the St. Johns River Water Management District, which helps us pinpoint permitting requirements and constraints that help the permitting process work smoothly. We maintain a strong, proactive relationship with the USACE Jacksonville District and directly support the construction of post-storm flood control and coastal emergency projects. We maintain a strong relationship with FDEP through joint coastal permitting and the Coastal Construction Control Line Program, as well as serving as advisors to FDEP.

Cost Estimates and Bid Support. Geosyntec has decades of experience in the development of capital improvement projects, including the development of project design, construction documents, and bid documents. We frequently provide estimation of project costs and have a proven track record of providing realistic bid estimates based on our ongoing experience with realized bid values. We have a demonstrated history of providing practical budget estimates for a range of engineering (civil, environmental, and geotechnical) projects. We use institutional knowledge of projects and accepted industry standards (for example, FDOT statewide or market area cost averages, RSMeans, etc.) as a basis for construction bid packages that typically comprise plan sets and technical specifications. Additionally, the bid form is developed based on project unit costs that are comparable to our own internal cost estimate calculations.

Construction Phase Services. We perform construction management as the engineer-of-record, providing field observations, project oversight, construction progress meetings, contract administration, and permit compliance and monitoring. As engineer-of-record, we develop the agenda and lead regularly scheduled construction progress meetings with the contractor and the owner, in this case, the County. We review the contractor's submittals including requests for information and shop drawings, conduct site assessments, and provide recommendations for payment based on the contractor's submittals and our site observations. We review and submit permit-required data and reports. After substantial completion of a project, we work with the owner to develop a punch list and project certification.

As-needed specialty services will be provided during the feasibility, design, permitting, and construction process by the following subconsultants, each of whom we enjoy long-standing professional relationships:

1. GEC (geotechnical support)
2. Applied Ecology (ecological and biological support)
3. ECHO UES (surveying and subsurface utility exploration)

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WATERSHED MANAGEMENT PLANNING



Our water resources staff includes professional engineers, scientists, and GIS specialists. Our technical diversity allows Geosyntec to provide effective studies and solutions for any water-related environmental or developmental issue. We provide customized data collection, monitoring, assessments, computer modeling, alternatives analyses, pollutant management planning and design, nutrient reduction plans, ecological restoration, and regulatory guidance.

Geosyntec has provided services on more than 200 watershed/stormwater management plans/projects for Florida local governments, including seven stormwater master plans within the last five years for the following local governments in Florida: the cities of Ormond Beach, Titusville, Riviera Beach, Cocoa Beach, and Deerfield Beach; and Flagler and Bay counties. Additionally, we have prepared 12 watershed assessments and/or basin studies for the following government entities over the last 10 years: SWFWMD; Pinellas, Orange, Seminole, Osceola, Manatee and Broward counties; and the City of Tallahassee.

Hydrologic and Hydraulic Modeling. Geosyntec possesses a high level of modeling expertise that will benefit the County. Our lead engineers have more than 2,500 square miles of detailed modeling expertise using Interconnected Channel and Pond Routing (ICPR), Stormwater Management Model (SWMM), and other common model platforms. We routinely use models to evaluate improvement alternatives at a watershed scale down to the local level, allowing effective and implementable design selections. Examples of intensive ICPR modeling include the countywide model for the Flagler County Stormwater Master Plan; South Creek Watershed Management Plan for Pinellas County, FL; Lake Harney Watershed Flood Resiliency Plan for Seminole County, FL; and Bowlees Creek Watershed Management Plan for Manatee County, FL. More complex project implementation requires greater attention to the interaction of surface water and groundwater. We apply our expertise through traditional MODFLOW-based tools and more sophisticated models such as the MIKE SHE/MIKE Hydro River Model, which we used in the countywide future flood model we developed for Broward County. Our understanding of modeling at all scales and various approaches for applying appropriate level of detail is critical in developing master plan models that can be particularly effective in identifying drainage infrastructure LOS issues and confirming problem flooding areas.



We have an extensive history of developing, applying, and reviewing hydrodynamic modeling systems to predict circulation and transport in the coastal and estuarine environments, as well as freshwater river, lake and reservoir environments. We provide both screening-level and detailed dynamic evaluations of watershed hydrology, hydraulics, and pollutant loadings. Models utilized include XPSWMM, SWMM5, HEC-HMS, HEC-RAS/GeoRAS, ICPR4, LSPC, SWAT, PLOAD, BASINS/HSPF, WAM, and WMM.

Water Quality Assessments and Modeling. Our water resources staff specialize in performing hydrologic and water quality assessments of receiving waters and watersheds, as well as waterbody impairment listings, total maximum daily loads (TMDLs), and basin management action plans (BMAPs). We integrate GIS with all projects, including design and implementation of hydrologic and water quality monitoring programs, asset management, geospatial analysis, watershed, hydrologic and water quality model pre- and post-processing. We provide customized data collection, monitoring, assessments, computer modeling, alternatives analyses, pollutant management planning and design, nutrient reduction plans, and regulatory guidance.



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Geosyntec conducts pollutant load reduction assessments and planning to assist stakeholders in achieving their TMDL targets and provide National Pollutant Discharge Elimination System (NPDES) support. We routinely use water quality models, such as the BMPTRAINS Model or the SIMPLE Seasonal Model. If modeling beyond the capabilities of standard spreadsheet-based pollutant loading models is needed, we are recognized experts with the following models: BATHTUB, SWAT, HSPF, WinSLAM, and CE-QUAL-W2 to characterize receiving waters. We perform hydrodynamic pollutant transport and/or water quality assessments in rivers, lakes, reservoirs, estuaries, and oceans using 1-D, 2-D, and 3-D models.

BMPs. Effective design, permitting, and construction of BMPs are important for successful water quality projects. Geosyntec specializes in developing new pollutant reduction projects and retrofitting existing areas. Maitland is essentially built-out, thus small footprint, distributed stormwater management practices may be the only viable options. We have extensive experience utilizing green infrastructure practices, including low impact design (LID) technologies for stormwater management. These allow for enhancing water recharge to distribute the hydrological load where soil types allow. Several LID technologies working in parallel and/or series can also enhance water quality treatment by providing a treatment train approach to pollutant load reductions. Often these strategies can work in conjunction with traditional practices, such as stormwater ponds, but help to lessen the overall stormwater system footprint.

Geosyntec is a lead consultant in the development and maintenance of data included in the clearinghouse of BMP effectiveness data (www.bmpdatabase.org). This database incorporates data from studies throughout the U.S. and from more than 70 sites in Florida. Involvement in this project has resulted in a more sophisticated approach to evaluating BMP performance from literature, specifically that simple BMP percent reduction should not be the stand-alone measure of a BMP's effectiveness because site conditions, watershed characteristics, and regional variability could impact BMP performance at a given site. An alternative way to evaluate BMP performance is to examine effluent concentration data from a given BMP compared to site-specific event mean concentration data for a better representation of specific BMP performance when using data from a different region or under different conditions.

Floodplain Management. We specialize in performing watershed, hydraulic/hydrologic and riverine, estuarine, and coastal floodplain assessments and modeling in support of floodplain mapping. We have significant expertise in the areas of storm surge and sea level rise (SLR) modeling and assessments to support project development, future risk planning, and regulatory compliance.

Our engineers and modelers, who are fluent with FEMA's flood zone mapping and remapping efforts, routinely review flood hazard maps for accurate representation of flood zones at a local level, which can lead to the filing of Flood Insurance Rate Map (FIRM) appeals or letters of map revision (LOMRs). Further, since FEMA's flood zone maps do not take into account SLR, we perform detailed numerical modeling analyses of storm surge, waves, and coastal inundation to quantify/map areas of vulnerability (riverine, estuarine and coastal locations). To date, Geosyntec has successfully obtained more than 80 LOMRs and Conditional LOMRs for properties where existing flood maps were found to be inaccurate.

Vulnerability Assessments and Resilient Design. With over four decades of experience, we utilize cutting-edge tools to quantify storm surge, wave impacts, and river flooding, enhancing coastal resilience and stormwater management. Our approach integrates flood protection with ecological enhancement, public space creation, and water quality improvements, aligning with the County's goals for sustainable development and climate adaptation. Representative projects include coastal risk assessments for infrastructure, hazard

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assessments, and vulnerability assessments for numerous Florida municipalities, demonstrating our commitment to resilient design solutions tailored to local needs.

We prioritize comprehensive approaches that consider existing infrastructure, environmental elements, and community input. Our goal is to develop alternatives that are effective, compliant, and affordable, while integrating mitigation and adaptation measures into the County's regulatory framework while fostering community understanding and support through robust public outreach programs. Our experience in flood abatement design and drainage retrofit projects demonstrates our capability to provide structural and non-structural solutions to mitigate flood risks effectively.

TMDL PROGRAM ASSISTANCE AND IMPLEMENTATION

TMDL Program Assistance. Our technical professionals specialize in providing water quality assessment and restoration, impaired water listing, TMDL, and BMAP support to local governments and state agencies throughout Florida. This is exemplified by our long-term water resources continuing services contracts in Florida with FDOT and numerous local governments. To date, we have represented stakeholders in nearly 550 adopted or draft TMDLs, 33 water quality plans, and four restoration plans, including two reasonable assurance plans in Florida. Since 2009, we have submitted listing comments on 2,100 water quality impairments; approximately 160 were recommended for removal from the verified list, of which 111 proposed impairments were removed from final adopted lists. [Subconsultant Russ Frydenborg, when with FDEP, developed the Impaired Waters Rule \(Chapter 62-303, F.A.C.\) and performed numerous TMDL environmental studies.](#) [Subconsultant Applied Ecology assists local governments with TMDL implementation, including nutrient reduction credits through the BMAP process.](#) [Dr. Claudia Listopad of Applied Ecology is largely responsible for the development of the Spatial Watershed Iterative Loading \(SWIL\) Model, which is currently used by FDEP to allocate pollutant loading within the Banana River, North and Central Indian River Lagoon watersheds.](#) Using a combination of spatial tools and modeling, including groundwater transport predictions and optimized hotspot analysis, Dr. Listopad identified communities/individual parcels of interest by ranking the potential of contamination to groundwater from wastewater sources.



Developing Ecosystem Goals and Targets. The Geosyntec team specializes in developing effective strategies to address ecosystem impairments and other challenges. This includes evaluating and establishing proper goals and targets for restoration of wetlands, surface water bodies, and estuarine settings. Often these targets are the result of regulatory requirements such as TMDLs, numeric nutrient criteria, minimum flows and levels (MFLs), or other environmental restoration goals. Our key professionals are very familiar with collecting the necessary environmental and water quality data to support such decisions and produce defensible plans for improving ecosystems. We routinely work with our municipal and water management district clients to further these efforts. We also address ecosystem restoration on a project-specific basis where the opportunity to protect or enhance wetlands or surface water resources can be identified as part of the overall project solution.

Our team's combined capabilities and experience include, but are not limited to: evaluation of the effects of recommended MFLs on ecological and other non-consumptive environmental uses; environmental criteria development for use in MFL determination; water resource value (WRV) assessment in support of ecosystem evaluation and target development; extensive empirical and mechanistic modeling (hydrologic, hydrogeologic, hydrodynamic, and hydraulic) to relate environmental responses to changes in flows and levels; use of hydro-ecological models (including Physical Habitat Simulation Model [PHABSIM] and System for Environmental

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Flow Analysis [SEFA]); monitoring program design and data collection; soils assessment and analyses; integrated surface and groundwater modeling; saltwater intrusion modeling; statistical analyses; vegetation, fish and wildlife, benthic, wetland, and stream condition and habitat suitability indices; database management and development; and ground and surface water chemical characterizations.

Our team has a clear understanding of the technical disciplines required to effectively develop ecosystem goals and targets. [Subconsultant Russ Frydenborg, while with FDEP, revised the Water Quality Standards Rule \(Chapter 62-302, F.A.C.\), including numeric nutrient criteria, dissolved oxygen criteria, biological health criteria, and human health-based criteria.](#) [Dr. Claudia Listopad of Applied Ecology specializes in techniques to streamline holistic hydrologic and water quality assessments of complex systems.](#)

Our extensive and respected volume of work includes evaluations of ecosystem responses to changes in hydrology, either in terms of magnitude or duration. We provide a well-respected understanding of the relationships between biological characteristics of a system and associated watershed and floodplain characteristics, and a recognized ability to develop relationships between stressors and responses which allow a deeper understanding at system-specific levels.

Our team's expertise in sample design, data collection and monitoring, groundwater modeling, surface water modeling, hydrodynamic modeling, and statistical analysis is valuable in the development of ecosystem goals and targets. In particular, understanding the relationships among environmental parameters such as seasonal and longer-term patterns in flows and water levels, elevation, soils, vegetation community structure, and temporal and spatial variability in water quality is equally valuable in identifying biological indicators that may be used in the development and establishment of ecosystem goals and targets.

Lastly, a clear understanding of the need for adequate data quality and quantity is paramount, as is how the interplay of data quality and quantity along with critical assumptions, and analytical limitations influence the level of certainty in any analyses. Given the importance of trustworthy data in all our efforts, we employ extensive data quality assurance/quality control (QA/QC) as part of our initial data evaluation, prior to utilizing the data. It is sometimes the case that insufficient data are available to develop defensible relationships between physical characteristics and ecosystem responses. If it is determined necessary that additional data are needed, the Geosyntec Team has extensive experience designing and implementing a variety of monitoring programs customized for the task at hand.

NPDES PROGRAM ASSISTANCE

NPDES MS4 Permit Compliance. Geosyntec professionals have extensive NPDES MS4 program experience and actively participate in the FDEP-managed working groups during rulemaking and permit revision activities. For example, we recently participated in FDEP's efforts to update the NPDES Phase I and Phase II MS4 permits.

In 2021, FDEP adopted an updated NPDES Phase II MS4 permit, with minor technical changes in July 2023. Geosyntec reviewed and provided comments to FDEP during the permit update process. The new Phase II MS4 permit includes several significant changes, including a new two-step application process, public noticing conditions, an updated Notice of Intent (NOI), an updated annual report form, and TMDL implementation requirements. We have experience implementing all requirements of the Phase II MS4 permit, including developing and implementing best management practices for the six minimum control measures, annual reporting, condition assessments of stormwater management facilities, training, and TMDL implementation. [Our understanding of these recent permit updates by FDEP and our extensive NPDES MS4 program](#)

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experience, enables us to provide valuable recommendations to the County related to its Phase II MS4 permit program.

NPDES MS4 Program Experience. The below summary highlights Geosyntec's specific NPDES program experience.

- **NPDES MS4 Annual Report Development.** The accurate development and timely submittal of annual reports for NPDES MS4 permits is critical for maintaining program compliance. Geosyntec's technical professionals have successfully developed more than 100 NPDES MS4 annual reports. We fully understand FDEP expectations for annual reporting, including the reapplication requirements needed to renew permit coverage. We are currently assisting Pasco and Seminole counties and the cities of Largo, Zephyrhills, and St. Petersburg, in the preparation of their Cycle 4 Year 5 NPDES annual reports.
- **Stormwater Management Facility Compliance.** Geosyntec staff have extensive experience performing compliance inspections on a variety of stormwater management assets, including the inspection and condition assessment of thousands of wet detention, dry retention, pollution control devices, treatment swales, exfiltration systems, and stormwater outfalls throughout Florida. We have numerous staff who have the experience, registration, and training to qualify as a stormwater inspector under the new stormwater rule that was ratified by the Florida Legislature on March 8, 2024.
- **Training and Education.** Training municipal and regulatory staff and contractors is key to managing a successful Phase II MS4 program. We have experience developing stormwater-related education programs and providing training to municipal staff and contractors. We developed the Illicit Discharge Detection and Elimination (IDDE) and Spill Prevention and Response training programs for FDOT which are currently in use statewide. *We can also assist the County with erosion and sediment control inspector certification training courses and developing public education and outreach materials.*
- **IDDE.** We have extensive experience identifying, investigating, and eliminating illicit discharges and connections. Our technical staff work with local government code enforcement staff and regulatory agencies (FDEP, water management districts, and Florida Department of Health). *Geosyntec can support the County with source tracking and sampling, as necessary to identify potential sources.* For example, we recently developed a GIS-based IDDE inspection and reporting tool to assist a local government client manage their IDDE program.
- **Notice of Intent (NOI).** On behalf of Flagler County, we recently prepared the initial NOI for the County's involvement in the NPDES program. In response to a letter dated April 14, 2021, from the FDEP advising that Flagler County's discharges of stormwater from its Phase II MS4 are required to be covered under a permit, we coordinated with FDEP and submitted a NOI to use the NPDES Two-Step Generic Permit for Discharge of Stormwater from Phase II MS4s. The submittal identifies the BMPs that the County will implement as minimum control measures as part of its stormwater management program.

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OTHER STORMWATER/ENVIRONMENTAL NEEDS THAT MAY ARISE

In addition to the above services/expertise, Geosyntec also provides the following services through inhouse staff.

Sampling and Monitoring. We monitor BMP pollutant reduction effectiveness and optimization through sampling and statistical data analysis. Our staff has extensive experience in sampling surface water and sediment media as well as measuring hydrological conditions. We collect and analyze flow-weighted (proportional) stormwater quality (runoff) samples.

We maintain a fleet of stormwater autosamplers and ancillary equipment that can be deployed short- or long-term on client sites. We install the units and related flow sensors and rain gauges, tuning them to the appropriate site setup conditions. We typically outfit our installations with telemetry and solar power to allow for remote access to the equipment to ensure proper working order, troubleshoot problems, and verify successful sample completion from the office or via mobile phone. This reduces the impact to staff time related to false starts or unexpected down time, translating into cost savings for the client. We are familiar with operations and maintenance requirements and have inspectors who can be dedicated to perform routine maintenance of the system.

Bacterial Source Assessments. Geosyntec is recognized as a national leader in bacterial source assessment, using advanced forensic techniques such as microbial source tracking (MST), spatial data analysis, isotopic analyses, caffeine, sucralose, and pharmaceuticals. These methodologies are utilized to identify bacterial sources as anthropogenic or natural. MST targets specific genetic markers associated with various animal species, including humans, dogs, cows, birds, etc. Resources are focused solely on bacterial issues that present a public health risk. With no regulatory requirement to eliminate natural background sources of bacteria, it is important to distinguish a bacterial source as anthropogenic. This allows the County to prioritize appropriate resources for a background source. *Geosyntec is committed to partnering with the County to proactively identify bacterial impairments and verify the County's limited resources are directed towards addressing the identified problems.*

Groundwater Assessments/Hydrogeological Investigations. Hydrogeological expertise is essential for accurately assessing subsurface conditions, informing infrastructure design, and evaluating accurate parameterization and environmental impacts in H&H modeling. Additionally, hydrogeological considerations are critical to determine infiltration and runoff conditions for the development of green infrastructure BMPs such as rain gardens or pervious pavement. Our inhouse licensed professional geologists and engineers conduct geotechnical evaluations of surface water impoundments and groundwater systems in the performance of CIP feasibility analyses, groundwater quality investigations, evaluation of groundwater and surface water interactions, water supply, and consumptive use planning and permitting. We conduct geologic mapping using a wide range of drilling methods including mud rotary, hollow stem, Sonic, direct push technology, reverse air, and direct air. Our extensive experience with aquifer profiling techniques allows for discrete sampling and aquifer characterization as a function of well depth. Our expertise includes performing subsurface investigations, laboratory and field testing of soils and construction materials, and preparing recommendations for design and construction. *We assist local governments throughout Florida in the evaluation of innovative approaches to meeting Outstanding Florida Springs BMAPs by leveraging underused space to pump groundwater that exceeds TMDL target concentrations to treatment areas which provide nitrate removal prior to infiltration back into the ground.*

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GIS Applications and Database Management. Geosyntec sets up preliminary model features, parameterizes watershed models, and models stormwater systems, using ArcGIS, while building and managing geographic databases. Geosyntec engineers, modelers, and GIS analysts routinely build sophisticated watershed models from complex geographic databases. For example, we identified flooding and water quality deficiencies in the Weeki Wachee Prairie watershed in Hernando County for the Southwest Florida Water Management District (SWFWMD) using the H&H model and associated graphical user interface ICPR4. We updated an existing SWFWMD H&H model to delineate 0.2-percent annual exceedance probability floodplains; migrated model components to the GWIS geodatabase for inundation polygon analyses and delineation; and conducted a level of service analysis to identify road and structure deficiencies for storm events in accordance with SWFWMD and Hernando County criteria. Additionally, Geosyntec conducted a surface water resource assessment to identify and document water quality concerns and characterize direct runoff, infiltration, and percolation pollutant loads of total nitrogen, total phosphorus, and total suspended solids. Geosyntec developed eight flood and water quality improvement projects; and evaluated and ranked each project based on anticipated costs and benefits.

Environmental Site Assessment, Risk Analysis, and Remediation. Geosyntec practitioners rank among the world's top professionals in providing site assessment and remediation services using innovative technologies and solutions that consistently advance the state of the practice. Our contaminated site practitioners guide clients through a specialized remediation plan, consult on regulatory strategies, and develop a comprehensive cleanup approach. We address numerous types of media, including contaminated soils, sediments, and groundwater.

We specialize in the assessment and remediation of sites where sediments have been impacted by a wide range of contaminants including metals, crude oil and refined petroleum compounds, polynuclear aromatic hydrocarbons, pesticides, and polychlorinated biphenyl's (PCBs). Our conservation, remediation, and restoration experience includes sites ranging from small, intermittent flow streams to large man-made and natural lakes, as well as complex river, estuary, and harbor systems. Geosyntec's multidisciplinary approach brings together nationally recognized in-house specialists in engineering, ecology and biological sciences, risk assessment and applied toxicology, and earth sciences to address the complex issues associated with contaminated sediment management.

Geosyntec's environmental management team develops compliance solutions, distinguishes between potential and actual environmental risks, and develops strategies to decrease energy and water utilization. We improve our clients' environmental, health and safety performance; manage risk; and reduce environmental liabilities consistent with their financial and stewardship goals. Our compliance, permitting, and auditing specialists have technical expertise across a broad range of disciplines thereby proactively identifying compliance obligations and opportunities to improve compliance for our clients.

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COUNTY OF VOLUSIA, FLORIDA****LITIGATION, FAILED WORK, AND CONTRACT BREACHES FOR
LAST FIVE YEARS**

Please find below the litigation Geosyntec has been involved in during the last five years. Geosyntec has not failed to complete services/cited for contract non-performance or breach of contract in the last five years. [Our subconsultants have not been involved in lawsuits, contract breaches, or cited for failure to perform during the last five years.](#)

Litigation

- **Resolved Litigation.** On May 22, 2019, the Estate of Kevin Quintanilla filed a lawsuit against Geosyntec, several other consultants, and the property owner where the accident occurred which led to Mr. Quintanilla's death. The Estate alleged the unsafe design of a road caused the accident to occur. The Plaintiff dismissed the claims against Geosyntec after we proved Geosyntec had no connection to the design of the road.
- **Resolved Litigation.** A client's insurer pursued a subrogation claim against Applied Technology and Management, Inc. (ATM), a subsidiary of Geosyntec Consultants. Electrical panels needed for the rehabilitation of a marina in Portland, Maine were damaged during an extreme weather event. The insurer claimed ATM's negligence caused the damage and ATM should reimburse the insurer. The matter was resolved through confidential settlement in October 2023.
- **Pending Litigation – Negligence and Negligent Misrepresentation – Waterfront Toronto/Savron (Savron is a division of Geosyntec Consultants.)** After months of exchanging letters, Savron's client, QM asked Savron to stop work and demanded that Savron refund amounts received. When Savron rejected QM's demand, QM filed a lawsuit on January 4, 2022. Savron filed an Answer and Counterclaim. On June 2, 2022, QM filed a Reply and Defense to Counterclaim, and then on May 16, 2023, QM sent Geosyntec a Statement of Issues. Along with the Statement, QM requested the parties submit the matter to mediation, which occurred on July 31, 2023. At mediation, QM did not have documentation or authority to negotiate. At mediation QM agreed on a list of the information reasonably necessary to review and evaluate QM's position. (The hope was that the parties could return to the negotiating table after making an informed assessment of the dispute.) At mediation, September 15, 2023, was mutually agreed upon as the deadline for production of QM's Damages Brief. An exchange of Affidavits of Documents was to occur no later than October 31, 2023, and Examinations for Discovery were to be scheduled for January of 2024. These dates were not met by QM, and Geosyntec's Legal Department decided to amend the Counterclaim to include a breach of trust action under the Ontario Construction Act. Draft pleadings were served on QM's counsel on October 20, 2023. QM did not provide consent to amend the pleadings, so a motion must be made before the Court in order to do so. The soonest available date to hear the motion amending the pleadings is on November 15, 2024, and external counsel has set that date to speak to the matter.

**ATTACHMENT (FLORIDA DEPARTMENT OF STATE SUNBIZ
REPORT)**

Please see subsequent pages for Geosyntec's current Sunbiz report.



[Department of State](#) / [Division of Corporations](#) / [Search Records](#) / [Search by Officer/Registered Agent Name](#) /

Detail by Officer/Registered Agent Name

Florida Profit Corporation
GEOSYNTEC CONSULTANTS,INC.

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Changed: 03/31/2012

Mailing Address

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Changed: 04/01/2013

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Name Changed: 01/10/2020

Address Changed: 04/23/2024

Officer/Director Detail

Name & Address

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Title VICE PRESIDENT

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Annual Reports

Report Year	Filed Date
2023	01/04/2023
2024	04/23/2024
2024	04/30/2024

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**QUALIFICATIONS FOR RFQ #24-SQ-101KW
 PROF. STORMWATER AND ENV. ENGINEERING SERVICES
 COUNTY OF VOLUSIA, FLORIDA**

PROJECT EXPERIENCE

In our Firm Qualifications document that was uploaded separately, we described our experience in the following stormwater and water quality-related disciplines:

1. Engineering analysis and design and permitting of capital improvement projects.
2. Watershed management planning.
3. TMDL program assistance and implementation.
4. NPDES program assistance.
5. Other stormwater/environmental needs that may arise.

Below, we explain our familiarity and experience with stormwater programs, regulatory programs, and grant funding. This is followed by references and 14 projects that highlight our expertise providing the requested services.

FAMILIARITY WITH STORMWATER PROGRAMS

Geosyntec has provided services on more than 200 stormwater-related projects in Florida, primarily through long-term continuing services contracts. A synopsis of our current continuing services contracts is below. This is followed by a list of stormwater management and/or watershed management plans that we have prepared during the last five years. **These contracts and projects are a testament to our experience and service to Florida governmental entities.**

Geosyntec Active Continuing Services Contracts (Stormwater and Water-Quality Focus)

No.	Florida Client	Description	Period of Performance
1	Volusia County	Continuing Stormwater and Environmental Engineering Services (Four projects: North Beach Street Grade Raise, Pooser Pond Stormwater Improvements, Spring Hill Green Infrastructure Resiliency Assessment, and Tractor Way Oil Water Separator)	2019 to Present
2	Seminole County	Wekiva Basin Watershed and TMDLs; NPDES Services; and Subdivision Rehabilitation Consulting Services Contracts* (Water Quality Assessments; H&H Modeling; Hydrological Studies; Monitoring; Watershed Assessments; BMPs Design, Permitting and Construction)	2017 to Present
3	Orange County	Water Quality Professional Services* (WQ Modeling, Assessment and Monitoring; BMPs Design, Permitting and Construction; Cost-Benefit Analyses; H&H Modeling; Grant Support)	2020 to Present
4	Orange County	Stormwater Engineering Services* (Impaired Waters Assessment; Ecological Evaluations; Data Collection; Sampling; H&H Modeling; Water Quality Modeling; BMP Alternatives Analysis; Flood Improvement Alternatives; WQ Improvement Alternatives; LOS Assessment; Stormwater Retrofit Conceptual and Final Design)	2011 to Present
5	Brevard County	Professional Services Stormwater Capital Improvements* (BMPs Design, Permitting and Const.; Cost-Benefit Analyses; Monitoring)	2015 to Present
6	Pinellas County	Engineering and Environmental Services* (BMPs Design, Permitting and Construction; Watershed Assessment)	2016 to Present

**QUALIFICATIONS FOR RFQ #24-SQ-101KW
 COUNTY OF VOLUSIA, FLORIDA**



PROF. STORMWATER AND ENV. ENGINEERING SERVICES

7	Alachua County	Continuing Environmental Services* (Stormwater Management; Water Quality Improvement; Green Stormwater Infrastructure; Water Quality Monitoring; Environmental Sampling and Analysis; Design Plans; Regulatory Coordination; Public Outreach)	2020 to Present
8	Osceola County	Water Quality Services (WQ Modeling, Watershed Assessments; H&H Modeling)	2014 to Present
9	Lee County	Continuing Water Quality Services (Regulatory Permitting [NPDES/MS4; TMDLs]; WQ Assessment)	2007 to Present
10	Pasco County	Continuing Water Quality Services (Regulatory Permitting [NPDES/MS4; TMDLs]; WQ Assessment)	2009 to Present
11	Pasco County	Drainage-Related Capital Improvement Projects (Regulatory Compliance; Drainage/Flooding Analyses; Operation and Maintenance Recommendations)	2021 to Present
12	City of Casselberry	Stormwater Quality and Lakes Management Continuing Services* (WQ Modeling, Assessment and Monitoring; BMPs Design, Permitting and Construction; Cost-Benefit Analyses)	2014 to Present
13	City of St. Augustine	Continuing Environmental and Engineering Services (BMPs; Design Permitting and Construction; Grant Support)	2017 to Present
14	City of Lakeland	Professional & Watershed Management Continuing Services* (WQ Modeling and Assessment; BMPs; Nutrient Load Calculations)	2015 to Present
15	City of Tallahassee	Environmental and Stormwater Services (WQ; H&H Modeling; Hydrological Studies; Environmental Assess.)	2016 to Present
16	City of Orlando	Professional Stormwater Engineering Services (WQ Modeling, Assessment and Monitoring; BMPs Design, Permitting and Construction; Cost-Benefit Analyses)	2019 to Present
17	City of Titusville	Stormwater Continuing Engineering Services* (Stormwater Management Plan; BMP Design; Water Quality Improvements)	2016 to Present
18	City of Apopka	Stormwater Management Continuing Services (Vulnerability Assessment; Regulatory Compliance; Assessments)	2023 to Present
19	City of Gainesville	Continuing Professional Engineering Services (Stormwater Management; Water Quality Improvement; Green Stormwater Infrastructure; Water Quality Monitoring; Environmental Sampling and Analysis; Design, Permitting and Construction Plans; Regulatory Coordination; Construction Administration; Grant Support)	2012 to Present
20	FDOT Central Office	Statewide Water Quality Services (Regulatory Permitting [NPDES/MS4; TMDLs]; WQ Assessment; Stormwater Infrastructure)	2008 to Present
21	Southwest Florida Water Management District	Comprehensive Services (Watershed Management, Environmental Monitoring and Assessment of Natural Systems, and Minimum Flows and Levels [MFLs]) (Data Collection; Engineering Studies and Alternatives Evaluations; Water Quality Improvements; H&H Modeling; GIS Data Compilation and Spatial Analysis; Floodplain Mapping; Statistical and Spatial Data Analysis)	2005 to Present
22	St. Johns River Water Management District	Environmental Assessment of Natural Systems and MFLs* (Ecosystem Goals and Targets; Statistical and Spatial Data Analysis; H&H Modeling; Water Quality Modeling)	2004 to Present

*Contract is described on later pages within this section.



**QUALIFICATIONS FOR RFQ #24-SQ-101KW
 PROF. STORMWATER AND ENV. ENGINEERING SERVICES
 COUNTY OF VOLUSIA, FLORIDA**

Geosyntec Stormwater Management and/or Watershed Management Plans (Within Last Five Years)

No.	Florida Client	Project Name	Period of Performance
1	Pasco County	Stormwater Management Master Plan Update	February 2024 to Present
2	Flagler County	Stormwater Master Plan*	2022 to 2024
3	Bay County	Stormwater Strategic Plan and Stormwater Master Plan Update	2020 to 2023
4	City of Titusville	Stormwater Master Plan	2022 to Present
5	City of Riviera Beach	Stormwater Master Plan Update	2022 to 2024
6	City of Ormond Beach	Stormwater Master Plan and Critical Asset Vulnerability Assess.*	2019 to 2023
7	City of Cocoa Beach	Stormwater Management and Resiliency Master Plan	2018 to 2022
8	City of Deerfield Beach	Stormwater Management and Flood Resiliency Strategies Master Plan	2020 to 2022
9	Seminole County	Lake Harney Watershed Flood Resiliency Plan	2019 to 2021
10	Seminole County	East Basins – Lake Jesup Watershed Management Plan	2023 to Present
11	City of Tallahassee	Surface Water Master Plan	2020 to Present
12	Osceola County	Shingle Creek Basin Stormwater Management Master Plan*	2023 to Present
13	Broward County	Countywide 100-Year Flood Map	2018 to 2021
14	Pinellas County	South Creek Watershed Management Plan	2019 to Present
15	Seminole County	Wekiva Watershed Model Refinement, Water Quality BMP Evaluation, and Watershed Management Plan	2017 to 2024
16	Manatee County	Bowlees Creek Watershed Management Plan	2017 to Present
17	Highlands County	Sebring Water Quality and Drainage Study	2023 to Present
18	Manatee County	Pearce Drain Feasibility Study	2022 to 2024
19	SWFWMD	Jack Creek Watershed Management Plan	2020 to Present
20	SWFWMD	Carter Creek Watershed Management Plan Alternatives Analysis	2020 to 2023
21	SWFWMD	South Manatee Watershed Management Plan	2023 to Present
22	SWFWMD	Sebring Floodplain LOS Analysis	2024 to Present

**Project is described on later pages within this section.*



**QUALIFICATIONS FOR RFQ #24-SQ-101KW
 PROF. STORMWATER AND ENV. ENGINEERING SERVICES
 COUNTY OF VOLUSIA, FLORIDA**

EXPERIENCE WITH REGULATORY PROGRAMS

Geosyntec has comprehensive experience in regulatory consultation and permitting of water resources and restoration projects in Florida through regular, proactive engagement with the Florida Department of Environmental Protection (FDEP), water management districts, and US Army Corp of Engineers (USACE). In addition, Geosyntec works closely with a range of ancillary regulatory entities including the Florida Department of Transportation (FDOT), Florida Fish and Wildlife Conservation Commission, the US Fish and Wildlife Service (USFWS), the State Historic Preservation Office, and the National Marine Fisheries Service.

For projects within the County, permitting through the St. Johns River Water Management District (SJRWMD) will be necessary on most projects. Geosyntec staff have permitted dozens of projects through SJRWMD and are familiar with current regulations and recent rule changes. Depending on project conditions, permits may be necessary from other regulatory entities, including USACE and or FDEP for wetlands and navigable waters impacts, or USFWS for listed and endangered species. Coordination with FDEP may also be necessary where water and/or sewer replacement is needed or where sovereign submerged lands are an issue. For projects abutting state-maintained roads, FDOT driveway and/or drainage connection permits may be necessary.

Regulatory coordination activities on behalf of our local government clients on **stormwater engineering projects** are captured in the below table.

Local Government Client	Project Name	Regulatory Agencies
Volusia County	North Beach Street Road Raising	FDEP, USACE, SJRWMD
Brevard County	Johns Road Pond Retrofit	SJRWMD
Brevard County	Flounder Creek Pond Retrofit	SJRWMD
Brevard County	Castaway Point Park Shoreline Improvements	SJRWMD
Brevard County	Stearns Point Park Shoreline Improvements	SJRWMD
Brevard County	Basins 1329, 1349, 1409, 1428 Outfalls	SJRWMD
St. Johns County	Butler Park West Improvements	FDEP, USACE
Seminole County	Whitcomb Drive Improvements	SJRWMD
Orange County	Orlo Vista Flood Mitigation	SFWMD
Orange County	Big Sand Lake Outfall Improvement Design	SFWMD, USACE, FDOT
Pinellas County	Mullet Creek Channel B Erosion Control	SFWMD, USACE
Pinellas County	Starkey M10 Stormwater Management Facility	SFWMD, FDEP
City of Gainesville	Beville Creek Restoration	SJRWMD
City of Cocoa Beach	Golf Muck Dredging/Capping	FDEP, USACE, SJRWMD
City of St. Augustine	Macaris Outfall Improvements	SJRWMD
City of Casselberry	Casselton Drive Improvements	SJRWMD, FDEP



**QUALIFICATIONS FOR RFQ #24-SQ-101KW
 PROF. STORMWATER AND ENV. ENGINEERING SERVICES
 COUNTY OF VOLUSIA, FLORIDA**

EXPERIENCE WITH GRANT FUNDING FOR WATER QUALITY AND FLOOD MITIGATION

Over the last 15 years, we have helped our local government clients secure and manage more than \$33 million in grant funding through a variety of sources. This is critical for infrastructure planning because the capital project recommendations can be quite expensive; therefore, all opportunities for external funding are important to consider. Our state, federal, and private foundation grant writing experience includes the following entities (see table below for Florida-specific projects that were grant funded and/or managed with Geosyntec’s assistance):

- Section 319 (Clean Water Act) Nonpoint Source Pollution Grants (EPA/FDEP)
- EPA Targeted Watershed Grants
- EPA Targeted Brownfields Assessment Grants
- FDEP State Water Quality Assistance Grants
- FDEP Resilience Planning Grants
- FEMA Hazard Mitigation Grant Program (HMGP)
- HUD (U.S. Department of Housing and Urban Development) Community Development Block Grant (CDBG)
- Water Research Foundation
- National Cooperative Highway Research Foundation
- SWFWMD and SJRWMD Innovative Project Cost Share
- SJRWMD Water Resources Cost Share

Another facet that separates us from other consulting engineers is that Geosyntec has an internal Technical Advisory Committee Source of Funding that is leveraged for our clients. For example, we have funded:

- \$40,000 – Orange County Stormwater Harvesting System with Real-time Controls
- \$48,000 – City of Casselberry Phytoremediation (tree wells) Golf Course Nutrient Reduction

We also assist our clients in developing pilot projects in partnership with BMP manufacturers for in-kind donations of equipment.

Successful Grant Applications and/or Management for Geosyntec Clients in Florida (Last 10 years)

Funding Entity	Project Funded	Funding Amount
SJRWMD Cost Share	City of St. Augustine Macaris Outfall Resiliency Improvements	\$60,747
	City of Gainesville Beville Creek Restoration	\$299,000
FDEP 319 Grant	City of Cape Canaveral City Park BMP Retrofit	\$600,000
	Orange County Bay Lake BMP Retrofit	\$150,000
FEMA HMGP	Orange County Orlo Vista Flood Mitigation	\$16.7 million
	City of St. Augustine Avenida Menendez Seawall	\$815,000
HUD CDBG	Orange County Orlo Vista Flood Mitigation	\$2.5 million
FDEP Resilience Grant	Town of Welaka Vulnerability Assessment	\$116,400
	City of Apopka Vulnerability Assessment	\$100,000
FDEP Grant (Indian River Lagoon Water Quality)	City of Cocoa Beach Muck Dredging and Capping	\$12 million

**QUALIFICATIONS FOR RFQ #24-SQ-101KW
 COUNTY OF VOLUSIA, FLORIDA**



PROF. STORMWATER AND ENV. ENGINEERING SERVICES

REFERENCES

Client	Project Name and Duration
<p>Richard Zion, PE, PG Flagler County Engineering Dept. 1769 E. Moody Blvd., Building 2 Bunnell, FL 32110 386.313.4051 Rzion@flaglercounty.gov</p>	<p>Flagler County Stormwater Master Plan 2022 to 2024</p>
<p>Evan Shane Williams, PhD, PE, Stormwater Engineer Alachua County Environmental Protection Department 408 West University Avenue Gainesville, FL 32601 352.264.6831 eswilliams@alachuacounty.us</p>	<p>Alachua County Continuing Environmental (and Stormwater) Services 2020 to Present</p>
<p>Shannon Wetzel, Watershed Division Manager Seminole County 200 W County Home Road Sanford, FL 32773 407.665.2455 SWetzel@seminolecountyfl.gov</p>	<p>Seminole County Wekiva Basin Watershed and TMDLs; NPDES Services; and Subdivision Rehabilitation Consulting Services Contracts 2016 to Present</p>
<p>Laurie Smith City of Lakeland 407 Fairway Avenue Lakeland, FL 33801 863.834.6276 Laurie.smith@lakelandgov.net</p>	<p>Professional Lakes and Watershed Management Services 2015 to Present</p>



**QUALIFICATIONS FOR RFQ #24-SQ-101KW
 PROF. STORMWATER AND ENV. ENGINEERING SERVICES
 COUNTY OF VOLUSIA, FLORIDA**

STORMWATER MANAGEMENT PROGRAM AND WATER QUALITY-RELATED PROJECTS

The following matrix synthesizes 14 projects that are described on the subsequent pages. The projects are cross-referenced to key services requested by the County under this solicitation.

No.	Geosyntec Project Name	Key Services Requested by County									
		NPDES Program Assistance	TMDL/NNC Program Assistance	Ecosystem Goals and Targets	Watershed Management Plan	Stormwater Master Plan	Water Quality/Pollutant Model	H&H Modeling	Spatial and Statistical Analyses	CIP Analysis, Design, Permitting	Grant Funding Assistance
1	Seminole County Wekiva Basin Watershed and TMDLs; NPDES Services; and Subdivision Rehab. Consulting Services Contracts	X	X	X	X	X	X	X	X	X	
2	Orange County Continuing Stormwater Engineering Services	X	X	X	X	X	X	X	X	X	X
3	City of Lakeland Professional & Watershed Management Continuing Services	X	X		X		X	X	X	X	X
4	City of Titusville Continuing Stormwater Services	X	X		X	X	X	X	X	X	
5	Brevard County Stormwater Capital Improvements	X	X		X	X	X	X	X	X	
6	Orange County Orlo Vista Flood Mitigation				X		X	X	X	X	X
7	Flagler County Stormwater Master Plan	X	X		X	X	X	X	X	X	X
8	Pinellas County Continuing Engineering and Environmental Services	X	X	X	X	X	X	X	X	X	X
9	Orange County Continuing Water Quality Services	X	X	X	X	X	X	X	X	X	
10	Osceola County Shingle Creek Basin Stormwater Management Master Plan		X		X	X	X	X	X	X	
11	Alachua County Continuing Environmental Services	X		X			X	X	X	X	
12	City of Ormond Beach Stormwater Master Plan and Critical Asset Vulnerability Assessment	X	X			X	X	X	X	X	
13	City of Casselberry Stormwater Quality and Lakes Management Continuing Services	X	X				X	X	X	X	
14	SJRWMD Environmental Assessment of Natural Systems and MFLs		X	X			X	X	X		

**QUALIFICATIONS FOR RFQ #24-SQ-101KW
PROF. STORMWATER AND ENV. ENGINEERING SERVICES
COUNTY OF VOLUSIA, FLORIDA**

1. Seminole County Wekiva Basin Watershed and TMDLs; NPDES Services; and Subdivision Rehabilitation Consulting Services Contracts

Client

Shannon Wetzel, Watershed Division Manager
Seminole County
200 W County Home Road
Sanford, FL 32773
407.665.2455; SWetzel@seminolecountyfl.gov

Description

Since 2016, Geosyntec has provided services to Seminole County through three separate continuing services contracts. We have provided services on 11 projects to date, including the following:

Wekiva Watershed Management Plan. Conducted engineering assessments, developed H&H and pollutant loading models, developed floodplain maps, and conceptualized improvement measures to reduce flooding and improve water quality within the Wekiva River watershed. The watershed comprises 56.2 square miles, including Big Wekiva River, Little Wekiva River, and Yankee Lake. Recommendations for improvement project concepts were provided to address flooding, water quality, and erosion and sedimentation the Little Wekiva River. **Project fees: \$690,022.**

Lake Harney Watershed Flood Resiliency Plan. Conducted a study of this 27-square-mile watershed to establish 100-year floodplains, assess flood level of service (LOS) of drainage infrastructure, and evaluate improvement alternatives to address flooding. Based on the results of the flood LOS and input from Seminole County staff, five focus areas were selected for development of flooding improvement concepts. Recommendations were provided for the remaining locations. Eight alternatives were evaluated and qualitatively ranked based on the estimated benefits and costs of the concepts. **Project fees: \$322,000.**

Basin Management Action Plan (BMAP) Project Pollutant Load Reduction Analysis. Geosyntec estimated the nutrient removal efficiency of multiple BMPs identified within several BMAPs for which the County is a stakeholder, recommended a street sweeping program to reduce nutrient mass loadings, recommended a methodology for estimating nutrient load reductions for shoreline vegetation projects, and reviewed the applicability of biochemical attenuation factors on previously estimated total nitrogen load reduction values. **Project fees: \$50,000.**

Whitcomb Drive Drainage Improvements. Whitcomb Drive, from Lake Harney Road to south of Crossover Lane, approximately 0.8 miles, experiences chronic and prolonged flooding from high lake stages and drainage deficiencies along the road. As part of the Lake Harney Basin Watershed Flood Resiliency Plan, Geosyntec developed a road and drainage improvement concept that included raising Whitcomb Drive approx. two feet to a minimum elevation of 9.1 feet and associated drainage improvements. Seminole County retained Geosyntec to design and permit the recommended road and drainage improvements. The project required permitting with SJRWMD and USACE. **Project fees: \$333,525.**

BMP Assessment for the Outfall to Lake Destiny Chain of Lakes. Performed a feasibility assessment for implementation of a water quality improvement BMP for stormwater runoff conveyed by a proposed outfall from Wymore Road to Spring Wood Lake to achieve the pollutant reduction goals of the Wekiva River BMAP. Several BMP options including an in-line baffle box with/without an up-flow filter and roadside swales/bio-swales along Wymore Road were considered. Based on site-specific conditions and proposed condition drainage characteristics, an in-line BMP structure was further evaluated for water quality improvement performance utilizing BMPTRAINS. Structure capacity, maintenance, installation, permitting, construction and operating costs, and annual water quality benefit were assessed, and construction and implementation recommendations were provided. **Project fees: \$6,703.**

ECHO UES and GEC are subconsultants working with Geosyntec on these contracts.

Services Relevant to Solicitation

- Stormwater Management
- Watershed Management
- Water Quality Improvements
- Nutrient Reduction
- CIP Analysis, Design and Permitting
- Modeling (H&H and Pollutants)
- NPDES Program Assistance
- TMDL/BMAP Assistance

QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

2. Orange County Continuing Stormwater Engineering Services

Client

Mike Drozeck, PE, CFM
Orange County Stormwater Division
4200 S. John Young Pkwy, Orlando, FL 32839
407.836.7945; Mike.drozeck@ocfl.net

Description

Since 2011, Geosyntec has provided services on over 180 task orders valued at more than \$21.8 million professional fees. Representative projects are briefly described below.

Carpenter Canal Drainage Assessment and Design. Addressed ongoing maintenance burden of Carpenter Canal located in a residential neighborhood within a narrow drainage easement. Improvements included the excavation and removal of undersized culverts, as well as a full depth replacement of roadway impacted during construction. Design plans and construction documents were prepared, consisting of construction plans, cost estimates, and specifications. A permit was obtained from SJRWMD and construction administration services performed. **Project fees: \$75,000.**

Shingle Creek North NPDES MS4 Stormwater Infrastructure Data Collection. A comprehensive stormwater infrastructure data collection geodatabase was developed to combine existing data from multiple sources and digitize missing stormwater infrastructure. The geodatabase was used to identify major and minor outfalls based on NPDES criteria to meet FDEP requirements. Deliverables included a stormwater infrastructure inventory geodatabase, geodatabase template and schema, and a procedure guide. **Project fees: \$497,000.**

Hansel Stormwater Pond Improvements. To streamline maintenance and reduce erosion occurring within the pond, conceived several retrofit options and designed the selected alternative that included the installation of 250 linear feet, 47-foot long (15-foot maximum retained height) sheet pile wall that traversed the southern extent of the pond. The wall increased the permanent pool volume of the pond and protects the southern border against the highly erosive forces of a 54" inflow pipe. The wall also creates a platform along the southern and western edges of the pond that allows County staff to use a long-boom excavator for dredging and sediment/ trash removal. **Project fees: \$136,562.**

Lake Rowena Estates Drainage Assessment and Design. Project consisted of a stormwater improvement with combination of bioretention and exfiltration and included a full roadway replacement and roadway realignment. Design construction documents were prepared, consisting of construction plans, cost estimates, and specifications. **Project fees: \$75,000.**

Woodsmere Watershed Management Plan and Stormwater Pump Station Evaluation. Prepared a comprehensive watershed management plan. Conducted a drainage structure inventory, H&H model development, floodplain delineation, and improvement concept development. An evaluation of the pump station condition and level of service was also conducted, which included desktop research, interviews with maintenance staff, and visual inspections. Water quality improvement recommendations were provided because the watershed is within the Wekiva BMAP area. **Project fees: \$171,000.**

Keystone Drive BMP Design and Monitoring. Prepared H&H and pollutant loading models to establish existing flood flows, existing pollutant loading, and proposed BMP efficiency. Designed an inline baffle box with off-line up-flow filter. Prepared design plans, bid package, and obtained permit from SJRWMD. Provided post-design services including shop drawing review, answering contractor questions, reviewing as-builts. Monitored BMP performance using auto samplers. **Project fees: \$213,000.**

Applied Ecology, GEC, and ECHO UES are subconsultants to Geosyntec on this contract.

Services Relevant to Solicitation

- Stormwater Management
- Watershed Management
- Water Quality Improvement
- Modeling (H&H and Pollutants)
- Design, Permitting and Construction Plans
- Construction Administration
- Regulatory Coordination
- Grant Funding Assistance
- NPDES Compliance
- TMDL/BMAP Assistance

QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

3. City of Lakeland Professional Lakes and Watershed Management Services

Client

Laurie Smith
City of Lakeland
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Lakeland, FL 33801
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Laurie.smith@lakelandgov.net

Description

Since 2015, we have provided services on 10 projects to date, including the following:

Stormwater Best Management Practices (BMPs) Design Manual.

Geosyntec developed a BMPs manual to guide stormwater management design of future development and redevelopment in the City. The manual includes a combination of low-impact design/green infrastructure and traditional stormwater management measures to meet enhanced water quality requirements. Innovative strategies are provided to adjust to changing hydrology due to likelihood of more intense future precipitation events. City code and policy revisions were identified to support the intent of the manual. **Project fees: \$180,301.**

Lake Morton and Lake Mirror BMP Feasibility Studies. Geosyntec performed studies of two lakes to assess the quantity and quality of stormwater runoff contributing to each. The lakes are in downtown Lakeland and development around the lakes occurred prior to modern stormwater regulation, thus stormwater flows to the lakes untreated. Stormwater grab and flow weighted autosampler sampling were performed to confirm nutrient event mean concentrations and flows of stormwater entering the lakes. The studies evaluated the contributing areas to the lakes to assess the primary sources of nutrients from stormwater and provide recommendations for BMPs to address sources of nutrient loading. **Project fees: \$ 154,639 (Lake Morton) and \$164,115 (Lake Mirror).**

Pollution Control Device (Baffles Box) Cleaning Water BMP Design Concept. Water associated with baffle box cleaning was identified as having extremely elevated levels of nutrients. Based on this, the City wanted to provide a way to treat this water prior to discharge to protect their surface waterbodies. Geosyntec developed an aesthetically pleasing design concept which included construction plans, a cost estimate, sampling procedures, a maintenance manual, a design calculator, and expected pollutant removal to address this issue. This was all summarized in a final report and submitted to the City. **Project fees: \$31,000.**

Street Sweeping and Maintenance BMP Optimization Study. This study focused on generating city-specific data of the nutrient content of street debris collected as part of street sweeping and PCD (pollution control device; baffle box) maintenance. Samples were taken during two distinct times of year to account for variation due to seasonality. Upon data collection, a cluster analysis was performed in ArcGIS to group the swept streets and PCDs based on a scoring system, considering tree cover, land use, and whether the activity occurred within the basin of an impaired water body. These data were used to provide recommendations to the City on appropriate values in determining nutrient content of street debris and optimizing current street sweeping and PCD maintenance programs. The benefit of this study was to provide a street sweeping and PCD maintenance schedule that maximizes the amount of collected street debris without increasing program cost, thus allowing the City to appropriately report their nutrient removal for NPDES MS4 permitting purposes. **Project fees: \$150,000.**

Stormwater Master Plan Model Peer Review. Conducted a thorough review of a preliminary city-wide H&H model assumptions, methodology, and parameterization to provide recommendations for enhancement and improvement under a future effort. **Project fees: 30,000.**

Services Relevant to Solicitation

- Stormwater Management
- Water Quality Improvement
- Modeling (H&H and Pollutants)
- Nutrient Reduction
- Design, Permitting and Construction Plans
- Regulatory Coordination
- NPDES Compliance
- TMDL Implementation

**QUALIFICATIONS FOR RFQ #24-SQ-101KW
PROF. STORMWATER AND ENV. ENGINEERING SERVICES
COUNTY OF VOLUSIA, FLORIDA**

4. City of Titusville Continuing Stormwater Services

Client

Sandra Reller, Public Works Deputy Director
City of Titusville
2910 Garden Street
Titusville, FL 32796
321.567.3846;sandra.reller@titusville.com

Description

Geosyntec has maintained continuing services contracts with the City of Titusville since 2016 to provide stormwater engineering services. We have provided services on six projects to date, including the following.

Stormwater Master Plan. Preparing a master plan that will guide the implementation of stormwater management projects and policy for the next 10 years. The plan addresses flood control, floodplain management, water quality improvement, and resiliency of City stormwater assets. Tasks include: a thorough inventory of stormwater management and drainage features and structures; identifying flooding and water quality problem areas, and areas that may be impacted by future changes in climate variables such as sea level rise and rainfall intensity. Prioritized capital improvement projects will be identified for implementation over the next 10 years. **Project fees: \$192,266.**

St. Johns and St. Teresa Basin Nutrient Reduction Strategy Studies. Evaluated two basins and provided structural BMP recommendations to remove TN and TP from stormwater to achieve the TMDL allocations specified in the Northern Indian River Lagoon BMAP. One BMP structure per basin was recommended which was supported by H&H modeling, pollutant load modeling, proposed BMP implementation factors, and cost-benefit data. Both basins are comprised of mostly urban areas with significant portions of their contributing areas draining to the Indian River through a large capacity drainage canal or pipe that provides little to no flow attenuation or water quality treatment. Structural BMPs considered include nutrient removing separating baffle boxes with up-flow filters, subsurface up-flow baseflow treatment with bio-activated media, and stormwater harvesting. **Project fees: \$65,613 (St. Teresa Basin) and \$37,056 (St. Johns Basin).**

Knox McCrae Baffle Box Design. The purpose of the project was to reduce the mass of nutrients in runoff discharged through the Knox McCrae outfall to the Indian River without impacting upstream flood stages. Runoff in the Knox McCrae drainage basin is generated from approximately 41 acres of mostly residential and commercial land uses that drain directly to the Indian River with little to no flow attenuation or water quality treatment. An evaluation of the existing conditions and the proposed improvements was performed by H&H and pollutant load modeling of the contributing area. The improvements will improve the water quality of runoff by diverting runoff conveyed in the main outfall pipe to a nutrient separating baffle box with an upflow filter. Engineering design services included headwall replacement, high-flow diversion structure, baffle box and upflow filter, associated piping, ditch paving and rip-rap slope stabilization of the outfall to the Indian River. Construction administration services were provided. **Project fees: \$100,497.**

Area Two Watershed Assessment and FEMA Letter of Map Revision (LOMR). The City applied to FEMA to consider changes to the floodplain on a flood insurance rate map. Geosyntec was retained by the City to prepare additional information requested by FEMA. An ICPR model was developed to delineate updated, more accurate 100-year floodplains. The model consisted of 121 basins, 142 nodes, 191 links to address the five-square mile area. Data was stored in a GIS database along with digital LIDAR data. The LOMR package was presented to the City Council and submitted to FEMA. FEMA had no technical comments and the map revision became effective. **Project fees: \$57,426.**

Applied Ecology, ECHO UES, and GEC are subconsultants to Geosyntec on this contract.

Services Relevant to Solicitation

- Stormwater Management
- Watershed Management
- Water Quality Improvements
- Modeling (H&H and Water Quality)
- Design, Permitting and Construction Plans
- Regulatory Coordination
- Construction Administration
- NPDES Compliance
- TMDL/BMAP Compliance

QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

5. Brevard County Stormwater Capital Improvements

Client

Carolina Alvarez
Brevard County
2725 Judge Fran Jamieson Way
Viera, FL 32940
321.633.2014, Ext. 56472; Carolina.alvarez@brevardfl.gov

Description

Geosyntec has maintained continuing services contracts with Brevard County since 2015 to provide stormwater engineering services. We have provided services on 11 projects to date, including the following.

Flounder Creek and Johns Road Pond Retrofits. Stormwater pond enhancement designs were intended to minimize the nutrients that enter the Indian River Lagoon via stormwater and baseflow. For each retrofit, an existing-conditions H&H model was run to quantify the existing conditions of hydraulic loading using ICPR v. 4.03. The pond water quality enhancement is an innovative media upflow reactor that will take water from the existing pond and treat it for total nitrogen and total phosphorus prior to discharge. The BMPTRAINS Model was utilized to evaluate the pre- and postconditions nutrient loading. **Project fees: \$27,000 (Flounder Creek) and \$24,000 (Johns Creek).**

Port St. John Master Plan. To implement water quality BMPs associated with outfalls into the Indian River Lagoon, inventoried the existing drainage features contributing to stormwater outfalls within this 4.6 square mile study area, performed modeling and other calculations to estimate H&H characteristics, identified candidate sites for BMP concepts, and developed water quality enhancement concept projects. Geosyntec proposed 25 innovative BMPs to treat stormwater runoff, including nutrient separating baffle boxes, rain gardens, bioswales, and inlet baskets. **Project fees: \$99,959.**

Priority Basin 1329 Phase 1 and 2. Brevard County identified this basin as an area that contributes significant nutrient loading via stormwater and baseflow to the Indian River Lagoon. Geosyntec performed a phase 1 evaluation to identify an appropriate BMP. Based on the results of the phase 1 evaluation, the proposed BMP is an underground upflow filter that was designed to treat stormwater and baseflow from the surcharged conveyance system using a solar pump. Geosyntec prepared construction plans, bid specs, permit applications, acquired the necessary permits, and performed construction oversight services. **Project fees: \$20,000.**

Priority Basin 1349 Phase 1 and 2. Brevard County identified this basin as an area that contributes significant nutrient loading via stormwater and baseflow to the Indian River Lagoon. Geosyntec performed a phase 1 evaluation to identify an appropriate BMP. Based on the results of the phase 1 evaluation, the proposed BMP is an underground instream biosorption media (BAM) reactor, which is intended to treat nutrients in baseflow within the ditch. Geosyntec prepared construction plans, bid specs, and permit applications and acquired the necessary permits. Due to a property ownership issue, this project was not constructed. **Project fees: \$20,000.**

Priority Basin 1428 Phase 1 and 2. Brevard County identified this basin as an area that contributes significant nutrient loading via stormwater and baseflow to the Indian River Lagoon. Geosyntec performed a phase 1 evaluation to identify an appropriate BMP. Based on the results of the phase 1 evaluation, the proposed BMP is a modification of an existing baffle box to incorporate a BAM upflow filter. Geosyntec prepared construction plans, bid specs, and permit applications and acquired the necessary permits. **Project fees: \$20,000.**

Applied Ecology is a subconsultant to Geosyntec on this contract.

Services Relevant to Solicitation

- Stormwater Management
- Watershed Management
- Water Quality Improvements
- Modeling (H&H and Water Quality)
- Design, Permitting and Construction Plans
- Regulatory Coordination
- Construction Administration
- NPDES Compliance
- TMDL/BMAP Compliance

6. Orange County Orlo Vista Flood Mitigation

Client

Mike Drozeck, PE, CFM, Chief Engineer
Orange County
4200 S. John Young Parkway
Orlando, FL 32839
407.836.8680; mike.drozeck@ocfl.net

Description

Geosyntec evaluated flood mitigation alternatives, secured FEMA Hazard Mitigation Grant Program (HMGP) funding for the selected alternative (County also received a CDBG grant), developed design plans to implement the selected alternative, provided bid specifications and construction documents, and is currently providing construction administration services in compliance with grant requirements.

Prior to this project, Geosyntec developed a detailed watershed model for the neighborhood to predict the potential for severe flooding during a major rain event similar in volume and intensity to Hurricane Irma. As a first step, the existing model was calibrated and verified prior to use as the basis for alternatives evaluation. Five flood mitigation alternatives were developed. The evaluation included proposed conditions modeling, preliminary design, and detailed cost estimates. Based on evaluation of implementation factors, including cost-benefit, increasing storage within the ponds by excavating vertically and constructing a new pump station was determined to be the most cost-effective solution to mitigate flooding through the 100-year storm event.

Geosyntec designed a pump station with three 13,333 gallons per minute mixed/axial flow pumps to drawdown the ponds, maintain pond water levels, and provide flood control. During design, hydraulic modeling was performed to size the pumps and discharge force main, pump station sump, and pump station mechanical items (discharge header, shut-off valves, check valves, pressure gauges, etc.).

The ponds and pump station are designed to protect homes from flooding through the 100-year/72-hour storm. A pump station operations plan was developed to drawdown the ponds prior to a potential flooding event. The design was simulated using the ICPR v4 model to confirm flood mitigation capacity. Downstream conditions in Shingle Creek were included in the model to confirm the design would not be expected to negatively impact downstream areas. In addition, the potential pollutant load benefit of the increased permanent pool volume in the ponds was calculated using the BMPTRAINS model.

Geosyntec developed construction documents, specifications, and cost estimates. The construction plans included plans, cross-sections, and details of the proposed ponds, pump station, and force main. Geosyntec is providing construction administration services now.

Project fees: \$1.7 million.

GEC and ECHO UES are subconsultants to Geosyntec on this project.

Services Relevant to Solicitation

- Stormwater Conveyance
- Floodplain Management
- Feasibility Analyses
- Modeling (H&H and Water Quality)
- Design, Permitting and Construction Plans
- Regulatory Coordination
- Construction Administration
- Grant Writing and Compliance



**QUALIFICATIONS FOR RFQ #24-SQ-101KW
PROF. STORMWATER AND ENV. ENGINEERING SERVICES
COUNTY OF VOLUSIA, FLORIDA**

7. Flagler County Stormwater Master Plan

Client

Richard Zion, PE, PG
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Rzion@flaglercounty.gov

Description

Geosyntec prepared a stormwater master plan (SWMP) to guide Flagler County’s stormwater program for the next 10 years. The SWMP effectively addresses future stormwater management by identifying implementable capital improvement projects and programmatic processes that result in a proactive stormwater management program, as well as by identifying potential funding sources for needed stormwater operations and maintenance and project implementation.

Specific tasks that were accomplished and deliverables that were prepared during the SWMP development process included the following:

- Thorough data collection and review of stormwater-related data and information
- Detailed countywide inventory of stormwater infrastructure
- Flood evaluation, including hydraulic and hydrologic modeling
- Water quality review
- Resiliency evaluation to address climate change issues
- Stormwater program operations and maintenance review, including funding strategies
- Regulatory review, including local water management district and state requirements
- Developed concepts, cost estimates, and funding strategies for 20 potential capital improvement projects that were ranked in priority for implementation.

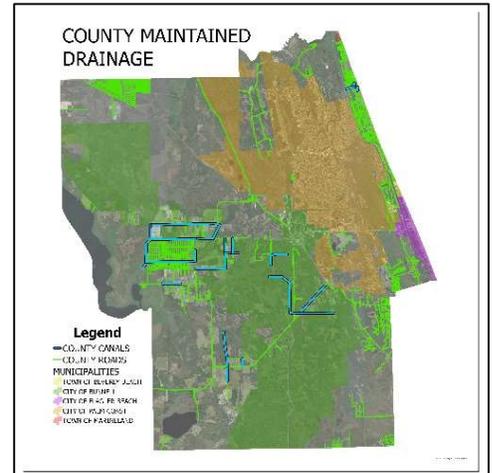
Additionally, the SWMP addresses the new requirement that the County participate in the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) program as a Phase II permittee. This requires addressing all County-maintained facilities in the census-defined urban areas of the county as well as those drainage systems interfacing with the current NPDES MS4 permit holders: cities of Bunnell, Flagler Beach, and Palm Coast.

Public outreach occurred to educate the public on the purpose and expected outcomes of the SWMP and solicit input on stormwater-related problems and issues. This included three public meetings as well as one workshop and one presentation with the Board of County Commissioners.

Project fees: \$807,914.

Services Relevant to Solicitation

- Stormwater Management
- Water Quality Improvements
- Modeling (H&H and Water Quality)
- Conceptual Design Plans
- Regulatory Coordination
- Resilience Assessment
- Public Outreach
- NPDES Program Setup



**QUALIFICATIONS FOR RFQ #24-SQ-101KW
PROF. STORMWATER AND ENV. ENGINEERING SERVICES
COUNTY OF VOLUSIA, FLORIDA**

8. Pinellas County Continuing Engineering and Environmental Services

Client

Paul Miselis, PE
Pinellas County
14 S. Ft. Harrison Ave, 4th Floor
Clearwater, FL 33756
727.453.3406
pmiselis@pinellascounty.org

Description

Geosyntec has provided services to Pinellas County under continuing services contracts since 2016. Representative projects are briefly described below.

Stormwater Infrastructure Criticality Analysis. Performed a criticality analysis of the county stormwater infrastructure to prioritize maintenance, repair, and improvement actions. To this end, relevant spatial and physical factors were identified from County GIS data, a criticality scoring rubric and methodology were established, and GIS tools to calculate stormwater infrastructure criticality were developed. The goal of the project was to provide the County stormwater managers with the tools needed to prioritize system infrastructure maintenance and improvements. **Project fees: \$88,000.**

Green Infrastructure Siting Tool. Developed a rating and suitability framework for siting green infrastructure taking into account where the County owns property or has rights-of-way, TMDL priorities, and site suitability (soils, water table, etc.). A GIS-based screening tool was developed to identify and rank sites based on these, and other, County spatial characteristics. The end result provides a framework and toolset for the County to evaluate water quality benefits and suitability to conceptualize and prioritize future green infrastructure projects. **Project fees: \$112,000.**

Mullet Creek Channel B Erosion Control and Floodplain Wetland Enhancement. Designed, permitted, and developed construction documents to address erosion and severe bank failures caused by Hurricane Hermine in 2016 along a 1,000-foot section of Mullet Creek Channel B. Included in the design is a vertical wall (gabion baskets) on one side and a sloped bank (to be lined with Flexamat®) along the other side of the creek. Project included restoration of an adjacent poor quality wetland area to facilitate a more effective overbank floodplain area. **Project fees: \$77,028.**

Starkey M10 Pond Outfall Improvements. Provided final design, permitting, and construction documents for improvements to a stormwater management facility (SMF). The SMF is a historical drainage ditch that was retrofitted by expansion into the overbank to create a wetland mitigation area. The SMF provides little attenuation for the removal of nutrients. Enhancement of the SMF will be achieved by providing additional residence time and storage that will improve water quality treatment, along with maintaining existing upstream flooding level of service. Storage will be provided by constructing two large stormwater pond areas with an in channel control weir structure. **Project fees: \$275,000.**

Regional Retention Siting Tool. Developed a rating and suitability framework for siting regional stormwater facilities countywide. A GIS-based tool was developed to rank sites based on specific criteria. Standard operating procedures were developed for the screening tool and the water quality evaluation of proposed regional retention sites. The end result provides a framework and toolset for the County to evaluate water quality benefits and suitability to conceptualize and prioritize future regional stormwater facility projects countywide. **Project fees: \$127,029.**

ECHO UES is a subconsultant to Geosyntec on this contract.

- Services Relevant to Solicitation**
- Stormwater Management
 - Watershed Management
 - Water Quality Improvements
 - Spatial and Statistical Analyses
 - Modeling (H&H and Water Quality)
 - Design, Permitting and Construction Plans
 - Regulatory Coordination
 - Construction Administration
 - NPDES Compliance
 - TMDL/BMAP Compliance

QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

9. Orange County Continuing Water Quality Services

Client

Emily Lawson, PE
Orange County
3165 McCrory Place, Suite 200
Orlando, FL 32803
321.689.7576; Emily.Lawson@ocfl.net

Description

Since 2020, Geosyntec has provided services on 17 task orders valued at \$2 million professional fees. Representative projects are briefly described below.

Services Relevant to Solicitation

- Stormwater Management
- Water Quality Improvements
- Modeling (H&H and Water Quality)
- Regulatory Coordination
- NPDES Compliance
- TMDL/BMAP Assistance

Boggy Creek Microbial Source Tracking (MST) Assessment. Performed a bacterial source tracking investigation on Boggy Creek that consisted of performing a historical fecal indicator bacteria (FIB) data assessment and evaluation, a surface water monitoring program, a stormwater inflow monitoring program, a MST monitoring program, and development of a FIB management plan complying with FDEP's FIB Toolkit. **Project fees: \$191,686.**

Subbasin CON0270 Feasibility Study and Design Services. Conducted a feasibility study to ascertain the estimated water quality improvement of a baffle box with an up-flow filter using BAM. H&H modeling and pollutant load modeling were performed to demonstrate pollutant removal without impacting upstream hydraulic grade lines. Design and permitting of the baffle box and upflow filter are ongoing. **Project fees: \$132,231.**

Lake Butler Subbasin 10 BMP Evaluation. Performed a nutrient reduction strategy study to address total nitrogen (TN), total phosphorus (TP), and total suspended solids (TSS) mass loadings discharging into Lake Butler from Subbasin 10. Provided a detailed feasibility analysis of the proposed BMP (installing a weir control structure at the Wetland 1 outfall to increase the residence time of the water in the wetland area), including flooding and water quality impacts, cost estimate, and construction considerations. The benefits of the BMP were outlined, and Geosyntec recommended not moving forward with the design phase. **Project fees: \$111,000.**

Wekiva Pond #0007 Groundwater Feasibility Study and Wekiva Pond #7006 Retrofit Study. Evaluating the feasibility of constructing a groundwater recovery system and enhancing an existing stormwater BMPs within the Wekiva Spring Basin Management Action Plan (BMAP) area. The ponds are identified as sites with high potential for treatment of nitrate in groundwater using existing stormwater infrastructure. Developing a H&H model for the existing and proposed conditions, performing a model result analysis, collecting groundwater nutrient data, estimating nutrient reduction, and preparing a technical memorandum. **Project fees: \$104,388 (Pond #0007) and \$162,000 (Pond #7006).**

Lake Weston BMP Feasibility Study. Assessed the feasibility of installing an underground vault and upflow nutrient reduction facility on an available parcel southwest of the lake prior to discharge to Lake Weston. The lake is impaired for chlorophyll-a and has an existing 4e pollution reduction plan with the goal of delisting the lake from the FDEP Impaired Waters List. Evaluated the potential water quality benefit, LOS, constructability, maintenance, aesthetics, and relative cost to address the feasibility of the proposed BMP. **Project fees: \$90,653.**

2020-2022 Waterbody Assessment Review Guidance Document. Reviewed the draft FDEP waterbody assessment lists; identified discrepancies, e.g., missing data, between the County's water quality database, the WIN database, and the IWR database; and developed a guidance document to assist County staff with undertaking reviews of future draft assessment lists. **Project fees: \$19,765.**

Applied Ecology, GEC, and ECHO UES are subconsultants to Geosyntec on this contract.

QUALIFICATIONS FOR RFQ #24-SQ-101KW COUNTY OF VOLUSIA, FLORIDA



PROF. STORMWATER AND ENV. ENGINEERING SERVICES

10. Osceola County Shingle Creek Basin Stormwater Master Plan

Client

Mahmoud R. Najda, PE
 Osceola County
 1 Courthouse Square, Suite 3100
 Kissimmee, FL 34741
 407.742.0200
 Mahmoud.Najda@osceola.org

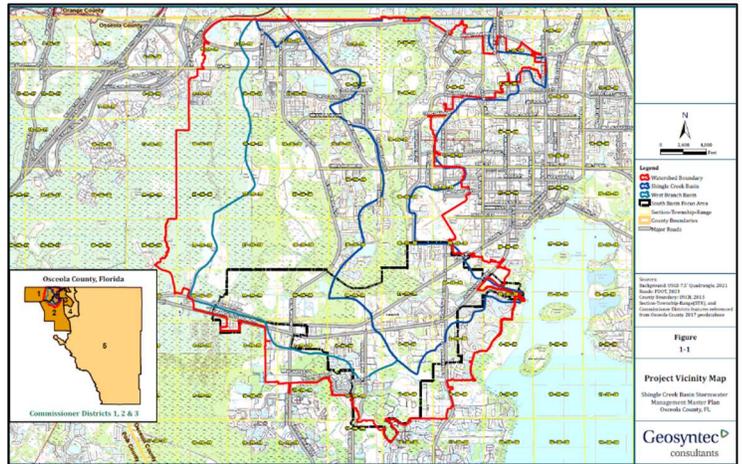
Services Relevant to Solicitation

- Stormwater Management
- Stormwater Retrofit
- Watershed Management
- Modeling (H&H and Water Quality)
- Flood and Erosion Control
- Feasibility Analysis
- Regulatory Compliance
- TMDL Implementation

Description

Osceola County (County), with assistance from the South Florida Water Management District, developed a master surface water management plan (master plan) in 1993 that was updated in 2006. The Shingle Creek and West Branch Shingle Creek Basins were identified as high priority basins in the master plan. The basins are located west/northwest of Lake Tohopekaliga, west of the City of Kissimmee, and generally drain from north to south from Orange County to Lake Tohopekaliga.

Through the preparation of an overall stormwater management plan (SWMP) for Shingle Creek and the West Branch Shingle Creek Basins, a solution to the flood elevation differentials between Osceola and Orange counties and delineation of flood risk is being completed. In addition, strategies to address water quality concerns through projects to reduce pollutant loads area are being conceptualized to help meet the requirements of the Lake Okeechobee BMAP. This will establish and prioritize capital improvement projects that will reduce flooding and improve water quality.



Geosyntec developed a detailed existing conditions H&H model using ICPR v4 that includes a floodplain and floodway analysis required for the development of several FEMA Flood Insurance Study products: floodway delineation, floodway data tables, and flood profiles. It is also needed for Geosyntec to submit a FEMA MT-2/ Letter of Map Revision for one of the five structural improvement design alternatives, as requested by the County.

Three phases comprise the SWMP process:

1. **Inventory and Problem Definition.** Preparation of a comprehensive GIS-based watershed data product that is an inventory of the existing stormwater system.
2. **Engineering Analysis of the Existing Stormwater System.** With a focus on existing conditions, completion of an engineering analysis to confirm the inter-relationships between lakes, ponds, streamflow, and significant drainage infrastructure to determine the existing stormwater system capacity, demands, and deficiencies.
3. **Alternatives Analysis.** Completion of an engineering analysis that results in recommended design alternatives to alleviate flooding in problem areas while maximizing pollutant load reductions, identifies easement needs, provides cost estimates for proposed improvements, and prioritizes the recommended improvements. The alternatives analysis focuses on structural improvement measures; however, the application of non-structural BMPs will be evaluated as well.

Project fees: \$1,056,769.

QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

11. Alachua County Continuing Environmental Services

Client

Evan Shane Williams, PhD, PE, Stormwater Engineer
Alachua County Environmental Protection Department
408 West University Avenue
Gainesville, FL 32601
352.264.6831
eswilliams@alachuacounty.us

Description

Since 2020, Geosyntec has provided services to Alachua County through an environmental consulting services contract. Projects to date include the following:

Services Relevant to Solicitation

- Stormwater Management
- Water Quality Improvements
- Modeling (H&H and Water Quality)
- Water Quality Monitoring
- Design, Permitting and Construction Plans
- Regulatory Coordination
- Public Outreach
- NPDES Compliance

Parker Road Water Quality Improvement Project. Developed improvement concept to expand an existing ditch to create a small retention area with a biosorption activated media (BAM) filter layer to provide treatment of water as it infiltrated into the ground. Developed a detailed ICPR4 model to demonstrate no change in the provided level of service due to the proposed improvements and developed a BMPTRAINS water quality model to evaluate the expected water quality benefit. Design plans were developed using AutoCAD Civil 3-D. Conducted pre-application meeting with SRWMD. **Project fees: \$83,061.**

High Springs Library Water Quality and Drainage Improvement Feasibility Study and Design. Performed a desktop analysis to evaluate the incorporation of previously suggested green stormwater infrastructure (GSI) in the library parking lot and retention pond for flood and water quality improvement. Drainage improvements were also examined to reduce nuisance flooding in the parking lot and promote drainage to the enhanced basin. Currently preparing full design plans and providing permitting support for the recommended GSI improvement that includes retention pond BAM enhancement, bioswale, and correcting deficient grading in the parking lot to better facilitate drainage to the pond and reduce nuisance flooding. **Project fees: \$132,556.**

Newnans Lake Sediment and Water Sampling. Geosyntec facilitated core sediment sampling and water sampling at 10 stations within Newnans Lake. All equipment and supplies were provided to navigate to stations, collected and processed samples, decontaminated sampling equipment between stations, and documented field activities. A written summary was prepared of the field effort and laboratory results (water and sediment chemistry). **Project fees: \$5,544.**

Trout Street GSI Feasibility and Design. Evaluating the use of GSI enhanced with BAM in four strategic locations to reduce flooding and improve water quality. The project area is located south of Melrose Bay, which is a small lobe of Lake Santa Fe, and includes the areas that drain to the outfall along Trout Street. Lake Santa Fe is the headwaters for the Santa Fe River and is designated an Outstanding Florida Waterbody. Opportunities exist to reduce stormwater runoff in this basin due to large County-owned rights-of-way where stormwater can easily be redirected to infiltration and/or detention storage areas. Two sites were selected for full design and construction plans are underway, along with initial permitting with Alachua County and SRWMD. **Project fees: \$143,152.**

**QUALIFICATIONS FOR RFQ #24-SQ-101KW
PROF. STORMWATER AND ENV. ENGINEERING SERVICES
COUNTY OF VOLUSIA, FLORIDA**

12. City of Ormond Beach Stormwater Master Plan

Client

Alex Schumann, PE, Deputy City Engineer
City of Ormond Beach
22 S. Beach Street
Ormond Beach, FL 32174
386.676.3302
Alex.Schumann@ormondbeach.org

Services Relevant to Solicitation

- Stormwater Management
- H&H Modeling
- Flooding Assessment
- Water Quality Improvements
- Best Management Practices
- Sea Level Rise Assessment
- Capital Improvements Planning
- Public Outreach
- NPDES Compliance
- TMDL/BMAP Compliance

Description

This project addressed stormwater management throughout the city to reflect current conditions, regulatory challenges, and impacts from climate change. Geosyntec developed a clear, comprehensive, and forward-looking (10 years) stormwater master plan. The plan incorporated resilience concepts into all aspects of the design and operations of the stormwater management system to reduce flooding, improve water quality, and provide long-term sustainability of the system and management plan. The following elements were addressed:

- Current city basin characteristics
- Flooding assessment leveraging city Stormwater Management Model (SWMM)-based model data – existing and future conditions
- Water quality assessment, including TMDLs and BMAP strategies
- Stormwater regulatory code and NPDES review
- Maintenance program review
- Stormwater utility administration and organization
- Public education, involvement, and outreach
- BMP evaluation and implementation
- Sustainability and resilience assessment including sea level rise impacts and preliminary vulnerability assessment
- Capital improvement program development



Project fees: \$250,000.

QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

13. City of Casselberry Stormwater Quality and Lakes Management

Client

Kelly Brock, PhD, PE, CFM, LEED AP
City of Casselberry
95 Triplet Lake Drive
Casselberry, FL 32707
407.262.7725; kbrock@casselberry.org

Description

Since 2014, Geosyntec has provided services on 19 task orders with cumulative fees of more than \$1.19 million. Representative projects are briefly described below.

Services Relevant to Solicitation

- Stormwater Management
- Water Quality Improvements
- Water Quality Monitoring
- Design, Permitting and Construction Plans
- Regulatory Coordination
- NPDES Compliance

Casselton Drive Improvements. Completed a stormwater and transportation improvements project on a 0.5- mile-long collector road. Designed a “road diet” solution that will narrow Casselton Drive while increasing the open space and promote pedestrian accessibility, sustainability, and livability for the adjacent neighborhoods. Stormwater BMPs were proposed to improve flooding LOS of the road as well as increase water quality benefit. A BFE analysis of the existing road and drainage area was performed since the area is within a FEMA Zone A floodplain. Project included replacement of a large supply water line through the corridor, the placement of linear park features, and a detailed landscaping and irrigation design. **Project fees: \$233,000.**

Park Drive Drainage and Wetland Improvements. Conducted a feasibility study of possible stormwater quality and wetland enhancement improvements. Alternatives were identified for integrating stormwater treatment into the area as well as enhancing the existing wetland condition. Improvements included low impact park amenities as a benefit to the neighborhood. The study also included a base flood elevation (BFE) analysis of the existing area, which is located within a FEMA Zone A floodplain. **Project fees: \$33,961.**

Stormwater Code Review for NPDES Compliance. Conducted a thorough review of the City’s codes and ordinances pertaining to stormwater and related water, environmental, and ecological resources to assist the City with compliance of its NPDES permit. Potential changes to existing codes and regulations were identified that would further reduce stormwater impacts of new development and areas of significant redevelopment. Recommended changes included promoting reductions in impervious surfaces, incorporating low impact development principles, reducing flow and volume of stormwater, increasing natural hydrology, and adhering to the principles of the Florida Yards and Neighborhoods program. A summary report was developed for the City’s Year 2 Annual Report. **Project fees: \$91,327.**

Lake Water Quality Monitoring: Performing Quarterly Ambient Water Quality Analysis of 12 Lakes. Each lake is sampled for alkalinity, BOD5, color, turbidity, ChlA, fecal coliform, ammonia, Nitrate+Nitrite, TKN, organic nitrogen, Orthophosphorus, total phosphorus, cadmium, chromium, copper, lead and zinc. The purpose of the quarterly analyses is to establish long-term trends of water quality within the Casselberry lake systems. **Project fees: \$240,302.**

Lake Concord Nutrient Study. Developed hydrologic and nutrient budgets for this urban lake. Detailed sampling of lake water, stormwater, lake sediments, and groundwater seepage were performed. Results were summarized in a final report along with recommendations for water quality improvement projects. **Project fees: \$70,000.**

Queens Mirror Alum Feasibility and Design. Completed a feasibility analysis for constructing an alum injection facility on an existing ditch draining into Queens Mirror Lake. Samples were collected from the existing creek using grab and autosampler methods and jar testing was performed to identify the most effective coagulant and the optimal dose. Design plans were prepared and permitting performed based on recommendations from the assessment. **Project fees: \$200,000.**

GEC and ECHO UES are subconsultants to Geosyntec on this contract.

QUALIFICATIONS FOR RFQ #24-SQ-101KW PROF. STORMWATER AND ENV. ENGINEERING SERVICES COUNTY OF VOLUSIA, FLORIDA

14. SJRWMD Environmental Assessment of Natural Systems and Minimum Flows and Levels (MFLs)

Client

Andrew Sutherland, PhD
St. Johns River Water Management District (SJRWMD)
Environmental Resource Program Coordinator
Division of Water Supply Planning and Assessment
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asutherl@sjrwmd.com

Services Relevant to Solicitation

- Ecosystem Goals and Targets
- TMDL/NNC Implementation
- Spatial and Statistical Analyses
- Modeling (H&H and Water Quality)
- Independent Peer Review

Description

Through a series of subject matter continuing services contracts, Geosyntec has provided services to SJRWMD through 30 task orders since 2004. Representative projects are briefly described below.

Water Resource Values Assessment of Priority Springs (DeLeon, Gemini and Green Springs), Volusia County, FL. Provided environmental, ecological, engineering, and hydrological services to assess whether the hydrologic regime defined by the multiple MFLs recommended within the District protects water resource and human use values for priority springs within the District. **Project fees: \$304,121.**

Environmental Evaluation of MFLs for the St. Johns River near Deland and Lake Monroe, Volusia County, FL. Performed technical evaluations of preliminary MFLs set by the District to determine if existing environmental values (water quality, sediment loads, transfer of detrital material, freshwater supply and storage, and absorption of nutrients and other pollutants) would be protected. **Project fees: \$54,000.**

Water Resource and Human Use Values Assessment of MFLs for Volusia Blue Spring, Volusia County, FL. Performed a peer review of the water resource and human use values assessment of MFLs for Volusia Blue Spring. Tasks performed included a technical evaluation of methodologies used to perform the values assessment including developed metrics and the appropriate use of available data, both from the literature and from SJRWMD studies (EFDC simulation results and statistical studies). **Project fees: \$122,049.**

Water Resource and Human-Use Values Assessment of the Wekiva River System, Seminole and Orange Counties, FL. Performing environmental, ecological, engineering, and hydrological services to determine MFLs for the Wekiva River System (Wekiva River, Little Wekiva River, Wekiwa Springs and Run and Rock Springs/Rock Run). Available hydrologic and water quality data, SJRWMD studies, and other related studies and recreational and economic information were gathered, collated, and are being used to perform supporting analyses and assessments. **Project fees: \$111,078.**

Water Quality Model Development for the Indian River Lagoon, Brevard and Indian River Counties, FL. Developed a 3-D Environmental Fluid Dynamics Code (EFDC) water quality model for the Indian River Lagoon and Mosquito Lagoon system. Tasks included development of model input parameters including watershed loads, atmospheric deposition, and offshore boundary forcing conditions; initial testing of the water quality model; and calibration of the water quality model against extensive data collected by SJRWMD. **Project fees: \$100,000.**

Frydenborg EcoLogic is a subconsultant to Geosyntec on the continuing services contracts.

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PROJECT APPROACH

In this section, we provide our:

- A. Methodology and strategy to approaching tasks
- B. Approach to management, quality control, schedule and budget requirements, etc.
- C. Unique capabilities and resources
- D. Integration of County task orders into Geosyntec workload (available capacity)

A. METHODOLOGY AND STRATEGY TO APPROACHING TASKS



We provide a customized example of how we will approach a County task assignment (**a stormwater retrofit project**), describing our task management and schedule and budget controls.

Our project team has been carefully assembled to provide the most innovative and cost-effective solutions to the types of projects that will be addressed under this contract. Projects will be conducted in accordance with Geosyntec's proven work processes and quality control program.

Once selected for a contract task assignment, Geosyntec will review available documentation and assemble a database of general project information to familiarize ourselves with the project. We will then coordinate a scoping meeting with the County, during which the task assignment goals and constraints will be established. Each task assignment will clearly describe the services required, state task start and completion dates to meet County expectations, and establish payment amounts and methods. Our experience conducting and managing similar projects for municipal clients allows us to identify constraints and potential problems at project commencement that may affect the project schedule.

QUESTIONS TO BE ADDRESSED DURING THE SCOPING MEETING

1. *Is the project focused on addressing stormwater infrastructure, flooding (retrofit, floodplain, etc.), utilities, water quality (TMDL, NPDES, etc.), groundwater, or multiple objectives?*
2. *Will the project identify alternative solutions, or will it commence straight to design-level engineering?*
3. *Will permitting be required? Will there be significant utility or right-of-way coordination?*
4. *Will the project require grant funding for implementation? Are there funding deadlines or political issues?*
5. *Will the project need to meet NPDES or TMDL requirements? How can the deliverables provide program credit?*
6. *Will there be a significant public involvement component?*

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TASKS

Upon completion of the scoping meeting, Geosyntec will confer with the project team to identify key resources to allocate to the project. **Geosyntec is sensitive to limited municipal budgets and will scrutinize all costs to ensure the County is receiving the most cost-effective work product.** Geosyntec's services on typical stormwater flooding or water quality-related retrofit projects include the following elements:

- **Desktop Review.** This initial task will focus on compiling available background information needed to support project requirements. This entails gathering GIS data, plans, permits, and environmental data relative to the project and compiling it into GIS geodatabases. This process will also identify data gaps requiring additional data collection.
- **Field Review.** This element includes a field investigation with photo/GPS documentation of key features (problem locations, drainage structures, conveyance features, wetlands, high water marks, etc.). During this initial survey, any geotechnical investigations and ecological assessments will be completed. Interviews will be held with County and regulatory personnel as well as residents, if applicable, to assess the frequency and severity of any problems.
- **Existing Conditions Analysis.** The completion of the desktop and field reviews allows for a complete understanding of the existing conditions of the project area. Design criteria will be established and a hydraulic and hydrologic (H&H) and/or pollutant loading model of the project conditions may be developed to confirm the origin of any problems and provide the basis for evaluating corrective action measures. H&H modeling will generally be performed using ICPR or SWMM. Pollutant loading models may be simple spreadsheet-based event mean concentration (EMC)/land use applications or more site-specific models for consistency with TMDL/NPDES requirements. At this point, the issues at the project site will be fully defined and the objectives for corrective action established.
- **Preliminary Engineering-Corrective Actions Analysis.** This element entails evaluating alternatives to meet the established corrective action objectives and goals. This may include civil infrastructure (roadway, sidewalk, drainage, etc.) improvement strategies, evaluating various flood reduction scenarios, water quality BMP implementation, erosion and sedimentation control measures, or some combination of these. Each alternative will be fully evaluated with respect to cost, land acquisition, long-term maintenance, constructability, utility conflicts, right-of-way/easement issues, and public acceptance. The focus is to identify implementable projects that are cost-effective and attractive to grant funding. Initial conversations with SJRWMD and other agencies will occur at this time to evaluate the permit feasibility of corrective actions. Concept sketches will be provided, and preferred alternatives will be agreed upon with the County before proceeding with final design.
- **Final Design Plans and Specifications Production.** Where implementation of capital projects is necessary, specifications will be generated and plans will be produced. Plans will be produced consistent with the County's CAD requirements. During this process, utility conflicts and right-of-way issues will be confirmed. *All plans will go through a value engineering review while developing cost estimates to ensure the most economical solution is provided.* Pay items will be prepared in accordance with standard FDOT line items or based on County preference. Construction specification packages will be prepared at this time. Right-of-way, easement, and environmental assessment issues will be addressed.



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- **Permitting.** Permitting with SJRWMD will generally occur at the 90% or 100% design plans interval. Geosyntec's experience will minimize requests for additional information, thereby saving time and money. In some instances, permitting with other agencies, including USACE, FDOT (drainage connections), or FDEP (utility relocations) may be necessary.
- **Post-Design Services/Construction Oversight.** Where necessary, Geosyntec will provide post-design services including pre-bid support, pre-construction reviews, and construction oversight.
- **Public Involvement.** If public involvement is required, it will generally be initiated at the preliminary design phase once an approved alternative is selected and/or once a couple of appropriate alternatives have been identified and public input is sought. Involvement at the time of construction initiation may also be beneficial to educate property owners on the expected impacts. Typically, the more contentious a project is, the greater the value in involving the stakeholders early in the process.

SPECIAL CONSIDERATIONS WHEN COMPLETING ASSIGNMENTS

Through the completion of numerous similar projects, Geosyntec personnel understand the types of special considerations and common difficulties that accompany municipal infrastructure projects. These include:



- **Safety.** Geosyntec is committed to protecting the safety and health of our employees, clients, and contractors and to protecting and preserving the environment in which we operate. In all activities, we continuously strive to comply with applicable laws, regulations, licensing requirements, and client expectations. Geosyntec will take appropriate steps in accordance with applicable regulatory guidelines and industry best practices during field investigations, design, and construction administration.
- **Funding.** We will focus on cost-effectiveness and value engineering while also helping the County identify opportunities for grants or other sources of potential external funding. Project deliverables can be tailored to be attractive for grants, particularly when involving water quality improvements (BMPs; low impact development) for NPDES/TMDL purposes.
- **Property Acquisition and Right-of-Way Easements.** Recommended improvement alternatives may require the acquisition of right-of-way, easement, or property for a pond site or other large footprint BMP. The best project designs are of no use to the County if they do not have the appropriate right-of-way or easement for the improvement. These needs should be identified as early in the design concept process as possible to avoid project delays and unnecessary expenditures of project budget.
- **Coordination between Jurisdictions.** When improvements cross jurisdictional boundaries (e.g., cities of DeLand, Deltona, Daytona, Holly Hill, Ormond Beach, etc.), coordination with other entities is necessary. Often, different jurisdictions have differing perspectives on project needs, constraints, and benefits. Effective communication and good working relationships are necessary to avoid project delays. We successfully coordinate project execution with staff at several local jurisdictions, including the County.
- **Utility Conflicts.** Projects become even more challenging during construction when utility conflicts are not properly identified during the design stage. Utilities adjustments during construction are costly and may be infeasible. Subsurface utility exploration should be conducted in conjunction with the design survey to identify conflicts early in the design process. Confirmation of conflict resolution with utility companies should always be documented.

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- **Ancillary Improvements.** During the course of design, opportunities for improvement to other infrastructure in the immediate vicinity of the drainage improvement should be considered. It is oftentimes much more economical to address upgrades while construction is already occurring rather than through a separate contractor mobilization. Examples include improvements to sidewalk, water/sewer pipes, pavement, guardrail, ADA upgrades, etc.

TASK MANAGEMENT, INCLUDING SCHEDULE AND BUDGET CONTROLS

The organizational chart provided in the separate Project Team document reflects the Geosyntec team structure for this solicitation. The framework of the team centers on the contract manager (CM) and task managers. Mark Ellard, PE, CFM, BC.WRE, ENV SP, as the CM, will:



1. Facilitate all scope development, cost proposal preparation, negotiation, and task order execution with the technical leads.
2. Serve as primary point of contact/day to day contact for the County.
3. Review and provide QA/QC for all task order deliverables with each task manager.
4. Ensure all task order schedules are met.
5. Address and facilitate solutions for any issues that arise during the execution of task orders.
6. Facilitate coordination and communication among all team members.
7. Interface with stakeholders, regulatory agencies, the public, etc.

Geosyntec will implement the following practices to maintain excellence throughout all project tasks:

1. Continual communication between the CM and task managers regarding the project scope; interim and final deliverables; and budgets and schedule requirements.
2. Timely corrective action, such as redirection of work effort or reassigning staff if costs begin to exceed progress on specific elements of work.
3. Regular external communication to keep the County informed of project progress, successes, problems, and work solutions to ensure satisfaction with project deliverable fulfillments and scope achievements.
4. Staffing of task assignments based on the best match of experience and task assignment requirements.

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B. APPROACH TO MANAGEMENT, QUALITY CONTROL, ETC.

Geosyntec has provided focused support to communities for more than 40 years. We understand how government agencies operate and the time and budget requirements of their projects. *Our willingness to meet the needs of our clients is best exemplified by the long-term relationships we have maintained with each water management district as well as multiple communities in Florida, including the cities of Ormond Beach, Titusville, Cocoa, Cocoa Beach, Melbourne, and Cape Canaveral, as well as Brevard, Volusia, Indian River, Flagler, Orange, Seminole, Osceola, and Pasco counties.* Our principals and project managers are experienced and motivated to exceed the expectations of our state and local government clients.

Effective project management encompasses schedule control, budget control and quality assurance/quality control (QA/QC). These three factors are keys to the success of any project. Geosyntec’s general project management strategy is geared toward each segment of a project being organized, directed and controlled by an experienced task manager to ensure its efficient completion within budget, on schedule and conducted in a cost-effective manner. The CM’s primary function and responsibility, working with the assigned task lead, is to lead the team, control scheduled activities, ensure the quality of the project deliverables, monitor and assure the commitment of necessary resources, and ensure that the project stays on track and within budget. At initiation, the project will be subdivided into measurable and manageable project tasks with milestones that allow definitive assignments of budget, schedule and quality control. The delineation of tasks also allows Geosyntec and the County to efficiently focus on managing each task as it is being accomplished.



MANAGING THE PROJECT



Upon receipt of an executed task order, Mr. Ellard will conduct a kick-off meeting with the County to review project scope, budget, schedule, and other elements of the task plan (discussed below); file transfer information; and establish administrative procedures including lines of communication, schedules, contacts and priority issues. Geosyntec’s emphasis on – and success in – meeting project schedules and

controlling costs is attributed in part to the strength and flexibility of our standard project management procedures.

The following describes Geosyntec’s standard procedures associated with schedule and budget control.

- **Task Plan.** In conjunction with development of the draft scope and budget, a draft task plan will be prepared that outlines fundamental information that is critical to properly fulfilling the executed task order. This document utilizes the scope of work as a base and identifies project personnel, project schedule, project vision/critical success factors (developed in conjunction with the County PM and staff), document control, quality assurance personnel and plan, communications plan and methods/schedule for reporting progress to the County.

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- **Schedule Control.** Geosyntec maintains established schedules throughout the project. We conduct regular meetings with the client and project team members to review the status of the scope of work, deadlines and budgets. Additionally, we regularly prepare project status reports that Mr. Ellard reviews and compares to the task plan. The schedule of meetings and the schedule for project status reports is outlined within the approved task plan.
- **Cost Control.** Geosyntec uses BST Enterprise Project Management Software (BST), a web-based, management-information system specifically designed for professional service organizations. BST provides real-time information on various components of project management that are critical to successfully keeping a project on schedule and within budget. Some components measured and monitored by BST include billings per employee, task and project remaining and total budgets, project expense charges and percent complete. BST is a very effective tool that allows Geosyntec to keep abreast of all project charges and completion levels. Detailed analysis of the project management reports provides a means to bring projects with overrun potential back on track. Use of this software on a daily or weekly basis allows Mr. Ellard and the technical leads to proactively avoid project overruns and keep the project on schedule.

Proactive communication between Geosyntec and the County is key when changes to the scope of work occur during project planning or design. When out of scope work appears necessary or is requested by the County, the task managers and Mr. Ellard will discuss internally to confirm the extent and significance of the work. Mr. Ellard will then reach out to the County to seek confirmation and agreement on the out-of-scope work and concur on the path forward to achieve project objectives. Possible solutions may include determining that the out-of-scope work is not essential to the project and will not be completed, other tasks may be reduced or eliminated to accommodate the additional work within the original budget, or adding scope and budget to the project through a contract amendment.

FACILITATING SUBCONSULTANT QUALITY AND SCHEDULE COMPLIANCE



Advanced technology enables Geosyntec to provide services efficiently, effectively, and in a seamless manner. Daily use and monitoring of electronic communications via computers, tablets, smart phones, and cell phones ensures responsiveness by all team members. Digital file sharing occurs via cloud-based storage systems such as OneDrive, which allow file access anywhere there is an Internet connection.

Geosyntec utilizes state-of-the-art technology to facilitate communication and transfer information between our offices and clients. We can quickly and efficiently set up virtual conferences, transmit documents and renderings, and reduce costs by working remotely wherever possible during the course of a project. Our employees utilize every available system to communicate effectively and economically around the world, regardless of location. For this solicitation, Geosyntec will establish and maintain a cloud-based site to facilitate interactive information sharing for uploading and downloading of electronic files.

Should subconsultants be required for a task order, Geosyntec will facilitate smooth interfacing with the subconsultants through careful planning, clear communication of requirements, timely monitoring of deliverables, and regular reviews of financial and performance data. Geosyntec follows a proven, straightforward philosophy for subconsultant management:

- Determine project objectives together
- Encourage value engineering suggestions

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- Review progress regularly
- Schedule work to meet objectives
- Implement corrective actions as required
- Verify documentation

ASSURING THE QUALITY OF THE PROJECT

QA/QC is an important part of Geosyntec's project planning and execution. Our QA/QC process helps to ensure that all project deliverables are reviewed by Geosyntec team members with the appropriate technical knowledge and experience. QA begins at the concept phase and is a part of all phases through project completion. Our QA/QC process draws on years of experience by identifying critical QC points and issues to be reviewed, using tracking mechanisms within BST, and identifying responsibilities for experienced reviewers independent of the project team. Internal QC points or milestones within the task order will be established during the project planning stage and will be outlined within the task plan. This, in turn, will be communicated to the project team at the kickoff meeting. The QA/QC schedule is part of the task plan. This independent oversight helps to facilitate consistent quality on all task orders issued under this solicitation.

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C. UNIQUE CAPABILITIES AND RESOURCES



The following innovative procedures, processes, and workflows will streamline data collection, analysis, and design, aiding in project optimization and cost savings.

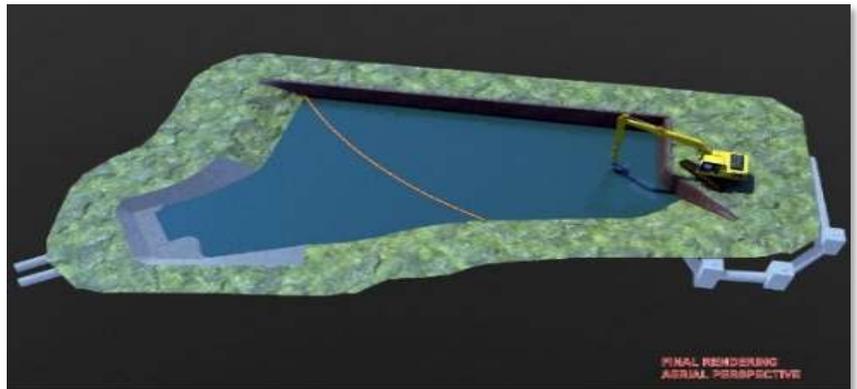
Cost-Saving Measures. Through the evaluation of multiple design alternatives, use of innovative project delivery methods, and engineering analysis, Geosyntec realizes significant cost savings for our clients. Geosyntec will use this same approach for alternative improvement concept projects under this solicitation with an emphasis on developing capital projects that provide a significant overall reduction of construction costs and long-term operation and maintenance costs. Our extensive experience with similar local government projects allows us to accurately estimate project costs to work within budget constraints. Our attention to project objectives enables us to focus on tasks that achieve tangible project benefits rather unnecessary data or analysis.

External Funding. Grants and research funding are excellent ways to supplement funding for project implementation. Geosyntec has helped clients secure more than \$33 million in grant funding from various sources over the last 15 years. We will assist the County in identifying grant opportunities and recommend improvement project concepts that are attractive to funding entities. Select Geosyntec projects that have received grants:

- City Park Neighborhood Retrofit and BMP Implementation, Cape Canaveral, FL (FDEP 319h)
- Orlo Vista Flood Mitigation, Orange County, FL (FEMA HMGP and DEO CDBG)
- Bay Lake Neighborhood BMP Retrofit Design and Monitoring, Orange County, FL (FDEP 319h)
- Beville Creek Restoration, Gainesville, FL (SJRWMD Innovative Cost Share)
- Macaris Street Outfall Resilience Improvements, St. Augustine, FL (SJRWMD Innovative Cost Share)
- Bay County Stormwater Master Plan, Bay County, FL (RESTORE Act)
- Town of Welaka Vulnerability Assessment (Resilient Florida)

High End Engineering Deliverables in AutoCAD.

Geosyntec operates primarily with the Autodesk CAD concurrent platform employing the Civil Infrastructure Design Suite package. Our advanced three-dimensional capabilities allow staff to visualize project concepts such as BMPs or natural system enhancements. The visualizations are an effective tool for translating project goals for the public. Electronic deliverables will be provided



for all design projects, including the full CAD design files, together with ASCII point file information in standardized County format. We provide a full range of civil-water resources and marine/coastal engineering

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design services that capture design elements in figures, construction details, as-built (record) drawings, design drawings, construction drawings, technical specifications, and special provisions.

GIS Interfacing. Geosyntec emphasizes the use of GIS on surface water projects and has a wealth of geodatabase management expertise that will benefit the County. Using a client-specific geodatabase schema allows for the storage of large amounts of infrastructure and related environmental data in a consistent topologically controlled environment allowing for easy updates and exporting data to other platforms. This includes leveraging the industry standard SWFWMD Geographic Watershed Information System (GWIS) model data schema. Linkages to the County's drainage inventory and CIP tracking system can be developed to streamline import/export of data to/from those repositories. All Geosyntec watershed staff are well versed in the application of GIS tools with regular training.

Two-Dimensional (2D) Modeling. Improvements in computer processing and hardware have led to advancements in stormwater modeling capabilities. One of the most notable enhancements is the emergence of 2D model analyses that simulate non-dendritic stormwater systems. This includes the ability to model large areas of overland flow or overbank conveyance along channelized systems which traditionally have been problematic using one-dimensional approaches. Geosyntec routinely utilizes 2D modeling on projects that include both urbanized and natural systems, which may have application in a number of areas in this contract's watersheds.

Low-Cost Field Data Collection. Geosyntec has a variety of resources to collect field data cost efficiently. Our surveyors have the latest data collection equipment including aerial-based and terrestrial LiDAR systems. Our engineers also have the ability to collect drainage inventory data with GPS/GIS-based handheld units with photo-linking capabilities which reduce the time needed to collect, process, and store project data, thereby saving project time and budget. We also have an FAA-approved drone pilot for efficient collection of aerial base photogrammetry and other mapping needs. We routinely deploy low-cost field hydrological monitoring systems to obtain valuable data needed for model calibration and verification including rain gauges, flow gauges and stage gauges.

LID/Green Stormwater Infrastructure (GSI). In the space-limited urban environment, land intensive BMPs such as stormwater ponds are often not practical. Small footprint, distributed low impact development (LID) or GSI-type practices such as bioretention, rain gardens, stormwater harvesting, etc., are effective alternatives in densely developed areas. These practices are particularly advantageous when contemplating capital improvement concepts for flooding and water quality where the availability of landscaped areas is often plentiful, and acquisition of large land tracts is impractical. These technologies work well in tandem with existing BMP facilities (i.e., treatment train) to reduce pollutants. Geosyntec is a leader in the research, design, and monitoring of various LID and GSI technologies. Our staff have performed key research and assisted in the development of stormwater treatment BMPs in use throughout the state, including:



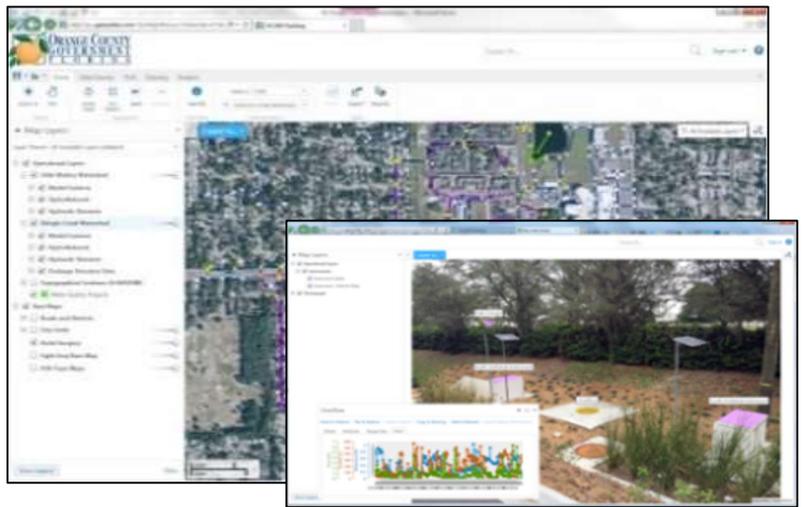
- Pervious pavement systems
- Floating treatment wetlands
- Stormwater harvesting
- Bioretention/bioswales
- Polyacrylamide applications
- Real-time monitoring and control

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- Green roofs/blue roofs
- Erosion control BMPs
- Biosorption activated media (Bold and Gold™)
- Stormwater forecasting for water supply

These solutions must have a positive benefit-cost for water quality improvement (e.g., \$/lb of pollutant removed) to utilize County funds most responsibly. Geosyntec excels in the design and implementation of stormwater collection and treatment systems. We assist clients throughout the U.S. in developing LID/GSI BMP manuals to address pollutant loads to meet NPDES and/or TMDL requirements. This includes our recent LID manual development efforts for Orange County, FL. We also help local governments develop tools to implement LID/GSI practices, such as the Green Infrastructure Siting and Regional Retention Siting GIS Tools for Pinellas County, FL.

Web-Based GIS Data Viewers. Geosyntec develops and hosts web-based GIS data viewers for our clients. This allows the benefit of GIS data to be leveraged across a wider client audience that does not have access to GIS licenses. One example of this application is our work with Orange County, FL, in which we set up an interface for their digital watershed and stormwater information. Orange County is challenged with data management, having to manage various disparate watershed and stormwater-related GIS geodatabases along with related reference data (plans, permits, photographs, etc.). Custom online tools were



developed to assist County staff with daily workflows through a non-proprietary web browser interface. The interface was developed for both desktop and mobile platforms. The web-based GIS data viewer saves time and budget while streamlining the process of data transfer and review, as well as facilitating the delivery of electronic deliverables.

Public Involvement. Geosyntec has a proven track record of facilitating effective project stakeholder coordination and will assist with a public involvement program. We will produce high quality flyers, large-scale display boards, project videos, and social media posts to share project information. Where funding constraints are present for project implementation, public support can help in developing resources. Public involvement will be conducted in a manner to maximize the County's credit under regulatory programs such as NPDES. We demonstrated these skills in the recent East Basins project for Seminole County, FL, where we facilitated public meetings as well as special meetings with citizens groups and regulators. Another example of our efforts is the Future 100-year Flood Map project for Broward County, FL, where we led stakeholder involvement efforts coordinating 31 municipalities, 23 water control districts, and the regulatory community.



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**D. INTEGRATION OF COUNTY TASK ORDERS INTO GEOSYNTEC
WORKLOAD (AVAILABLE CAPACITY)**

Our services to the County during the last five years demonstrate our ability to integrate County task orders into Geosyntec’s workload. Contract manager Mark Ellard, PE, CFM, BC.WRE, ENV SP, proactively conducts weekly workload/staffing coordination meetings with the Geosyntec Florida Water Resources team. He maintains awareness of all active project milestones and deliverables; QA/QC checkpoints; and personnel schedules. This is accomplished through the aforementioned weekly meeting as well as the process in place by which he reviews and approves all proposals, scopes of work, and/or task orders.

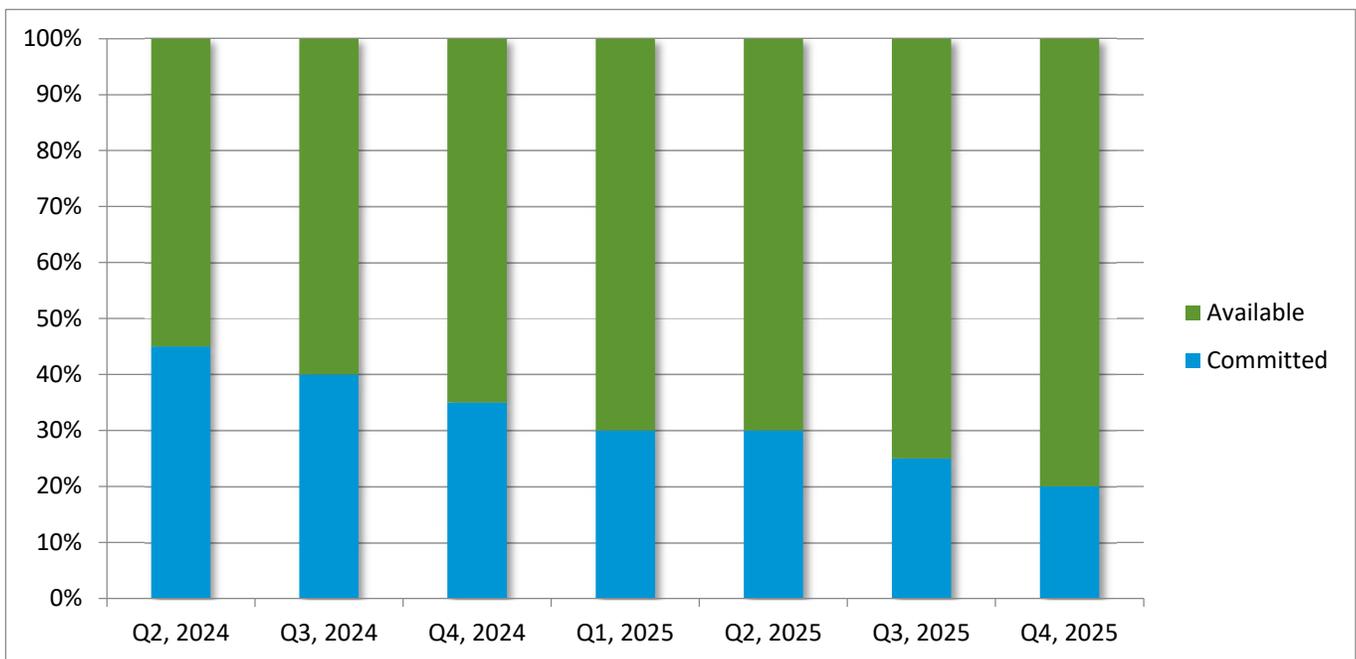


Further confirmation/understanding of personnel availability and overall workload capacity is provided through reports generated by BST, a web-based, management-information system specifically designed for professional service organizations. BST provides real-time information on project status (percent complete) and employee utilization.

AVAILABLE CAPACITY

We are committed to having the resources available and ability to meet assigned deadlines and budgets. From our experience working with each subconsultant, we fully expect that this commitment will be met. If a team member cannot meet a project deadline, or if there is a loss of key personnel, Geosyntec will utilize both internal and external resources as necessary to meet the overall project deadlines.

Based on currently contracted work and future projections, the following chart depicts the available capacity of the key personnel identified for this contract through 2025. Further, we will have available capacity for the term of the contract. [We are committed to providing the County with targeted, proactive service on a timely and cost-effective basis.](#) A summary of our key personnel availability is located on the next page.



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Availability of Key Personnel (Task Managers are in bold)

No.	Name	Role(s)	Highest Degree Earned	Total Years' Experience	Years with Firm	% Avail.
1	Mark Ellard, PE, CFM, BC.WRE, ENV SP	<ul style="list-style-type: none"> Contract Manager Senior Prin. Eng. 	MS	34	13	60%
2	Tom Amstadt, PE, CFM	<ul style="list-style-type: none"> Principal Engineer 	MS	20	13	40%
3	Mike Hardin, PhD, PE, CFM	<ul style="list-style-type: none"> Principal Engineer 	PhD	18	9	50%
4	Bob Burleson, PE	<ul style="list-style-type: none"> Senior Engineer 	MS	39	26	60%
5	Nick Hartshorn, PE	<ul style="list-style-type: none"> Professional Engineer 	MS	7	7	70%
6	Steve Peene, PhD	<ul style="list-style-type: none"> Senior Principal Scientist 	PhD	36	27	40%
7	Robert Potts	<ul style="list-style-type: none"> Principal Scientist 	MBA	19	1	50%
8	Scott Deitche, ENV SP	<ul style="list-style-type: none"> Senior Principal Scientist 	BS	29	2	50%
9	Cathy Foerster, AICP	<ul style="list-style-type: none"> Senior Land Planner 	BA	30	6	60%
10	Michael Scott, PE, PMP	<ul style="list-style-type: none"> Senior Engineer 	MS	16	9	40%
11	Gloria Teague, PE, CFM	<ul style="list-style-type: none"> Senior Engineer 	MS	12	4	60%
12	Kevin Tyre	<ul style="list-style-type: none"> Scientist 	MS	11	1.5	60%
13	Sevil Ranjbar, PhD, PE	<ul style="list-style-type: none"> Project Engineer 	PhD	3	3	70%
14	Karli Mahoney, EI	<ul style="list-style-type: none"> Project Engineer 	BS	2	2	70%
15	Craig Ballock, PE (GEC)	<ul style="list-style-type: none"> Senior Geotech. Engineer 	MS	20	19	35%
16	Claudia Listopad, PhD, GISP (Applied Ecology)	<ul style="list-style-type: none"> Principal Scientist 	PhD	24	15	35%
17	Tamy Dabu (Applied Ecology)	<ul style="list-style-type: none"> Senior Scientist 	BS	35	2	45%
18	Sarah Malone, CPM, ENV SP (Applied Eco.)	<ul style="list-style-type: none"> Scientist 	MS	18	1	45%
19	Walker Dawson, PE (Applied Ecology)	<ul style="list-style-type: none"> Senior Engineer 	BS	18	1	55%
20	Russ Frydenborg (Frydenborg EcoLogic)	<ul style="list-style-type: none"> Principal Scientist 	BS	45		25%
21	Eric Cain, PSM (ECHO UES)	<ul style="list-style-type: none"> Senior Surveyor 	BS	19	5	35%
22	Carlo Pilia (ECHO UES)	<ul style="list-style-type: none"> Senior Subsurface Specialist 	BS	20	7	35%

FINANCIAL STABILITY



Geosyntec has sustained uninterrupted profitable operations for decades, currently earning more than \$500 million in annual revenue. Based on our financial performance, Engineering News-Record (ENR), a longstanding industry publication, consistently ranks Geosyntec as one of the United States' top firms in several categories.

In May 2022, Geosyntec partnered with Blackstone Energy Partners to strengthen its ability to grow through strategic acquisitions and recruiting top talent. This partnership also positions us to respond to increasing demand for our services while continuing to provide exceptional client service and project execution. Geosyntec maintains a diverse client and market sector portfolio, which increases our stability as financial conditions fluctuate across various industries. The firm serves Fortune 100 manufacturing companies, potentially responsible party (PRP) groups, many of the United States' top law firms, and federal, state, and local government entities. As a result of Geosyntec's performance and client service, repeat business accounts for more than 80% of our annual revenue. Such dynamics increase Geosyntec's financial stability and the efficiency of our operations.

Geosyntec's Dun & Bradstreet (D&B) Rating is 5A2. The D&B rating reflects Geosyntec's financial stability based on a third-party objective analysis of the firm's size and balance sheet status. The first part of the rating is our Financial Strength Indicator. Geosyntec's 5A status reflects the highest possible rating and is reserved for companies with a net worth of \$50 million or more. The last number in the rating presents a Composite Credit Appraisal, an indicator of creditworthiness linked to the firm's financial condition and other factors such as trade payment history, length of operation, employee numbers, legal structure, and management experience. Geosyntec has the second-highest-possible rating in that category.

Geosyntec's financial stability allows our engineers, scientists, and innovators to focus on providing exceptional solutions to our clients' most complex problems.

Our most recent (2023) certified audited financial report can be provided upon request.

Geosyntec Consultants, Inc., certifies that it is financially stable and has the necessary resources, human and financial, to provide services at the level required by the County of Volusia.