1. **SCOPE OF SERVICES**
   1. Provide professional geologist or professional geotechnical engineer with experience in hydraulic and hydrologic investigation services and consulting services to support the Lake County Water Authority (LCWA) for assigned tasks related to, but not limited to, preparing water quality reports (event, semiannual, and technical reports), monitoring plan design, contamination assessments, providing oversight to all aspects of new monitor well installation, all aspects of existing monitor wells (including evaluation, abandonment, and repairs). Assessments of aquifers and any other subsurface water conditions. Analyzing water and river systems including wetlands and wetland preserves, dams, locks, and weirs on an as-needed basis. Investigations, hydrogeologic assessments, and engineering recommendations to ensure the sustainability, stability and performance of the geological and hydrogeological systems as a whole. The LCWA works in partnership with the Lake County Board of County Commissioners and staff to ensure all related elements of its mission are addressed.
   2. Consultant is required to maintain active and provide copies of any required licensing for services.
   3. The Lake County Water Authority is responsible for the restoration and sustainability of the natural water systems that exist and pass through Lake County. This includes care of the lakes and waterways as well as ensuring the health and restoration of wetland areas. The Harris chain-of-lakes, the Clermont chain-of-lakes, the Holly chain, and all the interconnected wetlands and underground water movement fall under the purview of the LCWA. The LCWA is also responsible for natural freshwater treatment through land restoration or chemical and mechanical intervention. The consultant for this scope will require an intimate understanding of all these unique systems.
   4. All sampling services are currently performed by private residents and County staff. A portion of the laboratory analyses are performed in-house, with the remaining analyses performed by other laboratories. LCWA would provide any “available” laboratory data to the Consultant in one data deliverable as needed. Examples include:
      1. Laboratory analytical data will be provided in the FDEP approved format (currently ADaPT)
      2. GIS files on sample locations
      3. Electronic copies of all field sampling data sheets
      4. Water level elevations for each sampling event
      5. Survey information
   5. Services to be performed by the Consultant under this contract include but are not limited to:
      1. Geologic/Geotechnical Services
         1. Site assessments inclusive but not limited to: Subsurface investigations of soil/rock and water. Soil stratigraphy, groundwater levels, and geotechnical conditions.
         2. Laboratory testing inclusive but not limited to: testing of soil, sand, and rock samples to determine parameters of compaction, permeability, consolidation properties, etc.
         3. Slope stability analysis is inclusive but not limited to: areas of critical infrastructure, riverbanks, lake shores, and canal embankments.
         4. Ground improvement recommendations are inclusive but not limited to: identifying and recommending ground improvement methods and stabilization.
         5. Foundation designs and support inclusive but not limited to: identification and recommendations for foundational support of critical infrastructure sites including dams, locks, weir, and treatment facilities.
         6. In-situ field work in preserves, wetlands, rivers/canals, waterbodies, etc.
         7. Assisting with the permitting requirements with all governing and/or regulatory agencies.
      2. Hydrogeological Services
         1. Hydrology and groundwater flow analysis
         2. Laboratory testing inclusive but not limited to: organic and inorganic loads and loading, total solids, oxygen, pH, bacterial contents, any other contaminates as requested, etc.
         3. Aquifer characterization is inclusive but not limited to: conductivity, transmissivity, storage, and capacity for supporting removal.
         4. Groundwater and surface water interactions
         5. Water table and groundwater quality monitoring inclusive but not limited to: evaluating fluctuations, contamination and contamination risk, and impacts on ecosystems and infrastructure.
         6. Transport modeling including contaminate modeling.
         7. Sheet flow modeling, water flow pattern analysis, drainage basin mapping and interactions.
         8. In-situ field work in preserves, wetlands, rivers/canals, waterbodies, etc.
         9. Well design
         10. Assisting with the permitting requirements with all governing and/or regulatory agencies.
         11. Provide oversight and/or project management for the installation of new monitoring wells.
         12. Well installation, repair, and/or abandonment services.
   6. Design support inclusive but not limited to: site specific recommendations, construction monitoring and inspections, design reviews and recommendations, risk assessments and impact analysis.
   7. Compliance and regulatory support inclusive but not limited to: compliance assessments, environmental impact assessments, permit applications, and Best Management Action Plans (BMAP).
   8. Provide data collection, report generation, and presentation services for County staff as well as public meeting support.
2. **Well Installation/Repair/Abandonment Services**
   1. Installation, repair, and/or abandonment of monitoring wells shall be included under this contract; this portion may be subcontracted out by the consultant. The consultant shall be responsible for the oversight of any third party well installations, repairs or abandonments.
   2. The monitoring wells are used for ground water quality sampling and analysis and for water level measurements. New wells shall be constructed according to the specifications and guidelines of the County, FDEP, EPA and any other regulatory or governing agencies. The consultant may be responsible for submitting plans or reports and obtaining approval for all work before and after completion through the FDEP. The consultant and the LCWA’s Project Manager or their designee will accompany the drilling contractor to all sites for an initial visit and will be available to consult with the drilling contractor during field operations to determine well/boring depth and other matters that may arise. The consultant may subcontract out the physical installation, repair or abandonment of the monitoring wells but will be responsible for the continued monitoring and management of the project.
3. **Reporting Requirements**
   1. Follow all requirements based on Rule 62-701.510 FAC where/when applicable.
   2. Initial and all follow up reporting will be strictly adherent to the regulatory standards for all permits, licenses, and certifications.
   3. When requested, signed/sealed reports will be provided to the LCWA by a professional geologist, hydrogeologist, or engineer.
   4. Summary data should be made available along with detailed reports.
   5. Quality assurance and quality control for ongoing projects.
4. **Deliverables**
   1. Signed/sealed construction ready engineering plans for geotechnical and hydrogeologic related projects.
   2. Signed/sealed analytic reports on geotechnical and hydrogeologic conditions.
   3. Recommendation reports in electronic and/or hard copy delivered electronically or in person, including public meeting support and presentation.
   4. Construction and project management services.
      1. Review or deny submitted shop drawings, product data and or samples as required by the contract documents.
      2. Respond to Requests for Information (RFI’s) during bidding or construction periods.
   5. Daily, weekly, monthly, quarterly, and/or annual reports on site conditions, projects, and areas of concern as requested.
   6. The LCWA reserves the right to meet with the consultant to discuss recommendations made in any report. All reports shall be signed and sealed by the professional geologist or professional engineer overseeing the project.
   7. Consultant acknowledges and must provide/comply with all requirements of this Exhibit (written and implied) at no additional cost to the County. This Scope of Services must be part of the consultant proposal.
5. **Key Contractor Personnel**

In submitting a proposal, the Proposer is representing that each person listed or referenced in the proposal shall be available to perform the services described for the Lake County Water Authority, barring illness, accident, or other unforeseeable events of a similar nature in which case the Proposer must be able to promptly provide a qualified replacement. In the event the Proposer wishes to substitute personnel, the Proposer shall propose a person with equal or higher qualifications and each replacement person is subject to prior written LCWA approval. In the event the requested substitute person is not satisfactory to the LCWA and the matter cannot be resolved to the satisfaction of the LCWA, the LCWA reserves the right to cancel the contract for cause.

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