Qualifications for:
Continuing Professional Services for the Utilities Commission, City of New Smyrna Beach

RSQ NO. 10-18 | April 5, 2018
April 5, 2018

Maureen Crossman, CPPB, FCPM, FCCM
Materials Manager
Utilities Commission, City of New Smyrna Beach, Florida
200 Canal Street
New Smyrna Beach, Florida 32168

RE: Request for Statement of Qualifications Continuing Professional Services RSQ No. 10-18

Dear Selection Committee Members,

Tetra Tech is delighted to submit upon this Request for Statement of Qualifications for Continuing Professional Services with the Utilities Commission, City of New Smyrna Beach. Tetra Tech is more than qualified to perform the services associated with the Civil Engineering category; including water, wastewater, reclaimed water, piping, distribution, transmission, pumping storage and treatment, miscellaneous site planning, water and wastewater plant upgrades, and other related projects.

**Track Record.** Tetra Tech has been recognized by Engineering News-Record as a front-runner in the industry, most recently being ranked by the publication as the #1 design firm in Water, #1 in Pipelines, #3 in Sewer and Waste, and #5 in the Top 500 Design Firms. Tetra Tech has held the #1 ranking in Water for 14 consecutive years, which speaks to the reputation that we have built in the industry, both locally and nationally, as a leader in developing effective solutions to constantly changing, difficult engineering challenges. Our reputation for providing effective and clear solutions to complex problems is backed by reliable engineering, scientific, and economic analyses.

**Proven Results.** Additionally, Tetra Tech has provided similar continuing engineering service on an as-needed basis to over 50 Florida municipalities, with a focus on central Florida communities. With this experience, we understand the unique nature of continuing contracts, and the necessity to provide timely responses to meet project budgets and schedules.

**Ability to Perform the Work.** Tetra Tech has been in business for over 50 years, and with over 400 offices and 16,000 associates worldwide, we provide the stability and longevity of a large-scale company, with a focus on local and community connection. Tetra Tech has over 20 offices and 500 associates within the state of Florida, 62 of such being Florida PEs. With this depth of resources, Tetra Tech will call upon specialized personnel, to tailor our project team to the specific project goals.

**Central Florida Presence.** Tetra Tech has been serving communities in the state of Florida since 1977. We have supported numerous local governments since that time, including the UCNSB, whom we have had the pleasure of serving since 2001. Some of these projects have included the 6.0 MGD Advanced Wastewater Treatment Plant, Lift Stations No. 14 and 60, multiple pipeline projects, as well as the Islesboro Subdivision Water and Wastewater Improvements and Expansion project, which is currently under construction. We have provided a broad range of services from project inception and planning, to design, permitting, bidding, and construction administration.

We submit this proposal for UCNSB’s consideration to select Tetra Tech as one of your continuing consultants under RSQ No. 10-18. Our entire team is committed to serving as an extension of the UCNSB’s staff, and we look forward to bringing our years of experience, local knowledge, and dedication to provide great service to the Utilities Commission, City of New Smyrna Beach!

Sincerely,

Jon D. Fox, PE
Vice President / Principal
Tetra Tech has been successfully providing continuing services to central Florida clients for more than 25 years. We believe our clients are our single greatest reference regarding our professionalism and quality of work.
Qualifications Data

Tetra Tech’s Background

Tetra Tech is a full service engineering consulting firm offering proven experience and demonstrated excellence in professional engineering services in water, wastewater, and reclaimed water utilities, hydrologic, roadway, stormwater, geotechnical, and environmental disciplines. In the state of Florida, Tetra Tech has served over 50 public entities under continuing services contracts, with 22 such contracts in the central Florida region.

It is our core belief that our professionals and staff serve as an extension of our clients’ staff. We place a large emphasis on serving the specific project needs and tasks of the UCNSB, while maintaining and updating an in-depth knowledge of the UCNSB’s various systems. As part of our commitment to the UCNSB, our staff will dedicate time and effort to further our understanding of the various components of the UCNSB; including water, wastewater, and reclaimed water systems.

Many of our professionals in the past have served the UCNSB on a variety of utility projects, specifically as the engineer-of-record for the UCNSB 6.0 MGD Advanced Wastewater Treatment Plant, and the Islesboro Subdivision Water and Wastewater Improvements and Expansion project. Our team will leverage this unique knowledge of your systems and standards to any related projects.

Established in 1966, Tetra Tech is a leading provider of consulting, engineering, and technical services. Tetra Tech has been serving clients throughout the state of Florida since 1977. Tetra Tech has 400 offices worldwide and more than 20 offices in the state of Florida. Our Orlando office’s physical proximity to the UCNSB will also enhance its staff involvement in every element of planning, design, permitting, and construction. Tetra Tech is committed to providing the UCNSB with on-time, responsive service, without delays.

Tetra Tech has significant expertise in the areas of water supply, treatment, storage, distribution, water use permitting, alternative water supplies, and other miscellaneous water utility related services. Engineering News-Record has ranked Tetra Tech No. 1 in Water for 14 years in a row! We were also ranked No. 5 among the Top 500 Design firms for 2017. Our extensive background has been focused throughout the state of Florida in a variety of specialized projects. These projects have included master planning, studies, preliminary design reports, design, permitting, construction management and operation start-up services associated with various water, wastewater, and reclaimed water projects. We have a complete understanding of the amendments to the Safe Drinking Water Act, and have assisted numerous clients throughout the state of Florida in complying with new regulations.

Our strategy for each and every assignment is to lead with science. This approach provides a healthy foundation for clear, efficient, and effective solutions. As an international leader in all major infrastructure categories, Tetra Tech is poised to provide UCNSB with “best-in-class” engineering services. Tetra Tech has significant expertise in the areas of wastewater collection, transmission, treatment, effluent disposal and reuse, and other wastewater utility related services. Our wastewater projects have included master planning, studies, preliminary design reports, design, permitting, construction management and operation start-up services associated with the various wastewater assignments.

UCNSB will be served from our main infrastructure design office in downtown Orlando. Our proximity and management philosophy will allow for effective communication between the Tetra Tech team and UCNSB staff.
An important aspect to being a full-service engineering firm is extending consultation, assisting beyond the engineering, to support the client throughout the project. Our engineers and management team will work closely to assist the UCNSB with its financial and fiscal needs. Tetra Tech routinely secures grant funding, state revolving loan funds, and bond reports, and prepares all supporting reports and applications. Our management consultants have a breadth of knowledge regarding utility rates and impact fees throughout Florida, and have provided numerous rate studies.

In addition to the services above, Tetra Tech provides services related to survey, geographic information systems (GIS), civil/site, electrical, structural, and mechanical engineering disciplines. Providing these general support-type services allows Tetra Tech to perform all projects with in-house staff.

The key to successful projects is our demonstrated ability to meet client schedules and budgets. Our goal is to deliver successful, completed projects that fulfill the needs of our client. One of our greatest lessons learned is that good planning and quality contract documents are the best insurance for successful project completion. Due to Tetra Tech’s vast experience with projects under our continuing services contracts, Tetra Tech has learned how to effectively cost manage projects, and is experienced in the scheduling requirements, coordination, and organization required to maintain project schedules.

Communication is critical during the planning, design, permitting, and construction phases of every project. Effective lines of communication are maintained by dedicating time in the schedule to meet with UCNSB to fully understand project requirements. Likewise, during permitting, Tetra Tech has an established philosophy of arranging pre-application meetings with permitting agencies as a means to facilitate a more streamlined permitting review process. Tetra Tech maintains respected relationships with central Florida regulatory agencies, including: Volusia County Health Department (VCHD), Florida Department of Environmental Protection (FDEP), St. John’s River Water Management District (SJRWMD), U.S. Army Corps of Engineers (ACOE), and the Florida Department of Transportation (FDOT). These relationships aid us in streamlining permit issuance.

A major factor of Tetra Tech’s excellent performance record is the ability to provide thorough and complete documents with which to estimate and control construction costs. Our team has many years of estimating experience in the construction industry, and continuously updates a database used in preparing estimates.

**SUBCONTRACTORS**

Tetra Tech does not foresee the need for any subcontractors on this contract. We can provide all anticipated services requested in the UCNSB’s RSQ, in-house. Any geotechnical services required will be provided by Ardaman & Associates, Inc., a Tetra Tech Company. If the need arises, we are willing to utilize local subconsultants to meet DBE and M/WBE requirements.

**UTILITY INFRASTRUCTURE ENGINEERING**

**WASTEWATER COLLECTION, TREATMENT, AND RECLAIMED WATER ENGINEERING**

Tetra Tech’s wastewater engineers specialize in wastewater collection, transmission, treatment, effluent disposal and reuse, and other wastewater utility related services. Our extensive background has been focused throughout the state of Florida in a variety of projects. These projects have included the planning, permitting, design, construction management, and operation start-up services associated with various related continuing services contracts. In addition, our firm maintains a library of all applicable State and Federal Regulations regarding wastewater collection, transmission, treatment and effluent disposal, and understands their impacts on utility systems. The following is a summary of wastewater services that Tetra Tech provides to our clients:

- Wastewater treatment unit process analysis, design, and optimization
- WWTP planning, design, and services during construction (including expansion, improvement, modification, and facility rehabilitation)
- Pilot plant studies
- Analysis of facilities arrangement, structural types, future capacity and single or dispersed facilities
- Wastewater sludge treatment, handling, and disposal
- Collection system modeling and design
- Energy efficiency optimization
- Wastewater reuse and reclamation programs
- Infiltration/inflow analysis
- Sewer system evaluation surveys
- Telemetry/instrumentation system design
- Alternate effluent disposal methods analysis
- Effluent irrigation systems
- High rate land application systems
- Lift/Pump station and force main design
- Value engineering
- Capacity analysis studies and reports
- Operation and maintenance performance studies and reports
- Reuse feasibility master plans, cost studies, and reports

**WATER SUPPLY, TREATMENT, DESIGN, AND DISTRIBUTION**

Tetra Tech has significant expertise in the areas of water supply, distribution, treatment, storage and other miscellaneous water utility related services. Our extensive background has been focused throughout the state of Florida in a variety of projects. These projects have included the planning, permitting, design, construction management, and operation start-up services associated with various related continuing services contracts. Our firm maintains a library of all applicable State and Federal Regulations regarding water supply, treatment and distribution of water, including St. John's River Water Management District (SJRWMD) requirements for alternative water supplies, and have assisted numerous clients throughout the state of Florida in complying with new regulations. A summary of our water services includes:

- Water treatment plant planning, design, and services during construction (including expansion, improvement, modification, and rehabilitation)
- Reverse osmosis (RO) water treatment systems for treatment of brackish supply sources
- Lime softening and membrane softening (nanofiltration) water treatment systems
- Color removal water treatment systems
- Split-treatment water systems
- Storage and pumping facilities
- Computer surge analysis
- Consumptive Use Permit (CUP) acquisition/renewals
- Water quality blending and stability analysis (corrosion analysis)
- Treatability analysis and lab work
- Local in-house water quality / bench-scale testing
- Energy efficiency optimization
- Telemetry/instrumentation system design
- Disinfection byproduct evaluations (TTHM/HAA)
- Disinfectant design and fluoridation design
- Water distribution system planning, design, and services during construction
- GIS and hydraulic modeling
- Bench, pilot, and demonstration scale studies for treatment and optimization alternatives
- Water resources planning, analysis, investigation, and conceptual designs
- Raw water wellfield design and development
- Permitting/Correspondence with regulatory agencies

The UCNSB is requesting professional services for a variety of disciplines to serve as an extension of staff. Tetra Tech, from our Orlando office, will provide the UCNSB with the breadth of experience and capabilities to deliver any of the anticipated projects related to Civil Engineering; specifically water, wastewater, reclaimed water, piping, distribution, transmission, pumping storage and treatment, and miscellaneous site planning, as well as water and wastewater plant upgrades.

**TRACK RECORD AND RELEVANT PAST PERFORMANCE ON SIMILAR CONTRACTS**

In the following section, we have highlighted a select number of our other continuing service projects currently held by Tetra Tech. We have provided a multitude of services under these continuing services contracts.
Continuing Professional Engineering Services Contracts

A select list of clients for which Tetra Tech has provided long-term continuing professional engineering services is provided below. We believe that this list truly represents Tetra Tech’s ability to foster and preserve relationships with clients, which is backed by our experience and dedication to providing quality service!

- City of Orange City: 28 years
- City of Lakeland: 27 years
- City of Cape Coral: 24 years
- City of Lake City: 24 years
- City of Naples: 24 years
- Toho Water Authority: 23 years
- City of Bartow: 22 years
- City of Orlando: 18 years
- Collier County: 18 years
- City of Daytona Beach: 16 years
- City of Deltona: 16 years
- City of Minneola: 16 years
- Lee County: 13 years
- Hendry County: 13 years
- City of Tampa: 12 years
- City of Winter Garden: 10 years
- City of Clermont: 9 years
- City of Clearwater: 9 years
- Orange County: 8 years
- City of Cape Canaveral: 7 years

50+ Florida Continuing Contracts
Since 1995, Tetra Tech has provided continuing professional engineering services to the Toho Water Authority (TWA). Specific projects include:

**Western Reuse Service Area Storage and Pumping Facility.** Designed to provide 4.0 MGD of reclaimed water storage and pumping facilities in the vicinity of the ChampionsGate Development. Facility is designed to provide 6.6 MGD, based on average day demand, of reclaimed water and will be a major distribution center, providing customers with reclaimed water at pressures minimizing the need for booster pumping.

**Emory Canal Upgrades.** The existing gravity sewers along the east and west bank of the Emory Canal in Kissimmee experienced periodic hydraulic flow surcharges as a result of insufficient conveyance capacity. In addition, several manholes located along the southern portion of gravity sewer main along Emory Canal near Clay Street had structural integrity concerns. If one of these manholes were to fail, there could be significant damage to Clay Street and environmental impacts to Emory Canal and Lake Tohopekaliga. Tetra Tech provided professional engineering services to eliminate the hazards associated with the layout and existing conditions at the southern end of Emory Canal.

**Sandhill Road Water Reclamation Facility (WRF) Disinfection System Conversion.** The WRF has a permitted capacity of 6.0 MGD on an annual average daily flow (AADF) basis. A portion of treated effluent from the Sandhill WRF is disposed of via spray irrigation in public access areas. Florida Administrative Code (F.A.C.) Chapter 62-610 sets forth effluent limits and plant component reliability requirements for treatment facilities that produce public access effluent. Facilities that produce public access effluent are required to meet high-level disinfection. F.A.C. Chapter 62-600 establishes design criteria for high-level disinfection. The Sandhill WRF currently utilizes ultraviolet technology to achieve high-level disinfection. The UV disinfection system is in need of replacement; however, due to cost and other considerations, TWA intends to remove the UV facilities and implement disinfection via addition of sodium hypochlorite. Tetra Tech is providing design, permitting, and construction phase engineering services to implement the desired disinfection concept. We will conduct sampling to ascertain the CT value needed to achieve high level disinfection and complete a chlorine demand and residual decay analyses to estimate the required sodium hypochlorite feed rate. Based on the results of the sampling and laboratory work, Tetra Tech will determine the regulatory agency acceptability of implementing sodium hypochlorite addition as the means of achieving high level disinfection and identify the required improvements.
Westside Reclaimed Water and Wastewater Transmission Mains. Project consisted of over 10,200 LF of combination 20- and 24-inch diameter ductile iron (DI) wastewater force main; 18,300 LF of 24-inch DI reuse water main. The wastewater force and reuse mains were constructed in parallel. Multiple segments were installed by means of directional drill in parallel for crossing of jurisdictional wetlands and water bodies. Crossings of the wetland areas via directional drill resulted in no impacts not requiring formal environmental resource permitting. Tetra Tech performed services such as applying for alternative water supply funding, route selection, surveying, easement sketch of descriptions and coordination of easements with property owners, final design document preparation including construction drawings and technical specifications, permitting, and construction administration. The Westside Project was crucial to expand TWA’s wastewater and reuse systems to serve a proposed development, Westside Development. Therefore, Tetra Tech pursued and obtained an Alternative Water Supply Funding grant in the amount of $1,557,117 for TWA to apply toward the cost of construction. Tetra Tech was able to meet all requirements for the funding deadlines as well as to expedite the project to assure that the development would have wastewater and reuse service prior to completion of construction of the Westside Development. The project was designed to incorporate horizontal directional drills to alleviate impacts to wetland areas and crossing of Davenport Creek, therefore no wetland mitigations were required. The horizontal directional drills were installed in parallel with separator as required by the Florida Department of Environmental Protection.

Pump Station Nos. 60 and 97 Improvements. Evaluated the condition of the pump stations, and identified appropriate improvements to address projected flows and reliability issues. Tetra Tech also provided final design, permitting, bidding, and construction phase services related to the recommended improvements.

Pump Station Nos. 28 and 112 Refurbishment. Replacement of submersible pumps, pump rails, and pump controls. Other improvements included relocation of discharge piping above ground to eliminate valve vaults along with the addition of interior liners.

Springlake Village Potable Water Main. 13,200 LF of combination of 24- and 30-inch diameter DI potable water main; approximately 400 LF of combination 8-, 12-, and 16-inch diameter DI potable water main and approximately 2,800 LF horizontal 30-inch diameter high density polyethylene (HDPE) potable water main installed via directional drill, valves, hydrants, water services and miscellaneous appurtenances.

Parkway RAS/WAS Pumping Evaluation. Tetra Tech assisted the Toho Water Authority with a present worth economic evaluation of the capital and operation/maintenance costs required to upgrade their existing return activated sludge (RAS) and waste activated sludge (WAS) pump station at their Parkway Water Reclamation Facility (WRF). The Parkway WRF currently collects RAS/WAS flows in their pump station wet well through the use of telescoping valves. The economic evaluation demonstrated that by upgrading the pump station, TWA could achieve significantly lower initial pumping rates as well as lower initial static head requirements, leading to annual energy cost savings.

SunRail 36-Inch Reclaimed Water Main. When SunRail added a railroad track to its northern right-of-way limits, Toho Water Authority selected Tetra Tech to provide professional engineering services related to the design, permitting, and construction administration of 280 LF of 36-inch DIP reclaimed water main, 200 LF of which are via open-cut installation and 80 feet of which are via 54-inch jack and bore under SunRail’s tracks. The project also includes PCCP/MJ adapters for connections to the existing 36-inch PCCP reclaimed main, removal of 49 LF of 36-inch PCCP piping, and grouting of 102 LF of 36-inch PCCP main under the existing tracks. Permitting included Osceola County ROW use for work within Old Tampa Highway, Florida Department of Environmental Protection ERP permitting for 100 square feet of wetland impacts and associated mitigation, Florida Department of Transportation utility permitting, CSX Transportation’s railroad standards usage, and heavy coordination with the SunRail joint-venture team due to its tight construction scheduling requirements.
Continuing Professional Engineering Services
City of Lakeland, FL

Tetra Tech has provided continuing miscellaneous professional engineering services to the City of Lakeland since 1991. Projects have included:

**Northeast Water Transmission System – Southern Route.** The Tetra Tech project team provided route planning, preliminary design, surveying, final design, permitting and construction administration services for 228 LF of 8-inch water main, 57 LF of 12-inch water main, and 21,706 LF of contiguous 30-inch water main. Over 8,000 LF of the 30-inch water main was installed, by directional drilling, in the public road right-of-way for Fish Hatchery Road. Over 200 LF of 30-inch HDPE water main was for a non-perpendicular crossing of Fish Hatchery Road. Approximately 54 LF of 48-inch steel casing was installed by boring and jacking methods for crossing State Road 33A with a 30-inch ductile iron water main.

**T.B. Williams WTP Filter Improvements.** Tetra Tech was chosen to perform this project based on the team’s experience working on previous improvements to this 51 MGD plant. The previous project involved evaluation of the gravity filtration and chemical feed systems at the plant. Tasks associated with the project included upgrading the backwash system from surface water agitation to the combination air/water, installing media retaining effluent launders, and recoating basin interiors.

**Aquifer Performance Test.** As required by Special Condition 5 of the City's Consumptive Use Permit (CUP), Tetra Tech was retained by the City of Lakeland to design, conduct, and analyze the data from a long-term aquifer performance test (APT) at the City’s Northeast Wellfield. Although an APT had been conducted in 1989 at the wellfield, and the CUP issued for 9 MGD average and 16 MGD maximum daily flow, the South West Florida Water Management District (SWFWMD) did not accept the results of the 1989 APT were correct, due to the short-duration of the test (which they had approved) and the wet conditions prior to starting the test. The SWFWMD therefore required the City to run another test, and determine the hydraulic properties of the Upper Floridan aquifer, and the leakance value of the confining units that overly the Upper Floridan aquifer. A seven-day constant rate discharge test was conducted, and ten wells located throughout the 880 acre wellfield and completed into the Upper Floridan, intermediate, and surficial aquifers were monitored before, during, and after the constant rate test. Electronic data loggers programmed to sample the water levels at one second up to one hour intervals were installed in the monitor wells, such that a detailed record of pre-pumping, pumping, and recovery data could be collected in sufficient quantity to use several methods of analysis. Rainfall monitoring was also included, but none occurred during the test.

REFERENCE:
Tom Mattiacci, PE
Manager of Engineering
863/834-6173
City of Lakeland (continued)

Skyview Utilities Water/Wastewater Improvements. Tetra Tech provided engineering support for the replacement and rehabilitation of approximately 23,000 LF of gravity sewer piping and 78 associated manholes, as well as demolition of the Skyview WWTP.

Glendale WWTP Dewatering Improvements. The City of Lakeland retained Tetra Tech for the design of the project, which included design of a centrifuge sludge dewatering system. To visualize the new system’s layout in an existing structure, the team created a series of 3D models using Revit®. Tetra Tech also provided permitting, bidding, and construction assistance.

City of Lakeland Edgewood Irrigation Well Improvements. The City of Lakeland owns and operates the Edgewood Irrigation well that provides irrigation water to the Cleveland Heights Golf Course. This project included the demolition of the well building, the pump and motor, and the electrical equipment. A new well pump and motor, discharge piping, building, and electrical service were constructed as part of the improvements. Services provided by Tetra Tech included preliminary design, final design, permitting, bidding, and construction administration.

Lake Hunter Lake Level Control Automation. The City of Lakeland retained Tetra Tech to evaluate the feasibility, conduct preliminary and final design of automating level control infrastructure for 13 gate control structures and regulating flow from lakes within the City. Improvements over the current system include automated collection of real-time data from monitoring stations located throughout the City. Significant structure changes are incorporated to convert the gate structure from its current underflow design to an overflow design which will significantly reduce structure blocking by debris. Division staff will be able to remotely observe environmental conditions, lake levels, flow rates and operate outfall structures for lake level and flow control. Individually, the control structures will be automated such that opening and closing the gates and video surveillance for debris blockages can be accomplished remotely from an office personal computer (PC) terminal. Each site is designed to be equipped with various controls and monitoring equipment to transmit real-time site specific environmental conditions as well as the lake levels and flow. Collectively, these stations will form a citywide system that can generate data useful for models used for engineering and design of Public Works projects. The Florida Department of Environmental Protection’s Total Maximum Daily Load (TMDL) program and future regulatory requirements are examples where City’s mandates may be adjusted through the collection and analysis of the above referenced datasets.

Northeast Wellfield Wetlands Monitoring and Restoration. Tetra Tech was engaged by the City to conduct the hydrologic and hydraulic modeling, prepare construction drawings, obtain permits, and provide construction administration services for construction of the structural improvements to divert surface flows into the wetlands. Using one-foot LiDAR topographic data, Tetra Tech’s biologist established the location for placement of ditch blocks, pipes and weirs. An ecological assessment of the site yielded a total of 17 structures to construct around the site to improve onsite hydrologic conditions.

Northwest Wellfield Wetlands Monitoring. Permit issuance conditions for the Water Use Permit (WUP) require that an ecological monitoring program be established for the wellfield property in order to detect any effects that groundwater withdrawals from the wellfield may have on the on-site wetlands. Tetra Tech staff has been responsible for the bi-annual monitoring events since 1993. This consists of individual monitoring programs for vegetation, soil subsidence, water levels, and general vegetative trends. Vegetative monitoring includes the use of meter square plots to analyze the subcanopy and groundcover, as well as observe general trends in the canopy. Tetra Tech also performs photographic monitoring at each wetland within the wellfield.
Tetra Tech has provided continuing professional engineering services to the City of Winter Garden since 2008, and have provided engineering services to the City since 2001. Our broad range of services has included studies, design, permitting, bidding and construction administration services and public outreach, as applicable. Related services include:

- Groundwater collection underdrain system
- Reclaimed water distribution system expansion
- Industrial wastewater pretreatment feasibility study
- Lift station rehabilitation and improvements
- Odor control studies
- Wetland and hydrological monitoring and reporting
- Lift station remote telemetry system
- Gravity sewer improvements
- Distribution and transmission piping

**FDEP Permit Renewal.** Tetra Tech provided engineering services to prepare the permit renewal application with necessary supporting documents for the FDEP Operating Permit for the City’s Crest Avenue WWTF. The application package was prepared by Tetra Tech in accordance with Chapter 62-620, F.A.C., Wastewater Facility and FDEP’s Guide to Wastewater Permitting and included preparation of the FDEP permit application Forms 1 and 2A, Capacity Analysis Report, and Operations and Maintenance Performance Permitting. Tetra Tech also responded to FDEP’s request for additional information as needed in order for the City to attain the permit renewal.

**Southwest Service Area Reclaimed Water System Expansion.** Project included the expansion of the City’s southwest service area reclaimed water system with design, public outreach, permitting, bidding, and construction administration services being provided. Interconnects with the Conserv II reuse system and 12,700 LF of 8-, 12-, and 16-inch diameter reclaimed water main piping were designed for this project, which has construction within the City, Orange County and private rights-of-way.

**Old Louis Dreyfus Citrus WWTP Feasibility Study.** The comprehensive feasibility study that reviewed and provided recommendations for the 0.4 MGD SBR pretreatment facility, equalization tank, and reclaimed water storage and pumping equipment.

**Odor Control Study at Crest Avenue WWTP and Lift Station 23.** Tetra Tech performed a comprehensive odor control study that identified potential odor sources; determined odor characteristics, analyzed odor control alternatives, and ultimately developed an odor control plan for the City. Services included sampling to ascertain the gas phase concentrations of various compounds in the pump station wet well, analysis of sampling data, and preliminary equipment sizing for three odor control alternatives. Odor control
alternatives were then evaluated with respect to cost, efficiency, and other non-monetary factors.

**Lift Station 23 Improvements.** Services included surveying, preliminary and final design, and bidding and construction management services for the rehabilitation of the City’s Master Lift Station No. 23. Improvements included the structural rehabilitation of the concrete wetwell, replacement of corroded wet well piping, replacement of the influent chamber isolation valves, and electrical/control panel improvements.

**CR 545 Reuse Water Main Improvements.** This project included surveying and engineering services to complete final design, permitting, and bidding/award services for improvements to the City's reuse system to complete the western loop of the transmission system. The project includes construction of approximately 4,000 LF of 12-inch diameter reuse main commencing at the intersection of Siplin Road and Avalon Road, and proceeding north along Avalon Road to the south side of SR 50. Multiple agency coordination was required for the construction of the main within the City, Orange County, Florida Turnpike Enterprise, and Florida Department of Transportation rights-of-way.

**9th Street Gravity Sewer Improvements.** Tetra Tech provided survey, final design, permitting, bidding/award services, and construction management for the improvements to the existing gravity sewer system on 9th Street. The improvements were prioritized based on risk of potential failure. The project included replacement of nearly 1,000 LF of 24-inch diameter gravity sewer main and manholes at Lift Station 23.

**Wetland and Hydrological Monitoring and Reporting Services.** Professional hydrological services were provided to conduct semi-annual and annual monitoring and reporting services for the City. This project included monitoring eight wetland/surface water sites and four rainfall station sites as required by the City’s Consumptive Use Permit (CUP).

**Lift Station Remote Telemetry System.** Tetra Tech provided services to obtain a new license from the Federal Communications Commission (F.C.C.) for operation of the City’s existing wastewater lift station remote telemetry system. Services included performing a spectral analysis of three candidate SCADA frequencies for F.C.C. licensing and determining the best frequency for final licensing. Upon F.C.C. license approval, Tetra Tech reprogrammed the 78 remote telemetry units located at the City's wastewater pump stations throughout the service area, and reprogrammed the master telemetry unit from the Fullers Water Treatment plant to the public services complex. The project included a new 100-foot tower to support the system antenna.

**Crest Avenue WWTF Filter Upgrades.** Tetra Tech provided engineering services to evaluate various disk filter suppliers, develop hydraulic profiles for selected filter suppliers, and prepared a preliminary design report along with FDEP Operations Permit modification application for the replacement of the traveling bridge filters with new disk type filters due to the age and maintenance required on the existing filters. Tetra Tech developed construction plans and technical specifications for the improvements and assisted the City with bidding the project. Tetra Tech provided construction administration services including reviewing shop drawings, conduction construction progress meeting with the Owner and Contractor, responding to Contractor’s requests for information, and reviewed change orders and pay requests.

**Crest Avenue Blower Improvements.** Tetra Tech provided design and construction administration services for aeration piping modifications to interconnect air piping between the aerobic digesters and process basins to provide additional redundancy in the event of a blower failure. Tetra Tech provided engineering services to evaluate various blower technologies including a cost evaluation, blower recommendations, and completed the preliminary design and permitting application process for the blower replacement.

**Crest Avenue Screening and Odor Control Improvements.** Tetra Tech provided final design and construction administration services for the replacement of two mechanical screens and addition of odor control equipment for treatment of at the influent master pump station and headworks structure. Screening improvements also included to addition of screenings conveyors and compactor/washer. Tetra Tech developed construction plans and technical specifications for the screening and odor control improvements and assisted the City with bidding the project. Tetra Tech provided construction administration services including reviewing shop drawings, conduction construction progress meeting with the Owner and Contractor, responding to Contractor’s requests for information, and reviewed change orders and pay requests.
Continuing Professional Engineering Services
City of Clermont, FL

Tetra Tech has provided continuing miscellaneous professional engineering services to the City of Clermont since 2009, and have provided engineering services to the City since 2000.

Projects have included numerous lift station refurbishments, utility infrastructure improvements, and other miscellaneous engineering services as required.

Specific projects have included:

**Water, Wastewater, and Reclaimed Water Systems Master Plan.** Tetra Tech was retained by the City to provide an update to the water, wastewater, and reclaimed water master plans last updated in 2008. The project consists of a service area evaluation, demand projections, a complete rebuild of the City’s hydraulic models and development of a capital improvement program to meet 5 year, 10 year, and build out demands.

**Southern Sector Wastewater Services.** Project included the development of small scale master plan to assist the City in determining future wastewater needs within their southern sector service area. Duties included survey, evaluation of actual and future wastewater flows, hydraulic analysis and modeling, basic design, and construction estimation to assist the City in determining budgetary needs.

**Westside Raw and Finished Water Transmission.** This project included the conveyance of raw water from the City’s two off-site raw water wells to the new the Westside Water Treatment Plant and upsized the finished water mains from the facility.

Professional services included final design, permitting (FDOT and FDEP) and construction administration of the improvements which included 11,000 LF of 10-inch raw water main, including 600 LF of directional drill, and 5,150 LF of 24-, 20-, and 16-inch finished water main, including 600 LF of directional drill and 3,200 LF utilizing pipe bursting technologies.

This continuing services contract has included:

- Wastewater transmission system evaluation
- Wastewater system master planning
- SCADA support
- Water reclamation facility design projects

REFERENCE:
James Kinzler
Director of Capital Planning and Projects
(352) 241-0178
Consultant’s Understanding

Understanding and Approach

As previously mentioned, Tetra Tech specializes in municipal and public consultation services. It is our core belief that our professionals serve as an extension of our client’s staff. Under this basic and important premise, we place a large emphasis on serving specific project needs and tasks of the UCNSB, while maintaining and updating an in-depth knowledge of the UCNSB’s utility systems. As part of our commitment to the UCNSB, our staff will dedicate time and effort to update our understanding of the various components of UCNSB’s water, wastewater, and reclaimed water systems.

Based on a review of the UCNSB’s Request for Statement of Qualifications No. 10-18, the continuing professional engineering services may generally include the various assignments in support of water, wastewater, reclaimed water, piping, distribution, transmission, pumping, storage and treatment, miscellaneous site planning, and water and wastewater plant upgrades, including:

- Planning
- Preliminary reports and studies
- Preliminary design
- Final design
- Bidding services
- Construction services
- Additional services

These assignments can involve simple stand-alone studies, permitting assignments, or a phased project involving a feasibility study, preliminary engineering, final design, permitting, bidding, and construction administration. Successful delivery of such projects under a continuing services contract requires the consultant to develop a clear understanding of the client’s goals at the earliest possible juncture. Typically, this is accomplished by meeting with the client during the scope development phase to discuss potential goals and objectives, and subsequently tailoring the project’s scope of services specifically for the assignment under consideration. Figure 1 (below) conceptually presents this project development sequence.

In addition to understanding the project goals, objectives, and requirements, it is imperative that the project manager assign qualified individuals that are postured to begin work in a timely manner, and see it through to completion. Regardless of the project, Tetra Tech’s project manager, Michael Thatcher, PE will carefully evaluate the various components of each assignment and prepare a project team that is comprised of individuals with the technical skills and availability to meet the needs of the UCNSB. The selected project team will be presented to the UCNSB as part of the proposal/fee negotiation process, and the entire team will remain intact for the duration of this assignment. This continuity and Tetra Tech’s Client Satisfaction Program, which provides for periodic feedback to Tetra Tech officers not involved in the projects, has ensured cost-effective high-quality service, and hence, numerous repeat continuing service contracts.

Potential Goals, Objectives, and Requirements

- Schedule
- Budget
- Innovation
- Funding assistance
- Flexibility
- Energy efficiency or sustainability
- Reliability
- Public acceptance
- Minimal construction revisions

![Collaborative Meetings](image)

- Scope Development
- Project Understanding
- Project Scope
- Project Execution

Figure 1
**Project Approach**

In order to provide for the unique needs of a municipality such as the UCNSB, an emphasis is always placed on providing responsive on-call service, while maintaining an understanding of project budgets and schedules. To achieve timely, efficient completion of any project, the work is broken-down into distinct phases.

For most projects, the phases should include preliminary engineering, final design, permitting, bidding, and construction administration, although some projects can involve a feasibility study or an evaluation of a particular facility or set of alternatives. Brief descriptions of activities for each phase or type of project are presented in the following paragraphs.

**Studies and Evaluations**

Over the course of a continuing services contract, clients often authorize their consultants to evaluate a variety of concepts. Such concepts may involve extending water or sewer service to certain areas, or implementing operational changes at a treatment facility to improve treatment or energy efficiency. In such assignments, it is important to clearly identify the scope of assignment, as well as the precision needed for decision-making. For example, precise performance models and cost-estimates may be necessary when evaluating treatment plant improvements that must yield short “pay-back” periods. In contrast, less rigorous analyses may be necessary to justify extension of sewer service.

Because of the uncertainties that currently exist with regard to the types of studies that may be authorized under the continuing services contract, it is difficult to develop a definitive project approach to stand-alone assignments involving studies or reports. Despite these uncertainties, the general approach to the work typically includes the following:

- Kick-off meeting
- Data gathering and analysis
- Development and refinement of alternatives
- Engineering calculations and computer models
- Calibration of models
- Capital, operating, and present worth cost analyses
- Quality Assurance/Quality Control Reviews
- Preparation of draft report
- Review meetings
- Preparation of final report
- Presentations

**Preliminary Engineering**

The preliminary engineering phase will generally present a variety of alternatives and present associated costs in a manner that will allow UCNSB to make informed decisions as to how the project shall proceed. This phase typically includes the following tasks:

- Kick-off meeting
- Data gathering and analysis
- Facility evaluation with respect to performance and condition
- Development and evaluation of options
- Site visits to observe performance of equipment under consideration, or to view the proposed project site or pipeline route
- Projections
- Preliminary layouts of the proposed facilities for options under consideration
- Estimates of capital, operating, and present worth costs for various alternatives
- Selection of process and equipment options or pipeline alignments with UCNSB
- Identification of the permits required to construct the project
- Identification of any issues that could impact the timely or economical completion of the project, and recommended solutions
- Preparation of a design report summarizing the findings of the preliminary engineering analysis
- Review meetings
- Preparation of final report
Final Design

The final design phase will consist of the detailed design engineering and quality control required to produce complete drawings, specifications, bidding documents, and cost estimates. This will be performed with the use of the latest UCNSB Rules for Design and Construction Specifications for Potable Water, Wastewater, and Reclaimed Water. It is anticipated that the construction documents (drawings and technical specifications) will be submitted and reviewed at the 60, 90, and 100 percent completion levels. Geotechnical engineering will be one of the first tasks completed in the final design, so that any findings can be addressed during design. The construction drawings will include the drawing index, vicinity map, general notes, legend and abbreviations, and sheets for civil, mechanical, structural, architectural, electrical, and instrumentation disciplines as needed. The project manual will include bidding and contract requirements, and technical specifications. The construction documents will be in compliance with UCNSB’s latest standards.

Permitting

Tetra Tech will prepare and submit all required project-related permit applications and supporting documentation necessary to obtain the required permits for construction and operation of any project. Tetra Tech’s project approach to permitting is simple and follows the same logic as the our overall project management philosophy. This simple philosophy is that the affected entities must be involved with the project from its inception, including pre-design and pre-permitting meetings that prevent costly project delays due to miscommunication with permitting agencies.

Bidding Assistance

Upon completion and approval of the final construction documents, Tetra Tech will work closely with UCNSB’s Purchasing Department to prepare the project for bidding. Tetra Tech will provide bidders with complete bidding sets in the format required by UCNSB. Tetra Tech will actively participate in the bidding phase by answering any questions related to the design, attending a pre-bid conference, and by preparing any addenda that may be required. After the bids have been received and opened, Tetra Tech will review and evaluate the apparent low bidder’s pricing, qualifications, and references. Tetra Tech will also prepare a tabulation of bids and make recommendations to UCNSB regarding the award of the construction contract. Tetra Tech has successfully bid many projects for municipalities and has always worked well with Purchasing Departments.

Construction Administration

Tetra Tech will maintain an active role in the construction phase of the project, and will work closely with the UCNSB, the City, other State and Local agency owners, and the Contractor. The same engineers who produce the design will continue through the construction phase, so that UCNSB’s comments during design review and the permitting requirements, guide the construction. Consistent staff from project inception to final construction completion is key to overall project success. The following tasks are anticipated to be performed in the construction phase:

• Prepare conformed contract documents that incorporate all revisions to the original bidding documents
• Plan, organize, and conduct a pre-construction conference
• Attend monthly progress meetings
• Periodically visit the project site to observe the progress and quality of work
• Provide interpretation and clarification of the contract documents when requested (RFIs)
• Review shop drawings for compliance with the conformed documents
• Review test reports
• Review applications for payment and progress schedules
• Evaluate claims and prepare field orders, work change directives, and change orders
• Participate in substantial and final completion inspections and assist with the preparation of punch lists
• Prepare record drawings incorporating the changes made during construction
• Prepare and submit the documents required to regulatory agencies for clearances
**Staffing Requirements**

**Key Personnel**

Tetra Tech has assembled a comprehensive project team with the project management and technical expertise, as well as the passion, to meet UCNSB’s goals and objectives. Our ability to provide the scope of services to meet UCNSB’s expectations is a result of our project manager’s experience, and effective project team.

Mr. Michael Thatcher, PE, will serve as the project manager, and will work as an extension of UCNSB’s staff so that each project’s requirements are met on-time, within budget, and up to the standards set forth by UCNSB.

Mr. Thatcher will be supported by a team of professionals who have experience providing services on an as-needed basis to numerous municipalities. While Tetra Tech does not currently foresee the need for subconsultants based on our in-house capabilities, Tetra Tech will team with local companies that have a history of successful working relationships with UCNSB, as needed.

Additionally, this selected Tetra Tech team brings a wealth of design experience covering all disciplines related to the Civil Engineering category of this RSQ.

Our team is proud of the work that we have completed on other water and wastewater projects throughout Florida, and more specifically, for the UCNSB.

Our team is dedicated to providing designs that provide safe and reliable utility infrastructure to the public.

Our readily available and qualified staff will enable Tetra Tech to organize and schedule assignments in a manner that allows for multiple assignments to be performed concurrently. In addition, we have a large talent pool to draw from to assemble the necessary support that the project manager may need. A depth of talent exists in each discipline area so that several assignments, even of a similar nature, can be conducted simultaneously.

Our team’s organizational structure is provided on the following pages, and is supplemented by an overview of our key personnel’s qualifications and experience.

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**The team assembled for this project brings a wealth of design experience covering all disciplines of this continuing services contract.**

Our team will partner closely with UCNSB to understand your needs, understand the challenges of your projects, and pull from our deep bench of resources to deliver the most challenging projects successfully. We have demonstrated success on previous task order projects, and bring all of our resources and innovation to UCNSB to deliver all the projects on this contract, in a timely and cost effective manner.
Key Management Staff

Our commitment to UCNSB is evident by the caliber of the principal, project manager, and senior technical staff we are proposing for this team. Below are brief biographies of our key management staff, followed by our team’s organizational chart.

**Jon Fox, PE**
Principal

Mr. Fox participates in many aspects of environmental engineering, including the planning, design, permitting, and construction administration of water and wastewater treatment facilities and distribution/collection systems. He has gained valuable experience in the hydraulic analysis of water distribution systems and construction management services. He will be the focal point for communications between UCNSB, and the project manager to ensure that the project needs are clearly spelled out and understood. He will keep UCNSB informed of the project status on not only what has been completed, but what is planned, what risks have been identified, and any potential budget or schedule variations. This type of clear, concise, and frequent communication will mean no surprises to UCNSB. Mr. Fox’s intention is to make Tetra Tech an extension of UCNSB’s staff.

**Michael Thatcher, PE**
Project Manager

Mr. Thatcher is a project manager at Tetra Tech. His experience includes design, permitting, and construction phase services for water distribution, and wastewater transmission projects, for a host of federal, state, local, and private clients. Since joining Tetra Tech, Mr. Thatcher has supported a number of major infrastructure improvement projects, in a variety of disciplines and capacities, including the City of New Smyrna Beach and Utilities Commission, City of New Smyrna Beach Islesboro Subdivision Utility and Stormwater Improvements, the Town of Fort Myers Beach Utility and Stormwater Improvements, and the City of Clearwater Groundwater Replenishment Advanced Water Purification Plant. Mr. Thatcher will provide technical direction for all disciplines, and ensure that Tetra Tech meets and exceeds the UCNSB’s expectations.

**James Christopher, PE**
QA/QC and Constructibility Reviews

Mr. Christopher serves as the Chief Technologist of Water Quality for Tetra Tech. His knowledge of water chemistry and water infrastructure design makes him highly qualified in defining, evaluating, and implementing water quality solutions to the most challenging problems. He has 36 years of professional engineering experience and is highly qualified in environmental engineering, with special expertise in water resources; water quality, reverse osmosis and nanofiltration, GAC, pumping system analysis/station design, facility planning, construction, administration, and overall project administration and coordination. Mr. Christopher will provide QA/QC and constructability reviews for all phase submittals to lower the risk of construction claims, and to ensure the projects can be competitively bid.
Organizational Chart

Principal
Jon Fox, PE

Project Manager
Michael Thatcher, PE

QA/QC & Constructibility Reviews
James Christopher, PE

Storage and Water Distribution
Janine Alexander, PE
Scott Smith, PE
Rasesh Shah, PE

Water & Wastewater Master Planning
Andrew Woodcock, PE, MBA
Jon Bundy, PE
Zuzanna Wasowska, EI

Wastewater / Reuse Transmission
Daniel Allen, PE
Janine Alexander, PE
Jason Warren, PE

Water Treatment
Jarrett Kinslow, PE
Jon Bundy, PE
Jennifer Roque, PE

Hydraulic Modeling
Scott Smith, PE
Jason Warren, PE
Zuzanna Wasowska, EI

Wastewater Treatment
John Toomey, PE
Brenda Keenan, PE
Kevin Friedman, PE

SUPPORT SERVICES

Electrical and Instrumentation/SCADA
David Burger, PE
Banks Wason, PE

Survey and Mapping/GIS
Lawrence Jenkins, PSM
Alex Montalvo

Hydrologic/Water Resources
Charles Drake, PG
Miguel Garcia, PG

Civil/Site Engineering
Roderick Cashe, PE
James Warner, PE

Structural Engineering
Alex Garde, PE
Jason Burkett, PE

Mechanical Engineering
Michael Sutherland, PE
Vickash Dial, EI

Rates and Finance
Andrew Woodcock, PE, MBA
Jon Fox, PE

Mr. Fox participates in many aspects of environmental engineering, including the planning, design, permitting, and construction administration of water and wastewater treatment facilities and distribution/collection systems. He has gained valuable experience in the hydraulic system analysis of water distribution systems and construction management services.

**Education:**
BS, Environmental Engineering, University of Central Florida, 1990

**Registrations/Certifications:**
Professional Engineer, FL, No. 49487

**Professional Affiliations:**
American Society of Civil Engineers
American Water Works Association
Water Environment Federation

**Office Location:**
Orlando, FL

**Years of Experience:**
27

**Years with Tetra Tech:**
27

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**6.0 MGD Advanced Wastewater Treatment Plant, Utilities Commission, City of New Smyrna Beach, FL.** Project Manager for the development of the new wastewater treatment plant site consisted of site selection, ecological assessments and resolution of various site zoning issues. The wastewater treatment plant included permitting and design of a pretreatment structure, a 5-stage biological nutrient removal system, secondary clarifiers, continuous deep bed filters, high level disinfection. The sludge treatment facilities consisted of sludge holding, rotary drum thickening and lime stabilization. The reclaimed water system consisted of a 6.0 MG substandard storage tank, a 2 MG reclaimed water storage tank and high service pumping facilities. In addition to design activities, tasks included permitting (e.g., FDEP, ERP, FDOT, and ACOE), and construction administration.

**Intermediate and Master Pump Stations, City of New Smyrna Beach, FL.** Project Manager. Preliminary engineering, final design, permitting, bidding and construction phase services for two new submersible wastewater pump stations. Intermediate pump station included a circular precast concrete wet well, triplex submersible pump system, discharge piping, controls, and SCADA interface. Master pump station included a cast-in-place concrete wet well, quadruple submersible pump system, discharge piping, VFDs, odor control facilities, a standby generator set, controls, electrical building, and SCADA interface.

**Water, Wastewater, and Reclaimed Water Master Plan, City of Clermont, FL.** Quality Control. Provided update to the water, wastewater, and reclaimed water master plans that were last updated in 2008. Service area evaluation, demand projections, a complete rebuild of the City’s hydraulic models, and development of a capital improvement program to meet five- and ten-year, and build-out demands.

**Old Louis Dreyfus Citrus WWTP Study, City of Winter Garden, FL.** Project Engineer. Feasibility study that reviewed and provided recommendations for the SBR pretreatment facility, equalization tank, and reclaimed water storage and pumping equipment.

**Southwest Service Area Reclaimed Water System Expansion, City of Winter Garden, FL.** Client Manager/Qaulity Control. Route planning, preliminary design, surveying, final design, permitting, and construction administration services for 13,500 LF of 8-, 12-, 16- and 20-inch reclaimed water main and six direct interconnections to the City of Orlando’s reclaimed water system. Over 8,500 LF of reuse main were installed by directional drilling in the City road right-of-way.
Fox (continued)

**Lift Station Remote Telemetry System, City of Winter Garden, FL.** Project Manager. Obtained a new license from the Federal Communications Commission (F.C.C.) for operation of the City's system. Performed a spectral analysis of three candidate SCADA frequencies for F.C.C. licensing and the best frequency will be selected for final licensing. Upon F.C.C. license approval, reprogrammed all 78 remote telemetry units at the wastewater pump stations throughout the service area and the master telemetry unit located at Fullers WTP.

**Southern Route, Northeast Water / Wastewater Transmission System, City of Lakeland, FL.** Senior Project Manager. 8,700 LF of 30-inch HDPE water main installed via directional drill and 12,700 LF of 30-inch DIP water main. Design, permitting, construction drawing, technical specification preparation, and construction management.

**Poinciana WWTP No. 2, Tohopekaliga Water Authority, Kissimmee, FL.** Principal-in-Charge. WWTP had a design of 3.0 MGD and utilized a sequencing batch reactor to provide secondary treatment. Design increased the permitted capacity to 6.0 MGD with provisions for future expansion to 12.0 MGD, utilizing the Construction Manager at Risk process. Project also included abandoning the SBR process in favor of the Modified Ludzing Ettinger process, new filtration facilities, modifications to the influent screens, a new grit removal system, odor control facilities, a new chlorine contact basin with transfer pumps, new effluent storage and pumping, new residuals handling, and associated electrical and instrumentation.

**Alternative Water Supply, Tarpon Springs, FL.** Project Manager. Design and technical services associated with the design/build construction of the City's 6.4 MGD alternative water supply facility designed to accommodate high salinity brackish water from a group of 15 Floridan aquifer supply wells. It includes three 2 MGD reverse osmosis (RO) skids, degasification, biotrickling filters for odor control, chlorine contact, transfer pumping, 5 MG ground storage reservoir, and high-service pumping. Raw water system and RO skids designed using duplex stainless steel to accommodate high salinity and seawater membranes.

**Cypress West Water Reclamation Facility Upgrade and Expansion, Phase IB, Tohopekaliga Water Authority, Kissimmee, FL.** Client Manager. Expansion upgrades from 6 to 12 MGD, including disk membrane filtration, chlorine contact chambers, effluent storage, and high-service pumping facilities.

**Pump Station Nos. 60 and 97 Improvements, Tohopekaliga Water Authority, Kissimmee, FL.** Project Manager. Preliminary engineering, final design, permitting, bidding, and construction phase services for the rehabilitation of two submersible wastewater pump stations. Improvements included structural rehabilitation, installation of a triplex submersible pump system, above-grade discharge piping, odor control facilities, a standby generator set, new controls, and SCADA interface.

**Pump Station Nos. 28 and 112, Tohopekaliga Water Authority, Kissimmee, FL.** Project Manager. Survey, design, permitting, and construction administration for the refurbishment of duplex pump stations, pump station Nos. 28 and 112. General improvements to both pump stations included replacement of: submersible pumps, pump rails, and pump controls. Other improvements included relocation of discharge piping above ground to eliminate valve vaults along with the addition of interior liners. Gravity main between PS No. 28 and the terminal manhole was replaced to repair a previous failure, which caused excess infiltration and inflow. Improvements to PS No. 112 included raising the top slab of the station and terminal manhole to minimize site flooding.

**Westside Wastewater and Reuse System, Tohopekaliga Water Authority, Kissimmee, FL.** Senior Project Manager. 26,400 LF of 20- to 24-inch wastewater and reuse force main, 10,160 LF of 24- to 30-inch wastewater and reuse force main via parallel directional drills. Design, permitting, construction drawing, and technical specification preparation and construction management.

**ChampionsGate Water/Wastewater Transmission Mains, Tohopekaliga Water Authority, Kissimmee, FL.** Project Manager. Route evaluation, final design, permitting, and construction administration for 23,700 LF of 24- and 30-inch water main, 30,620 LF of 24- to 36-inch wastewater force main. Project also included four 42-inch diameter jack and bores, 300 LF aerial water body crossing, and utility coordination. Permitting involved FDEP water /wastewater permits and negotiating a mitigation plan to compensate for wetland impacts required for construction.
Michael Thatcher, PE, ENV SP

Mr. Thatcher’s experience includes design, permitting, and construction phase services for water distribution and wastewater transmission projects, for a host of federal, state, local, and private clients. He has supported a number of major infrastructure improvement projects, including the City of New Smyrna Beach and UCNSB Islesboro Subdivision Utility and Stormwater Improvements, the Town of Fort Myers Beach Utility and Stormwater Improvements, and the City of Clearwater Groundwater Replenishment Advanced Water Purification Plant.

Islesboro Subdivision Utility and Stormwater Improvements, City of New Smyrna Beach and UCNSB, FL. Project Engineer. Design of 13,000 LF of watermain improvements, 4,300 LF of wastewater improvements and expansion, 20,000 LF of stormwater pipe improvements, and roadway improvements for approximately 6 miles of roadway in the subdivision. Design of utility improvements, relocation, and expansion, coordination with utility agency owners, hydrologic/hydraulic (H/H) analysis of project area, as well as preparation of construction documents, obtaining of ERP and ACOE permits, bidding procurement, and construction administration. Engineer of Record for Volusia County Health Department watermain testing and clearances.

Fort Myers Beach Utility and Stormwater Improvements, Town of Fort Myers Beach, FL. Project Engineer. Design of 65,000 LF of watermain improvements, 50,000 LF of stormwater pipe improvements, 22,000 LF of swales, and roadway improvements along multiple side streets. Design of utility improvements, relocation, and coordination with utility agency owners, H/H analysis of project area, as well as preparation of construction documents, obtaining of ERP and ACOE permits, and bidding procurement.

Estero Boulevard Watermain Improvements, Town of Fort Myers Beach, FL. Project Engineer. Design of 23,000 LF of watermain improvements, and roadway improvements. Design of utility improvements, relocation, and coordination with utility agency owners, as well as preparation of construction documents.

Groundwater Replenishment Advanced Water Purification Plant, City of Clearwater, FL. Project Engineer. Design of utility, process, and site elements at the proposed plant. Design of utility connections and upgrades, H/H analysis of project area, as well as roadway design and analyses, driveway connections, and preparation of construction documents, and obtaining of ERP and FDOT permits.

Wellington Interconnect Watermain Improvements, City of Deltona, FL. Project Engineer. Design of 7,000 LF of watermain improvements, which increased the 6- and 8-inch watermains in the project limits to a 20-inch distribution main. Design of utility improvements, relocation, and coordination with utility agency owners, as well as preparation of construction documents.

Standards and Construction Specifications Update, City of Deltona, FL. Project Manager. Assisting the City in updating Standards and Construction Specifications Manual for water, wastewater, reclaimed water, lift stations, treatment facilities, and SCADA systems, as well as standard details, and approved products list for Construction.
James Christopher, PE, BCEE

Mr. Christopher is highly qualified in environmental engineering, with special expertise in water resources; water quality, reverse osmosis, pumping system analysis/station design; hydraulic analysis, pipeline design; wastewater collection, treatment, effluent reuse/utilization/disposal, facility planning; construction and administration, and overall project administration and coordination.

Alternative Water Supply Design/Build, Tarpon Springs, FL. Design Manager. Design and technical services associated with the design/build construction of the City’s 6.4 MGD alternative water supply facility. Facility designed to accommodate high salinity brackish water from a group of 15 Floridan aquifer supply wells and includes three 2 MGD reverse osmosis (RO) skids, degasification, biotrickling filters for odor control, chlorine contact, transfer pumping, 5 MG ground storage reservoir, and high-service pumping. Raw water system and RO skids designed using duplex stainless steel to accommodate high salinity and seawater membranes.

Cypress Lake WTP, Tohopekilaga Water Authority, Kissimmee, FL. Process Team Leader. Preparation of the conceptual and preliminary design reports, cost budgets, and schedules for a proposed 34 MGD RO WTP, raw water supply well field, and deep injection well disposal system.

Alexander Orr Jr. WTP Process Optimization Study, Miami-Dade County Water and Sewer Department, FL. Project Manager. Responsible for Tetra Tech’s work as subconsultant to HDR for bench scale testing, field testing, review of plant operating information, development of water quality goals and development of alternatives to optimize cost-effective operation of the lime softening and stabilization process for this 262 MGD facility.

Southeast WTP, Huntsville Utilities, Huntsville, AL. Technical Leader. Responsible for the technical aspects of the design of a surface water treatment facility with an initial capacity of 24 MGD and an ultimate capacity of 96 MGD, which will obtain raw water from the Guntersville Reservoir segment of the Tennessee River.

Janine Alexander, PE

Ms. Alexander has more than 21 years of utility experience, including project management for the design of new facilities, relocations of existing facilities, utility coordination, permitting, construction administration and management, inspections, and certifications for numerous public and private-sector projects.

SunRail 36-Inch Reclaimed Water Main, Tohopekilaga Water Authority, Kissimmee, FL. Senior Project Manager. When SunRail added a railroad track to its northern right-of-way limits, Tetra Tech provided professional design, permitting, and construction administration services for 280 LF of 36-inch DIP reclaimed water main, (200 feet via open cut and 80 LF via a 54-inch jack-and-bore under the tracks). Project included PCCP/MJ adapters for connections to the 36-inch PCCP reclaimed main; removal of 49 LF of 36-inch PCCP piping; and grouting of 102 LF of 36-inch PCCP main under the tracks.

Water Main Replacement Program, City of Hollywood, FL. Project Manager. Design, permitting, bidding, and construction administration services to replace over 257,000 LF of water mains ranging from 4- to 24-inches in diameter, utilizing various pipe materials including PVC, HDPE, DIP, steel, and PCCP. The City has an ongoing water main replacement program and has identified the area from Hollywood Boulevard to Sheridan Street between N. 21st Avenue and the Intracoastal Waterway as a project for Tetra Tech to design under the General Engineering Consulting Services contract.

Water Main Replacement Program: Federal Highway (US 1) from Polk Street to Sheridan Street, City of Hollywood, FL. Senior Project Engineer. Design, permitting, bidding, and construction administration services for the east side of Federal Highway including 7,400 LF of 12-inch water main, 100 LF of 16-inch water main, 14 new fire hydrants, and reconnections to side streets varying from 2 to 8 inches in diameter.

QA/QC & Constructibility Reviews

Education: MS, Environmental Engineering and Science, University of Central Florida, 1980; BS, Chemistry, Duke University, 1976

Registrations/Certifications: Professional Engineer, FL, No. 34204;

Years of Experience: 36

Storage and Water Distribution

Education: BS, Environmental Engineering, University of Central Florida, 1996

Registrations/Certifications: Professional Engineer, FL, No. 59244; NPDES-Certified Inspector

Years of Experience: 21
Andrew Woodcook, PE, MBA

Mr. Woodcock has special expertise in utility master planning, due diligence investigations, utility valuations, financial feasibility analyses and business plans. His skills include assisting utilities prepare operating and capital programs and supporting those programs with a series of rates and charges to provide for successful implementation. He is also experienced in conducting economic and feasibility analyses and serves as an expert witness on utility rate regulatory matters.

20-Year Reuse Water Master Plan, Daytona Beach, FL. Project Manager. Master plan evaluated the city reuse system and provided a listing of projects to expand the City’s use of reclaimed water over the projection period. A hydraulic model of the system was created in Innovzye using the City’s CAD drawings and as-builts of recent projects. A unique feature of the modeling effort was to effectively simulate a low pressure reclaimed water transmission line that also acts as an outfall to the Halifax River. When the WWTP produces water that does not meet public reuse standards, the pipeline is the sole form of effluent disposal. The model was used to develop an operational protocol for the pipeline given these two conflicting uses. Once the CIP was determined, a full reclaimed water rate study was performed to demonstrate how varying levels of investment in the CIP would affect reclaimed rates.

Water/Wastewater Utility Master Plan, Marion County, FL. Project Manager. In the four years prior to initiation of the Water and Wastewater Master Plan, Marion County had quadrupled its utility customer base through a series of utility acquisitions in key growth areas. The primary focus of the Plan was to provide a roadmap to efficiently consolidate utility systems and establish four County sub regions that would serve as the future basis for utility planning and operations. The Master Plan presented a program for systematically decommissioning small package plants and expanding sub regional facilities to accommodate the customer base and projected growth.

Daniel Allen, PE

Mr. Allen is an experienced environmental engineer with experience in utility management, master planning, water resources engineering, and the design and construction of water and wastewater treatment, effluent reuse and disposal, water distribution, wastewater collection/transmission, and well pumping systems. Mr. Allen’s specific pipeline experience includes the design, permitting, and construction management of over 256 miles of pipelines.

Malcolm Road Water Supply Facility, Orange County Utilities Department, FL. Project Manager. Final design, permitting, and construction management services for a new 8.64 MGD potable water treatment facility. Facility consists of six lower Floridan aquifer supply wells, two 2.0 MG ground storage tanks, high service pumping within a treatment facility building, and sodium hypochlorite and fluoride storage and feed systems. Project also included 2,400 feet of 36-inch water main to connect to the County’s water distribution system.

Eastern Regional Water Transmission System, Orange County Utilities, FL. Project Manager. Master planning and transmission system improvements. Hydraulic modeling prepared during the master plan was used to develop the County’s 20-year plan for this service area. Transmission improvements included 37,350 LF of 24-inch DIP water transmission main in eastern Orange County. In addition, 37,350 LF of 12- to 24-inch wastewater force main were designed and constructed based on the County’s Wastewater Master Plan.

Education: MBA, Rollins College, 2001; MS, Environmental Engineering, University of Central Florida, 1989
Registrations/Certifications: Professional Engineer: FL, No. 47118
Years of Experience: 28

Water & Wastewater Master Planning

Education: MBA, Rollins College, 2001; MS, Environmental Engineering, University of Central Florida, 1989
Registrations/Certifications: Professional Engineer: FL, No. 47118
Years of Experience: 28

Education: BS, Civil Engineering, Michigan State University, 1981
Registrations/Certifications: Professional Engineer, Florida, No. 37891
Years of Experience: 37
Jarrett Kinslow, PE

Mr. Kinslow serves as a senior project manager and technology leader in membrane processes in the utility division and has participated in many aspects of environmental engineering including treatability studies, pilot testing, design, permitting, construction administration, data analysis, and planning. He has project experience in the design, construction, and startup of potable water treatment facilities, including specialization in membrane treatment processes with a combined experience of more than 77 MGD in membrane treatment capacity.

Central Water Integration, San Antonio Water System, City of San Antonio, TX. Project Manager/Design Lead. Project consists of treatment facilities, conveyance pipelines, and improvements to pump stations and distribution facilities to integrate a new 48.0 MGD potable water supply source into the utility's potable water distribution system. The supply source for this project consisted of a $900M P3 water supply project that will import groundwater from a wellfield that is 140 miles from the City. Designed facilities include pressurized solution injection of carbon dioxide for pH adjustment, lime storage and batch slaking, lime saturators (solids contactors) for calcium remineralization, dual media pressure filters, a sodium hypochlorite on-site generation system, fluoride storage and feed, backwash recovery, filtered solids and lime sludge gravity thickener, sludge handling and dewatering using centrifuges, and associated polymer storage and feed systems.

Groundwater Replenishment Advanced Water Purification Plant, City of Clearwater, FL. Project Manager/Engineer of Record. Design and permitting of a full-scale Full Advanced Treatment for Indirect Potable Reuse program that will be the first facility of its kind in the State of Florida. Program utilized tertiary treated reclaimed as a water source for the purification treatment processes, which include pressure-driven ultrafiltration, reverse osmosis, UV/peroxide advanced oxidation processes, membrane contactors, and various post treatment chemical feeds for stabilization and assimilating the treated water to the quality of the native groundwater. Project incorporated an open platform ultrafiltration membrane skid design that is directly coupled to the RO process.

Scott Smith, PE

Mr. Smith has more than 19 years of engineering experience specializing in hydraulics, pumping systems, hydraulic modeling, water reclamation and reuse, water and wastewater treatment, GIS, and project management. He is thoroughly familiar with all aspects of permitting, design, bidding, and construction of large high-profile public works projects.

Leland and Tivoli-Wheeling Flood Control Pump Station Modifications, City of Deltona FL. Lead Engineer. Conducted hydraulic analysis and devised pump station modification plans for City’s Tivoli-Wheeling and Leland flood control pump stations, which pump to stormwater ponds to enable pumping at same rated capacity to new influent storage tank (change of operating TDH conditions) serving Alexander Ave. Reclaimed Water Augmentation Facility, where stormwater will be treated and augment the City’s reclaimed water system. Used WaterGEMS for development of system head-capacity curves for current conveyance system and condition of pumping to new facility.

Raw Water Wells 10, 11, and 14 and Raw Water Main, City of Tarpon Springs, FL. Lead Engineer. Preliminary and final design and permitting of proposed additional Upper Floridan Aquifer brackish water supply wells and new HDPE raw water piping to connect to raw water transmission system as needed to support growing water demand from the City’s RO WTP. Created and used raw water system hydraulic model and drawdown testing information to select variable speed pumps to accommodate present and projected future conditions.

Pinellas Avenue Water Main Extension, City of Tarpon Springs, FL. Lead Engineer. Fast-track design, permitting bidding, and construction for 2,400 LF of new directionally drilled 16-inch HDPE and open cut 12-inch PVC potable water main along North Pinellas Avenue right-of-way from Meres Boulevard to Florida Hospital property. New water main extension was needed to provide sufficient fire flow to the hospital. Performed route analyzes, sized new mains using City’s WaterGEMS hydraulic model, and detailed proposed design in technical memorandum.

Water Treatment

Education: BS, Environmental Engineering, University of Central Florida, 2000

Registrations/Certifications: Professional Engineer: FL, No. 63900

Years of Experience: 19

Hydraulic Modeling

Education: MS, Environmental Engineering, University of Cincinnati, 1999

Registrations/Certifications: Professional Engineer: Florida, No. 59505

Years of Experience: 17

April 2018
Location
Tetra Tech has 400 offices worldwide, and more than 20 offices in Florida. The UCNSB will continue to be served from our infrastructure design office in downtown Orlando. Our proximity and management philosophy will allow for sound and expedited communication between the Tetra Tech team and UCNSB staff. Physical proximity will also enhance the involvement of UCNSB staff in every element of planning, design, permitting, and construction. Tetra Tech is committed to providing UCNSB with on-time, responsive service, without delays.

Financial Stability
Tetra Tech is listed on the NASDAQ Stock Exchange (TTEK). Our annual revenues exceeded $2.8 billion in fiscal year 2017. Additionally, we carry very little debt. Thus, we are in an excellent financial position, and can provide necessary resources to rapidly deploy and meet aggressive project schedules. Our annual financial reports are public, and available on our website: http://www.tetratech.com/en/investor-financials-and-filings.

Insurance
Tetra Tech’s insurance policies are issued to our insurance company by the Department of Insurance of the state of Florida, which maintains a Best’s Rating of “A+” or better according to the A.M. Best Company. Our insurance company has a Best’s Rating of “A+,” and a size category of “XV”.

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<thead>
<tr>
<th>INSURANCE LIMITS</th>
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<tbody>
<tr>
<td>Type</td>
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<tr>
<td>General Liability</td>
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<tr>
<td>Automobile Liability</td>
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<td>Umbrella Liability</td>
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<tr>
<td>Workers Compensation and Employers Liability</td>
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<tr>
<td>Contractor Professional Liability</td>
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</tbody>
</table>

Insurance

John Toomey, PE
Mr. Toomey has over 39 years of responsible engineering experience in planning, design, and construction administration of various water and wastewater projects. He serves as the water/wastewater discipline leader for Tetra Tech’s IEW unit. Duties include: technical oversight; staff recruitment, evaluation, and mentoring; workload assessment and balancing; business development and proposal development; and detailed technical involvement on selected projects.

WWTP Process Evaluation and Rerating, UCNSB, New Smyrna Beach, FL. Detailed analysis of flows, influent characteristics, and plant performance in conjunction with a computer modeling effort resulting in increasing plant capacity from 6 to 7 MGD with only minor improvements.

Lift Station No. 1/7 Improvements, Orlando, FL. A new 25 MGD wastewater pump station and that includes a split wetwell, provisions for the installation of six 250-HP pumps, above-grade discharge piping, VFDs, odor control system, flow metering facilities, a monorail system, standby power facilities, and a building architecturally consistent with the surrounding neighborhood.

Potable Water Facilities Plan, City of Lake City, FL. Project Manager/Engineer of Record. Analysis of potable water treatment options pursuant to requirements established for the SRF Loan Program. Project included flow projections, an evaluation of capital and operating costs for various alternatives, consideration of various non-monetary factors and selection of an overall strategy for providing potable water treatment capacity for a 20-year planning period. Project also included preparation of a “Capital Financing Plan.”

Northwest Regional Water Reclamation Facility Expansion, Hillsborough County, FL. Process analysis and preliminary design in conjunction with a computer modeling effort to increase design and permitted capacities from 12 to 30 MGD.

Wastewater Treatment

Education: BSE, University of Central Florida, Environmental Engineering, Magna cum Laude; AET, Vermont Technical College, High Honors

Registrations/Certifications: Professional Engineer, FL, No. 40264; GA No. 41116

Years of Experience: 39
Occupational Licence

Below is Tetra Tech’s Occupational License.

State of Florida
Board of Professional Engineers

Is authorized under the provisions of Section 471, Fla. Statutes, to offer engineering services to the public through a Professional Engineer, duly licensed under Chapter 471, Florida Statutes.

Expiration: 2/28/2019
Audit No: 228201902800 R
CA Lic. No: 2429

References

Below we have provided contact information for clients that we serve. Our previous experience is our best reference and we encourage UCNSB to contact them.

<table>
<thead>
<tr>
<th>CLIENT</th>
<th>DATES OF SERVICE</th>
<th>WORK PERFORMED</th>
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</thead>
<tbody>
<tr>
<td>Toho Water Authority</td>
<td>1995 to present</td>
<td>• Alternative water supply exploration and water use permitting</td>
</tr>
<tr>
<td>Deb Beatty, PE, Senior Project Manager</td>
<td></td>
<td>• Water distribution (up to 24-inch) design, permitting and construction</td>
</tr>
<tr>
<td>951 Martin Luther King Boulevard, Kissimmee, FL, 34741</td>
<td></td>
<td>• Wastewater and reclaimed water/transmission (up to 24-inch) design, permitting, and construction</td>
</tr>
<tr>
<td>(407) 944-5023</td>
<td></td>
<td>• Wastewater gravity system collection rehabilitation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Water use permitting and compliance</td>
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<tr>
<td></td>
<td></td>
<td>• Wastewater lift station upgrades and refurbishments</td>
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<tr>
<td></td>
<td></td>
<td>• Raw water supply wells and transmission mains</td>
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<tr>
<td></td>
<td></td>
<td>• Permitting: FDEP, FDOT, SJRWMD, ACOE, Osceola County, City of Kissimmee</td>
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<td></td>
<td></td>
<td>• SRF Loan Application and Supporting Documents</td>
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<tr>
<td>City of Lakeland</td>
<td>1991 to present</td>
<td>• Water filter air/water backwash improvements</td>
</tr>
<tr>
<td>Tom Mattiacci, PE, Manager of Engineering</td>
<td></td>
<td>• Irrigation well pumping improvements</td>
</tr>
<tr>
<td>(863) 834-6173</td>
<td></td>
<td>• Water use permit (WUP) renewal/compliance monitoring</td>
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<tr>
<td></td>
<td></td>
<td>• Water distribution (up to 30-inch) design, permitting, and construction</td>
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<tr>
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<td>• Wastewater sludge thickening improvements</td>
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<td></td>
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<td>• Permitting: FDEP, PCHD, FDOT, and SWFWMD</td>
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<tr>
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<td>• SRF Loan Application and Supporting documents</td>
</tr>
<tr>
<td>City of Bartow</td>
<td>1996 to present</td>
<td>• Water system Master Plan(1996-2006): Raw water supply, treatment and distribution</td>
</tr>
<tr>
<td>Ron Johnson, Water Ops Manager</td>
<td></td>
<td>• Hydraulic Modeling - Water transmission distribution</td>
</tr>
<tr>
<td>PO Box 1069, Bartow, FL 33881</td>
<td></td>
<td>• 7.0 MGD wellfield expansion, lime softening, water treatment plant design, permitting, and construction</td>
</tr>
<tr>
<td>(863) 534-0159</td>
<td></td>
<td>• Water distribution (up to 24-inch) design permitting and construction</td>
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<tr>
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<td>• Water use permitting and compliance</td>
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<tr>
<td></td>
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<td>• Permitting: FDEP, FDOH, FDOT, ACOE, and SWFWMD</td>
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<td>CLIENT</td>
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<td>WORK PERFORMED</td>
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</tbody>
</table>
| City of Deltona                             | 2002 to present  | - Site plan, ecological, and landscape reviews/DRC member  
- Planning and zoning assistance  
- Retrofit drainage projects and stormwater grant applications  
- Floodplain management  
- Roadway program management  
- Water and wastewater system improvements  
- Wastewater treatment expansion program  
- Parks and recreation improvements |
| Matt Doan, PE                               |                  | City of Deltona Matt Doan, PE Public Works Director 255 Enterprise Road Deltona, FL 32725 (386) 878-8973  
- Development Review: Site civil and utilities  
- Master Planning: Stormwater system and potable water system  
- Hydraulic Modeling: water system  
- Water Distribution System Improvements - Design, permitting, construction  
- Stormwater flooding forensic study  
- Stormwater System Improvements - Design, permitting, construction  
- Permitting: SJRWMD, FDEP, ACOE, Lake County, and LCHD |
| Fred Miller                                 | 2002 to present  | City of Minneola Fred Miller Public Works Director P.O. Box 678 Minneola, FL 34755 (352) 516-3929  
- Development Review: Site civil and utilities  
- Master Planning: Stormwater system and potable water system  
- Hydraulic Modeling: water system  
- Water Distribution System Improvements - Design, permitting, construction  
- Stormwater flooding forensic study  
- Stormwater System Improvements - Design, permitting, construction  
- Permitting: SJRWMD, FDEP, ACOE, Lake County, and LCHD |
| Jim Monahan, PE                            | 2008 to present  | City of Winter Garden Jim Monahan, PE Senior Engineer 300 West Plant Street Winter Garden, FL 34787 (407) 656-4111 Ext. 2263  
- Groundwater Collection Underdrain System: Design  
- Reclaimed Water Distribution System Expansion: Design, public outreach, permitting, and construction  
- Industrial wastewater pretreatment feasibility study  
- Permitting: SJRWMD, FDEP, Orange County, and FDOT  
- Wastewater pretreatment mechanical screening improvements and odor control, design, permitting and construction  
- Wastewater tertiary filtration improvements and process blowers: design, permitting and construction |
| Chuck Shultz, PE                            | 1999 to present  | City of Orlando Chuck Shultz, PE Assistant Wastewater Division Manager City of Orlando 400 South Orange Ave. Orlando, Florida 32801 (407) 246-2658  
- Conversion and rehabilitation of two duplex lift stations from dry pit to wet pit  
- Master lift station rehabilitation of triplex dry pit station with a peak capacity of 7.0 MGD, included addition of biofilter odor control system  
- Assistance developing city standard electrical/instrumentation CADD details  
- Site improvements at 10 lift stations  
- Standby power improvement for master lift station  
- Utility infrastructure improvements  
- Financial analysis |
| James Kinzler                               | 2009 to present  | City of Clermont James Kinzler Director of Capital Planning and Projects (352) 241-0178  
- Raw Water Supply Well: Design, permitting, and construction  
- Westside WTP: Design, permitting, and construction  
- Lift Station (68) SCADA system implementation  
- Elevated Storage Tank Repairs and Repainting: Design and construction  
- Water, wastewater, and reclaimed water master plans: projections, hydraulic modeling, and CIP development  
- Reclaimed water 2.0 MG ground storage tank  
- Alternative water supply in the Lower Florida Aquifer |
Other Information

2017 Tetra Tech Rankings

Water
1 Water
1 Treatment & Desalination
3 International Water
3 Sewer & Waste
12 Wastewater Treatment Plants
19 Sanitary & Storm Sewers

Energy
1 Wind Power
1 Hydro Plants
3 Solar Power
7 Nuclear Plants
9 Power
10 Transmission & Distribution

Environment
1 Environmental Management
1 Environmental Science
1 Consulting / Studies
1 Solid Waste
3 Site Assessment & Compliance
5 Chemical & Soil Remediation
5 Clean Air Compliance
6 Hazardous Waste

Design
1 Dams & Reservoirs
1 Pipelines
4 Aerospace
4 Marine & Port Facilities
5 Private Clients
6 Federal Clients
7 Combined Design & CM/PM
10 Data Centers

Source: Engineering News-Record issues: 5/1/17, 6/19/17, 7/3/17, 7/13/17, and 8/7/17
Addendum No 2 Received By:

[Signature]

4/5/2018

Signature/Authorized Company Official

Jon Fox, PE

Printed Name

Submit this signed form with your proposal on April 5th.