

Experience Highlights

Bryan Veith has over 26 years of “One Water” and public/private civil engineering experience including advanced water and wastewater treatment plants, integrated water resources, pumping stations, pipelines and trenchless technologies, reclaimed water systems, water supply and deep injection wells, stormwater management systems, site-civil, site planning, and biosolids to energy.

Professional services have included business consulting, master planning/studies, piloting, modeling, engineering and design, construction management/CEI, permitting/regulatory assistance, asset management, funding assistance, public/stakeholder involvement, and alternative project delivery (i.e. Design Build, CMAR). He has served in various roles for projects throughout Florida and the US such as:

- Multi-office (region) area leader
- Client services manager
- Quality Control
- Business service line leader
- Business Consultant
- New Initiative Leader
- Project director
- Senior project manager
- Technical Leader

Business Consulting / Asset Management

Business Plan Development Assistance, SWFWMD, Brooksville, FL CSM/Project Manager. Provided business consulting to assist the District with development of their first Business Plan to clarify and to document the staff and financial resources needed to meet the District’s initiatives and goals – some of which were already in progress – outlined in the District’s Strategic Plan. The Business Plan was necessary to continue to find efficiencies and effective organization improvements, and to outline the specifics for achieving their Strategic Plan. The Business Plan will serve as a guide for business operations, management, employees and stakeholders with respect to scheduling priorities, providing direction to staff and setting performance measures of success. It will be used to as a management agenda and to communicate District’s accomplishments internally and to external interested parties. Services included developing a business plan template, facilitating workshops for SWOT analysis, stakeholder identification, Key Performance Indicator Development, Succession Planning/Recruitment Analysis, Future Trend Analysis, Resource Needs Analysis and assistance with business plan development and governing board presentation.

Project Management Office (PMO) Assessment, SWFWMD, Brooksville CSM/Project Manager. Provided business consulting for evaluating and assessing SWFWMD's newly formed PMO group. Scope of work included workshops and interviews with key staff, data review, evaluation, and preparation of a technical memorandum with recommendations.

CMOM Program Assessment, Sarasota County, Florida Project Director/CSM/QC. The County entered into a FDEP Consent Order due to wet weather SSOs. This project included evaluation of County SSO data to identify SSO root causes for various asset types, an assessment of County’s existing CMOM programs summarized in TM (gap analysis), Existing / To-be business process mapping, recommendations for strengthening programs including enhancements to ArcGIS and Maximo systems, and a roadmap for implementing recommendations and achieving regulatory compliance.

Sanitary Sewer Management Systems, City of Largo, Florida Deputy Project Manager. The City of Largo operates and maintains a sanitary sewer collection, treatment, and disposal system. The City’s sanitary sewer system infrastructure includes approximately 255 miles of gravity sewers (22 miles of interceptor sewers), 52 City-owned lift stations (143 privately maintained stations), 48 miles of force mains, manholes, laterals, a

Education
<i>M.S., Environmental Engineering, University of South Florida, 1999</i>
<i>B.S., Civil Engineering, University of Florida, 1993</i>
<i>Business Minor, University of Florida, 1993</i>
Registration
<i>Professional Engineer, FL 52791</i>
Experience
<i>26 years</i>
Expertise
<i>Grit Removal & Screening</i>
<i>1Water / Integrated Water Resources</i>
<i>Alternative Project Delivery (i.e. CMAR, Design Build, etc.)</i>
<i>Asset Management</i>
<i>Business Consulting</i>
<i>Engineering Planning & Design</i>
<i>Permitting</i>
<i>Pipelines</i>
<i>Pumping Stations</i>
<i>Reclaimed Water Systems</i>
<i>Regulatory Compliance</i>
<i>Treatment Plant Design</i>
Recognition
<i>ASCE “Fellow” March 2019</i>
<i>FSAWWA 2015 Volunteer of the Year Award</i>
<i>ASCE Florida Section Young Engineer of the Year Award, 2000</i>
<i>ASCE Zone II Outstanding Small Branch of Year Award, 2000</i>
<i>Awarded Top 40 Under 40 / Gulf Coast Business Review / Featured in March 2000 issue</i>

wastewater treatment plant, and effluent disposal system (Citywide reclaimed water system and surface discharge).

During the El Nino storms of 1997 and 1998, approximately 30 million gallons of sanitary sewer overflows (SSOs) occurred within the City of Largo Sanitary Sewer District (wastewater service area). Since that time the City and its consultants, in response to the overflows, performed a sanitary sewer evaluation survey (SSES), initiated projects and programs to reduce the overflows, rehabilitated portions of the collection system through annual repair contracts (lining, manholes, etc.) and preventative/repair programs, and designed/constructed sanitary sewer projects.

The City adopted a Sanitary Sewer Improvement Plan, which identifies that the City will make improvements to the sanitary sewer management systems, as well as make physical improvements to the major collection and treatment systems. Through the Competitive Consultants Negotiations Act process, the project was to perform professional services to assist the City in improving their sanitary sewer management systems such as their **concurrency management system; management, operation, and maintenance (MOM), and Computerized Maintenance Management System (CMMS)**. Also included was the development of the Management Systems component of the plan for sustainable infrastructure and elimination of unauthorized SSOs.

Developed business process maps of existing City's critical business processes as related to Concurrency Management (Development Review). Conducted a series of workshops to interactively develop the Concurrency Management Program with City staff including To-Be Process Maps. Also evaluated the potential resource impacts for implementing the new program. The deliverable was a Summary Memorandum.

Asset Management Program Evaluation and Development, Pasco County, Florida

Project Director/CSM/QC. Through a task order under a continuing contract with Pasco County Utilities, evaluated the current state of their Asset Management Program, developed an implementation plan with a prioritized list of recommendations for this multi-year program. Services also included assisting PCU with the development of updated Level of Service (LOS) Goals and Key Performance Indicators (KPIs) and a detailed 5-year program implementation schedule in Microsoft Project.

Development of Renewal and Replacement (R&R) Program, Tampa Bay Water, Tampa, FL

Project Manager. Tampa Bay Water requested the development of a system-wide R&R Program to estimate annual R&R Program funding requirements and activities, estimate and justify R&R Program staffing needs, determine asset conditions and prioritize and schedule the renewal and replacement of assets by assessing the vulnerability and criticality of assets. The team was tasked with developing an assessment protocol and providing direction on the development of a data collection tool to be used in the field to capture assessment data. Our team along with Tampa Bay Water conducted the sensory condition assessment on the above ground assets. In addition, other Tampa Bay Water staff was trained in conducting future condition assessments of the rest of Tampa Bay Water's assets.

The next stage of this project will include conducting additional condition assessments of above ground assets along with underground assets. The final piece of this project includes developing the replacement planning model which includes determining the remaining useful life of TBW existing assets, the replacement year and cost of those assets, a refurbishment framework, all in coordination with TBW staff. The result will be desktop software that produces a forecast of future funding needs for all TBW assets for future years along with a detailed log of refurbishments and replacements by year.

Asset Management Phase 3, R&R Planning for ECRWRF and LSs, City of West Palm Beach, Florida

Project Manager. This project is a continuation of Phases 1 and II of the City's asset management implementation. Work under this phase included field condition assessments of the City's 11 most critical lift stations and East Central Regional Water Reclamation Facility (ECRWF). Based on the condition assessments, a 10-year R/R plan was prepared that included providing opinion of probable costs and collaboratively working with the City to prioritize the R&R CIP.

Sanitary Sewer Wet Weather Business Case Evaluation, City of Largo, Florida

Deputy Project Manager. Services included a business case evaluation (BCE) of major collection, treatment, and disposal system project alternatives to help the City reach consensus on the most cost-effective preferred project alternative to address their SSOs and the FDEP Consent Order. The BCE process was used as a decision tool to help the City select the right project for the Wet Weather Monitoring and Pumping System based on factors such as social, economic, environmental, etc. Tasks in the BCE evaluation included: working

with the City's BCE team to brainstorm project drivers, objectives and alternatives; alternatives refinement; developed a basis for life cycle costing of the alternatives, with the assistance of the City's team a life cycle cost analysis; identified the alternatives risks and benefits; and conducted final workshop to review the BCE results City staff and reach a consensus on the preferred alternative. The budget for the SSO solution was approximately \$60 million; however, BC was able to recommend and then design a project for less than \$50M.

Tampa Bay Water Replacement Planning Model (RPM) and Maximo Assistance, Clearwater, Florida CSM/MM/Quality Control. The projects' overall goal is to convert the Condition Assessment, the Renewal and Rehabilitation, and the RPM processes to use the Maximo asset data instead of TBW's EMS data. To accomplish that goal, the following objectives were accomplished: develop a process for creating the annual Condition Assessment database that uses Maximo asset information; update and convert the current R&R database to using Maximo equipment identifiers instead of the EMS identifiers; develop a process for updating the R&R database with the Condition Assessment data, develop a process for populating the RPM database with data from Maximo and the R&R database,

CMOM Program Assistance, Pinellas County, Florida

Project Director/QC. The County was under a FDEP Consent Order due to wet weather SSOs. This project included evaluation of County SSO data to identify SSO root causes for various asset types, interviews with County staff, an assessment of County's existing CMOM programs, recommendations for strengthening programs, and a preparing an update to the County's existing CMOM plan.

Infrastructure R&R Improvements and Asset Management Program, Orange County, Florida

Technical Advisor. Continuing services contract to establish a R/R program strategy for wastewater collection, water distribution and reclaimed water infrastructure. Scope includes evaluating the entire system and assisting the County to develop the strategy to make key decisions about which assets to rehab/replace and when and apply available funding to meet system needs. Services including condition strategic planning and utility performance consulting, assessments, evaluation, recommendations for improved processes and procedures, data management and tracking, R&R prioritization, and preliminary design.

Bond Engineering – Annual Systems Report, Hillsborough County, Florida

Project Manager. Project consisted of preparing Hillsborough County's water, wastewater and reclaimed water systems annual report. The work was performed under a Professional Services Agreement with the Hillsborough County Water Resource Services for Water/Wastewater Utility System Revenue Bond Services. Annual Operations Review scope is comprised of six primary elements, or tasks. These include interview with department managers, review/analysis of utility system performance, review/analysis of financial system condition, preparation of annual systems report, and annual certification to meet bond covenant requirements.

Bond Engineering – CIP Oversight, Hillsborough County, Florida

Project Manager. Project consisted of bond engineering assistance services related to Hillsborough County's water, wastewater and reclaimed water systems. As the County's Bond Engineer in support of preparing the Annual Report and overseeing the CIP program for FY 2008, provided assistance for the monthly capital improvement program meetings. The work was performed under a professional services agreement with the Hillsborough County Water Resource Services for Water/Wastewater Utility System Revenue Bond Services.

Activities include attending monthly CIP project review meetings conducted by County staff as a means of staying current on the status of active CIP projects as input to capacity fee calculations and future bondholder annual reports. Additionally, the observations made at these meetings will be included in the annual bond report and inspections report. County's comments will be incorporated and submitted final minutes electronically via e-mail within two business days of receipt of County's comments.

Bond Engineering – Facilities Inspection Report, Hillsborough County, Florida

Project Delivery Officer/QC. Project consisted of preparing Hillsborough County's water, wastewater and reclaimed water systems facilities inspection report. The work was performed under a Professional Services Agreement with the Hillsborough County for Water/Wastewater Utility System Revenue Bond Services. The primary scope elements included general assessment of the current condition, inspection results, and repair and rehabilitation improvement recommendations in the 2- to 5-year planning horizon for the water and wastewater treatment plants, water pumping stations, water wells, reclaimed water storage and pumping stations, wastewater lift stations, meters, manholes, valves, fire hydrants and sewer lines.

1Water / Alternative Water Supply Projects

Integrated / One Water Master Plan, City of Winter Haven, Florida

Business Consultant / 1Water Framework Development Lead. Due to the importance of the City's lake system, population growth, regulation changes, and other factors, the City authorized the Black & Veatch team which includes Veith Engineering & Business Solutions in a key role for the short and long range master planning of water resources using an integrated/sustainable/One Water approach. The City envisions the Integrated/One Water Master Plan to be created initially to be used as a framework for making future decisions. Individual/detailed utility master plans for water supply, wastewater, reuse, and water conservation are also being developed using the Integrated/One Water approach as a framework. The utility master plans will also incorporate priorities for stormwater, surface water, lakes, natural systems, quality of life and land planning as they relate to integrated water resources.

The City's primary goals are: 1) Develop detailed water resource master plans that achieve sustainable water resources, including economic, social, cultural and environmental considerations, 2) Consider all aspects of land and water management as one integrated effort 3) Engage staff, residents and stakeholders in the process.

The project is currently in phase 1 of a multi-phase, multi-year plan. The Phase 1 scope includes One Water Framework Development, stakeholder/public engagement, regulatory agency coordination, and planning for stormwater, water, wastewater, and reclaimed water.

Lake Eva and Lake Henry Restoration Feasibility Study and Design, City of Haines City, Florida

CSM/Project Manager. This Alternative Water Supply (1Water) project is located within the Peace Creek watershed in Polk County, Florida. The project includes an evaluation of potential improvements identified in the Southwest Florida Water Management District's (District's) Peace Creek Canal watershed work and concepts developed by the project team to implement feasible solutions to achieve the project objectives. The project objectives are: 1) address Lake Eva **Minimum Flow and Level (MFL)** and SWFWMD guidance levels; 2) improve **water quality** in Lake Eva; 3) improve **flood protection** within Lake Henry, while protecting water recreation opportunities; 4) improve **groundwater recharge** and potentially **obtain water supply credits** from SWFWMD; and 5) **natural systems enhancement/improvement**. The plan is to meet these project objectives by connecting Lake Henry and Lake Eva through natural systems such as wetlands, private canal systems through Morrison Ranch, and/or an existing drainage ditch maintained by the Haines City Water Control District and to infiltrate excess treat. This project is being cooperatively funded by the District.

T. Mabry Carlton Jr. EDR Water Treatment Plant, Sarasota, Florida

Project Engineer. Responsible for review of shop drawings, construction observation, and preparation of an O&M manual for the wellfield. Scope of services included final design of a 12-MGD electro dialysis reversal (EDR) water treatment plant to help meet the potable water needs of Sarasota County. Design included the EDR process plant piping, chemical feed equipment, buildings, plant site work, high service pumps, and storage tanks. The team also designed 11 production wells, an access road and a seven-mile raw water transmission pipeline.

State of Florida Expenditure Plan (Gulf Consortium), 23 Florida Gulf Coast Counties, FL

Project Director/Engineering Advisor. Responsible for team oversight and engineering technical advisement. The Gulf Consortium was established in 2012 by 23 of Florida's Gulf Coast counties to form an organization to respond and manage tasks under the RESTORE Act in response to the Deepwater Horizon oil spill. ESA/BC team was engaged to develop the State Expenditure Plan (SEP) which will provide a procedure that each County can follow to apply for funding for projects that meet key requirements related to improving water quality, habitat, ecosystem, etc. to help improve the Gulf of Mexico and those water bodies/conveyances/areas that contribute to the Gulf of Mexico. The team helped 1) develop the initial program development strategy, 2) prepare the Plan and 3) Public process to obtain approval. Projects in the SEP plan were focused on stormwater, ecosystem restoration, and nutrient reduction (i.e. septic to sewer and wastewater system upgrades) in 23 Florida gulf coast Counties to improve water quality and the ecosystem.

Peer Review Alternate Water Supply Report, City of Tarpon Springs, FL

Client Services Manager/Project Manager. Responsible for team oversight and letter preparation. Scope of services included peer review of the City of Tarpon Springs' staff report regarding the evaluation of Tarpon Springs Independent Municipal Water Supply.

Brackish Water Supply Feasibility – Hydrogeologic Compilation and Summary of Findings for Brackish Groundwater Resources, City of Tarpon Springs, Florida

Client Services Manager/Project Manager. Responsible for overall team direction and preparing the technical memorandum. The work included hydrogeologic framework, groundwater quality considerations, regional water quality summary, and preparation of hydrogeologic maps and profiles for brackish groundwater sources.

Brackish Water Supply Feasibility Study/Test Wells – Phase I, City Tarpon Springs, Florida

Client Services Manager/Project Manager. Responsible for wellfield siting analysis, field testing program development, aquifer modeling, design/permit, water quality sampling and analysis, bid and construction phase services, and final well completion report for test production and monitor wells. The project's purpose was to evaluate the capacity and quality of two water supply aquifers for water supply and reverse osmosis treatment and to summarize results/evaluation/recommendations in a final report.

Alternative Reverse Osmosis Water Treatment Plant Capacity Evaluation and Demand Projects, City of Tarpon Springs, Florida

Client Services Manager/Project Manager. Project included preparing potable water demand projections and a new reverse osmosis water treatment plant capacity evaluation in support of the implementation of the City's Alternative Water Supply Plan.

Reverse Osmosis Water Treatment Plant Siting Study, City of Tarpon Springs, Florida

Client Services Manager/Project Manager. Responsible for evaluation and letter report. This project consisted of performing data collection including aerial, GIS, soils and parcel information; conducting a site visit and conceptual site evaluation of a new 5.0 MGD and 8.0 MGD reverse osmosis water treatment plant for site adaptation on several vacant parcels.

Alternative Water Supply Feasibility Study – Phase II, City of Oldsmar, Florida

Client Services Manager / Project Manager. Responsible for wellfield siting analysis, developing a field-testing program, design and construction of two pilot production wells, bid and construction phase services for test production wells and a reverse osmosis pilot study. Project's purpose was to evaluate the capacity and quality of two water supply aquifers through two test and four monitor wells, performing a RO pilot treatment study after the construction of the wells to evaluate treatability and concentrate characteristics, and an engineering evaluation of wellfield, transmission pipelines, treatment and concentrate disposal.

Alternative Water Supply Feasibility Study – Reverse Osmosis Piloting and Treatability Evaluation, City of Oldsmar, Florida

Client Services Manager/Project Manager. Responsible for the overall direction of the team for preparing the reverse osmosis (RO) piloting test plan and protocol, the standard operating procedures, and the technical memorandum summarizing results and providing recommendations; conducting the pilot unit setup and testing during the 5-month testing period; analysis of laboratory data; and providing for ROWTP Scale-up considerations. This work was completed as part of the brackish test well drilling. Project's purpose was to evaluate the raw water, permeate, and concentrate water quality through pretreatment and RO pilot testing of two brackish groundwater supply aquifers.

Reverse Osmosis Water Treatment Plant and Wells – Phase III, City of Oldsmar, Florida

CSM/Project Manager. Responsible for the overall direction of the project. Services included preparing preliminary design report; SWFWMD WUP/FDEP IDP permit applications, Reverse Osmosis System Suppliers RFQ, FDEP SRF water facility plan, and providing financial assistance. The project consists of 3.2 MGD brackish water reverse osmosis treatment facility, a 4.3 MGD brackish groundwater wellfield and a 1.1 MGD by-product surface water disposal system into deep well injection.

Sulphur Springs Minimum Flows and Levels (MFL), City of Tampa, Florida

CSM / Project Manager. SWFWMD established a minimum flow for two City of Tampa water bodies, including the Lower Hillsborough River and Sulphur Springs Run. A recovery strategy has been adopted for the Lower Hillsborough River. Rather than releasing reservoir water stored for potable water supply, the Lower Hillsborough River recovery strategy consists of diverting flows from Sulphur Springs, the Tampa Bypass Canal (TBC), Blue Sink, and Morris Bridge Sink to the Hillsborough River Dam. Sulphur Springs is an artesian spring located in the City on the north bank of the Hillsborough River (River). The City withdraws water from the spring to both supplement freshwater flows in the River as well as an emergency fresh water supply. These

withdrawals reduce the flow of fresh water to the water body that originates downstream of the spring, Sulphur Springs Run, and flows from the spring pool to the Hillsborough River. The Sulphur Springs Run is influenced by brackish water from the lower Hillsborough River. The City desires to modify an existing weir located approximately 75' upstream of the outlet to the River. The goals of the weir modification are to minimize saltwater incursions into Sulphur Springs Run as well as allow passage of manatees during certain periods of the year. Modifying the existing weir will include modifications to the structure containing the existing weir, making provision to adjust weir dimension and installation of a manually operated gantry crane for weir removal/installation. Services included design, permitting, bid phase, and construction phase assistance.

Reclaimed Water Interconnect – Phase I, Sarasota County, Florida

CSM/Program Manager. Sarasota County (County) is undertaking this important reclaimed water main interconnect project to **optimize the use, treatment, storage and disposal** of the reclaimed water generated at both their Bee Ridge Wastewater Reclamation Facility (BRWRF) and the Central County Wastewater Reclamation Facility (CCWRF). Additionally, the County also owns and operates a centrally located series of reclaimed water storage ponds and pumping system located at Parcel-X. During wet weather periods when reclaimed water irrigation demand is low and wastewater flows are higher, the County does not have the ability to adequately transfer reclaimed water between facilities. This project will create a reclaimed water system that provides the needed capacity and operational flexibility to store and transfer flows between facilities especially during wet weather periods. Services include conducting pipeline route analysis (TM#1), reclaimed water balance (TM#2), Hydraulic Modeling (TM#3), Integrated Monitoring and Control (TM#4), Surge Analysis (TM#5), and a Basis of Design Report (BDR). Improvements include new ground storage tanks, pumping stations, yard piping and motorized valving, chlorination, filtration, SCADA and new instrumentation and controls at the WRFs and Parcel X.

SJRWMD General Engineering Contract, Palatka, Florida

Project Director/Client Services Manager. Contracted services include Alternative Water Supply Development Projects, Central Florida Water Initiative (CFWI) support, Minimum Flows and Levels (MFLs) Determinations and Prevention and Recovery Strategy Development, and North Florida Water Supply Planning.

SJRWMD Upper Lake Louise Surface Water Model Review and MFL Status Assessment Update Palatka, Florida

Project Director/Client Services Manager. As part of SJRWMD's water supply planning process, the status of adopted MFLs are assessed to determine potential impacts to priority water bodies through the 20-year planning horizon. As part of this effort, for some lakes within the District, it is necessary to use water budget models to simulate current surface water withdrawals, to determine whether they will affect the status of a lake's MFLs. Services provided included hydrogeological modeling and analysis services related to simulating water levels for the Upper Lake Louise. The purpose was to model the effects of surface water withdrawals on lake levels, and to determine the amount of freeboard (available surface water and groundwater) that remains (the amount of surface water and groundwater necessary to cause the MFLs to not be met)

SWFWMD Chapters C and D General Engineering Contract, Brooksville, Florida

Project Director/Client Services Manager. Performed a variety of small and medium size assignments for environmental monitoring and assessments of natural systems / natural and water conveyances.

Horse Creek and Charlie Creek System for Environmental Flow Analysis (SEFA) Data Collection and Analysis, Florida (for SWFWMD)

Project Director/Client Services Manager. Developing minimum flow levels for Horse and Charlie Creeks in the Peace River watershed. Services included planning, field data collection, SEFA modeling, and reporting to SWFWMD. Close collaboration was required to adhere to strict schedule and budget requirements.

Desoto Correctional Institution Reverse Osmosis Water Treatment Plant, Desoto County, Florida

Project Engineer. Provided process design, stormwater design, structural design, yard piping design, and permitting with SWFWMD for a new water treatment plant. Scope of services included an evaluation and design for the Desoto Correctional Institution Water Treatment Plant as part of a one-year expansion program for the prison. The project included study, design, permitting, and construction of a new 0.6-MGD water treatment plant, three raw water wells, chemical feed facilities, ground water storage tank with cascade aeration, chlorination, high-service pumping station, and emergency generator.

Wastewater Treatment and Biosolids

Manatee County SWWRF & SEWRF Belt Filter Press Rehabilitation Design, Manatee County, Florida
Project Director/QC/CSM. Manatee County Utilities (County) is experiencing increased sludge production at their Southwest Water Reclamation Facility (SWWRF) and the Southeast Water Reclamation Facility (SEWRF). Additionally, some of the County's WRFs biosolids assets are reaching their useful life and in need of rehabilitation and replacement. Under a General Engineering Contract (GEC), the County authorized a project specific work assignment to provide services for this SWWRF and SEWRF Belt Filter Press (BFP) Rehabilitation Project. Services include survey, geotechnical, basis of design and final design (civil, mechanical, structural, electrical and instrumentation engineering), permitting, and preparing opinion of probable construction costing.

Falkenburg WWTP Bar Screen Replacement – Evaluation/Basis of Design/Final Design, Hillsborough County, FL

Project Director/CSM/QC. As a work order under a Professional Services Agreement (i.e. General Engineering Contract) with Hillsborough County Public Utilities Department, services included planning, evaluation, hydraulic analysis, conceptual design, design, permitting, and engineering services during construction of the Bar Screen Replacement Project at the Falkenburg Advanced Wastewater Treatment Plant (AWWTP) headworks. Scope of services involved performing a feasibility evaluation of dual-stage center flow/perforated plate screening (footprint adaptability, hydraulic profile analysis), development of a conceptual basis of design, preliminary cost estimating, engineering design and drawings, permitting, bid phase, and engineering services during construction.

NWWRF Biosolids to Energy Study, Hillsborough County, Florida

CSM/Project Manager. Hillsborough County desires to perform a business case evaluation (BCE) for biosolids management options at its NWWRF, including energy concepts that would produce renewable energy. The County has requested to prepare the BCE that will evaluate the current method of biosolids handling as well as screen potentially applicable biosolids to energy alternatives and identify one or more alternatives considered worthy of future consideration. Scope of services includes data collection and review, developing biosolids to energy alternatives, preparing a Solids-Water-Energy Evaluation Tool (SWEET) model for baseline and proposed conditions as a basis of comparing the alternatives, develop 30-year present-worth estimates for the baseline and each option, prepare a technical memorandum, and conduct a presentation.

Countryside Odor Control Evaluation, Hillsborough County, Florida

Project Director/QC/CSM. The project's purpose was to improve the odor issues in the project area to reduce complaints received along Countryway Blvd. as a result of a recent increase in an existing forcemain from 12-inch to 16-inch. The discharge configuration was modified at the existing receiving gravity sanitary sewer collection system manhole. The County has implemented various ventilation and backflow type check valves to prevent the migration of odors, however they require significant maintenance and has increase costs significantly. Services included performing an evaluation that modeled and simulated the existing wastewater infrastructure to analyze possible causes of the odor and propose alternatives to reduce and/or treat the odor problems. More specifically, tasks included performing hydraulic and odor analysis, liquid and gas sampling, desktop alternatives analysis, cost-benefit evaluation, and the preparation of Technical Memorandum (TM) for Countryway Blvd. Odor Control Evaluation summarizing the results and findings.

Valrico WRF Reject Storage Study, Hillsborough County, Florida

Project Director/QC/CSM. The County's goal is to increase the pumping capacity of the reject return pump station's capacity so that reject pond water is returned to the AWWTP for treatment more quickly. In addition, the County prefers the discharge location of reject return pipeline is preferred alternate discharge locations in addition to the existing headworks location to minimize the impact of the return water volumes, dependent on regulatory requirements. As part of the alternatives to be developed, a phased approach to the construction of the proposed improvements may be considered required based upon available budget over multiple fiscal years. The following tasks were completed as part of this project scope: data collection, hydraulic analysis, evaluation of alternatives, and basis of design report.

Biosolids and Yard Waste to Energy - Design, City of St. Petersburg, Florida

Project Delivery Officer/Quality Control/Grant Assistance. This Biosolids and Waste to Energy Project – Design Phase provides engineering services to prepare bid documents for the construction of the wastewater process

improvements associated with Technical Memorandum No.4, Phase I. This project was awarded to as a result of the close involvement with the feasibility study and technical memorandum completed previously. To assist Florida's first "Green City", the design will incorporate recommendations made previously that will produce Class A biosolids, increase volatile solids reduction, enhance biogas production, consolidate solids treatment, treat biogas for power production, enhance SWWRF's capacity to treat wastewater and reduce odors that affect the neighboring community.

Biosolids and Yard Waste to Energy Feasibility Study, City of St. Petersburg, Florida

CSM/Project Manager. Project was to study the City's desire to produce renewable power from currently under-used resources. The City produces an average of 41,000 wet tons per year (WTpY) of Class-B biosolids and 40,000 WTpY of yard waste. The Study was driven by the State of Florida's "effective ban" on Class-B biosolids land application. Over 35 different process configurations were considered to consider all potential solutions. Some of the innovative technologies that were considered included: gasification with syngas to either engines or rankine-cycle systems; fluid bed combustion with steam turbines; concentrating solar arrays to provide heat to indirect dryers; Cambi; Class-A anaerobic digestion; and heat drying. Evaluated during the study was the economics of the recommended Phase-1 and Phase-2 upgrades with maintaining the status quo of land application of Class-B biosolids.

SWWRF Capacity Upgrades, City of St. Petersburg, Florida

Quality Control/Monitoring Manager. Assignment included the preliminary design, design, permitting, and construction phase services for peak wet weather capacity improvements (expansion to 70 mgd) to the City's SWWRF. Capacity improvements included aeration, secondary clarification, hydro cyclones, disinfection, pumping, filtration, splitter box, pipe bypasses, yard piping, and electrical/controls. The project delivery method was Construction Manager at Risk (CMAR). The project had a very fast-track schedule including fast-track (interim and permanent) and late track improvements.

Northwest Water Reclamation Facilities Reject Water Disposal Systems Improvements, City of St. Petersburg, Florida

CSM/Project Manager (Study Phase). Project Delivery Officer/QC (Design and Construction Phase). The City of St. Petersburg (City) owns and operates the Northwest Water Reclamation Facility (NWWRF). The City requested an assessment of viable options of recycling reject effluent back into the NWWRF for either full or partial retreatment in order to comply with the new Florida Department of Environmental Protection requirements. Assessed four options as a conceptual level analysis of alternative means of using two existing 5.0 million gallon (MG) effluent ground storage tanks (GST's) to allow timely action should one or more effluent discharge parameters (e.g. total suspended solids, turbidity, chlorine residual, fecal coliform, etc.) not meet permitted standards for reuse or deep well injection. This action would involve routing of the reject water to the designated reject tank, draining of the reject tank and return of the reject water to either the head of the NWWRF or some location within the treatment train to allow retreatment of the water to Reuse standards.

Wastewater Reclamation Facility Aeration Biological Nutrient Removal Study, City of Largo, Florida

Client Services Manager/Project Manager. Responsible for project oversight and client interface. Professional services in connection with the evaluation of biological nutrient removal (BNR) improvements to the City's 18-MGD AADF Wastewater Reclamation Facility (WRF). Based on the implementation of other projects, the evaluation included the possible reconfiguration of aeration basins for a "treatment" re-rating. The City's WRF consists of three 6-MGD existing parallel treatment trains. Three aeration/biological process modification options were identified and evaluated based on the grit removal project being implemented. The study concluded that the BNR process could be re-rated to 7.5 MGD per train.

Water Reclamation Facility Headworks Grit Removal System Improvements, City of Largo, Florida

Project Manager. Responsible for preliminary design, preparation of drawings and specifications, bid phase, and construction observation. Scope of services included evaluation and design of grit removal improvements for the City's 18-MGD AADF WRF. The City's WRF consists of three 6-MGD existing elevated concrete preliminary treatment structures. The existing grit removal units were not operating efficiently, so new grit removal technologies (Eutek Headcell) were retrofitted into the existing preliminary treatment structures.

Water Reclamation Facility Residuals Dewatering Project, City of Largo, Florida

Client Services Manager. Responsible for design team oversight and client interface. This project consisted of professional services in connection with the evaluation of alternatives for minimizing operational time, physical labor, and handling of collection system residuals by City personnel at the City's 18 MGD WRF. Based on the selected alternative, the team performed the design, bid, and construction phase services for the project.

Wastewater Expansion Program, City of North Port, Florida

Quality Assurance/Quality Control (QA/QC). The overall wastewater expansion program consists of expanding the capacity and upgrading the treatment processes and facilities at the existing WWTP from 3.7 to 7.2 MGD. In addition, the project included two new WWTPs, each with a capacity of 2.0 MGD (expandable to 6.0 MGD) that will be used as regional treatment facilities. Other work that was performed under this program was a new regional master lift station, wastewater transmission system improvements (20,000 feet of 20-inch force mains), a 13.5 MGD Class I deep injection well for wet weather disposal and a biosolids master plan. Prepared the Consulting Engineer's Report, as well as State Revolving Loan documents that were used to support the funding of the wastewater program. Services included construction related professional services including full-time, on-site representation for the expansion projects. Total Project Cost: \$75 million.

Southwest Water Reclamation Facility Aeration Improvements, City of St. Petersburg, Florida

Principal in Charge. Project consisted of the study, design, and limited construction phase services for the conversion from surface aerators to fine bubble diffuser aeration at the City's Wastewater Treatment Plant. The project also included the study of conversion to membrane bioreactor (MBR).

SWWRF Capacity Analysis Report (CAR) and Operation & Maintenance Performance Report (OMPR), City of St. Petersburg, FL

Technical Advisor/Quality Control. BC completed the City's SWWRF CAR and OMPR for the renewal of their 20 mgd AADF wastewater reclamation facility.

Eastside Wastewater Treatment Plant Expansion, City of Venice, Florida

Project Engineer. Responsible for developing a reuse water balance computer model to calculate wet weather storage, developing a hydraulic model for expansion to reuse distribution system, design of the reuse pumping station, yard piping, and preparation of the Reuse PDR. Scope of services included permitting and preliminary and final design of a 3.0-MGD expansion of a wastewater treatment plant and reclaimed water irrigation improvements. The project involved the expansion of the preliminary treatment, Bardenpho/Carrousel facilities including enhancements to improve biological nutrient removal capabilities, secondary clarifiers and filters, disinfection, sludge thickening, and other miscellaneous improvements.

Wastewater Treatment Plant Phase I Improvements & Deep Well Injection, City of Punta Gorda, FL

Technical Leader. Responsible for planning, preliminary design, preparation of construction drawings and specifications, permitting, bid and construction phase. This project included planning, design, permitting, and construction phase services for the Phase I modification to the City's secondary WWTP and effluent disposal through deep well injection. Phase I includes modifications to the chlorine contact tank, a new effluent injection well pumping station, new pretreatment structure providing influent screening and grit removal, new plant water pumping station, new VFD pumps at the existing irrigation pump station, and pipeline from the irrigation pump station to the WWTP facility. The WWTP is currently permitted at 3.2 MGD. The Phase I design included arrangements for convenient future expansion to 4.0 and 6.0 MGD.

Capacity Analysis Report and Operation and Maintenance Performance, City of Punta Gorda, FL

Project Engineer for 1999 operation and maintenance performance report. This project included the preparation of a capacity analysis report of the City's wastewater treatment plant including its operation and maintenance performance.

Wastewater Alternative Study, City of Punta Gorda, Florida

Project Engineer. Responsible for preparation of a comprehensive study comparing alternatives for compliance with new effluent quality standards. This project consisted of a study and report on alternatives for future wastewater treatment and disposal.

Wastewater Treatment Plant System Evaluation, Town of Belleair, Florida

Technical Leader. This project included the development and evaluation of conceptual alternatives for a 0.9 MGD wastewater treatment facility to assist the Town with complying with a FDEP consent order regarding effluent quality. Prepared a short-term evaluation for the BNR improvements and long-term evaluation to address Class I Reliability, screening/grit removal, and other operation and maintenance issues.

Wastewater Treatment Plant Short-Term Improvements, Town of Belleair, Florida

Technical Leader. This project consisted of the design of construction improvements to the Town of Belleair's WWTF, currently permitted for 0.9 MGD, to assist the Town in meeting its Total Nitrogen (N) effluent permit limit. The biological nutrient improvements included installation of submersible mixers and appurtenances; chemical feed system, piping/valves for redirection of flows, and electrical work.

Donax Water Reclamation Facility, Sanibel Island, Florida

Technical Advisor and Quality Control. Project consisted of the study and evaluation of wastewater disposal and storage alternatives. The study reviewed alternatives such as reclaimed water onsite storage, off-site storage, and deep well injection and concluded with a report with recommended alternative and opinion of probable cost.

Wastewater Treatment Plant Headworks Evaluation, Bonita Springs Utilities, Bonita Springs, Florida

Technical Leader. Responsible for hydraulic calculations and preparing technical memorandum.

Florida State Hospital Chlorine Contact Tank, City of Chattahoochee, Florida

Project Manager. Responsible for the evaluation of improvements to Florida State Hospital's WWTP chlorine contact tank. This project includes the engineering analysis and evaluation of possible modifications to improve the operation of the existing chlorine contact tank. After reviewing several alternatives, a letter report summarizing the recommended action with opinion of probable construction costs was prepared.

Wastewater Treatment Facility Operations and Maintenance (O&M) Manual, City of Lake Alfred, FL

Project Engineer. Responsible for the preparation of the O&M manual for the wastewater treatment plant and effluent reuse system. Scope of services included planning and design of a municipal water reuse program and a new 0.6-MGD trickling filter wastewater treatment plant to produce reuse-quality water. The project also included a two-mile, 10-inch-diameter transmission main for conveyance of treated water to a 400-acre citrus irrigation site, and onsite storage pond to accommodate seasonal demand fluctuations.

Private Client, Evaluation and Conceptual Design / Effluent Lift Station Evaluation and Modeling, Polk County, Florida

Project Manager. The client owns and operates an industrial/domestic wastewater collection, treatment, and disposal system at their Auburndale Main Street facility. The facility's wastewater system consists of wastewater collection, influent and effluent lift stations, membrane bioreactor (MBR), reverse osmosis treatment with brine storage, an anaerobic (reactor) tank, and a control room. The facility is limited to 17,000 gallons of storage in its effluent lift station.

Bryan managed the project to construct a 250,000-gallon holding tank that provides equalization during peak flow/loadings, acid cleanings, and equipment maintenance downtime. Bryan will provide contract administration, attendance at meetings, preparation of meeting minutes, monthly project status reporting, coordination with the client, and attendance at the 90 percent submittal review meeting with the staff and site visit; and provide quality assurance and control for the deliverables.

Continuing Professional Environmental Engineering Services, Private Client, Auburndale Facility Wastewater System

Project Manager. Bryan served as project manager for a private client. Upon completion of professional services for the client, authorized through purchase order number 6100127312 in the amount of \$5,000 for preliminary investigations to address the Facility's regulatory issues. The client desires to authorize additional continuing on-call wastewater consulting services via a purchase order with an upset fee limit of \$5,000. Services include perform review and analysis of data, coordination with the client and ADI, attendance at on-site meetings, and teleconferences to assist with developing a short-term and long-term solution to the client's regulatory issues and Notice of Violation.

Water Treatment and Quality

Hodge Street Water Production Facility, Polk County, Florida

CSM/Project Manager. This project consists of the field investigations, design, permitting, bid phase and construction engineering-inspection services for the construction of a new 2.0 MGD water treatment plant in the Polk County East Regional Utility Service Area (ERUSA). The ERUSA, located south of Interstate 4 and east of the City of Winter Haven, is divided by the Lake Wales Ridge and includes the unincorporated area of Waverly. The following elements are included in the project: 1,500 gallon per minute (gpm) well pump, 15,000-gallon hydrotank, sodium hypochlorite chemical feed and storage system for disinfection, poly-orthophosphate chemical feed and storage system for corrosion inhibition, concrete building housing controls/equipment, back up emergency power generator, offsite potable water main, yard piping and valves, site Improvements/stormwater management.

Van Fleet Water Production Facility Expansion and Well APT, Polk County, Florida

CSM/Project Manager. This project consists of the field investigations, design, permitting, bid phase and construction engineering-inspection services for the construction of a water treatment expansion from a peak capacity of 3.0 MGD to 14.5 MGD. The water production facility, which is supplied by a wellfield, is located in the Polk County Northeast Regional Utility Service Area (NERUSA). The following elements are included in the project: new high service pump station (14.4 MGD), new HSP VFD/Well controls, expanded sodium hypochlorite and poly-orthophosphate chemical feed and storage system, new air-conditioned concrete block building housing controls/equipment, upgraded backup power facilities, electrical distribution, well pump control system and Motorola ACE RTU; hydraulic analysis/new yard piping, new automated valves, site improvements and demolition, ground storage tank rehabilitation, upgraded SCADA and flow monitoring, and production well APT/monitor well construction.

Loma Linda Water Production Facility Well Expansion and APT, Polk County, Florida

CSM/Project Manager. This project consists of the field investigations, design, permitting, bid phase and construction engineering-inspection services for the construction of new 18-inch water supply well to expand the capacity of the existing facility from 0.45 to 0.90 MGD. The following elements are included in the project: new 18-inch production well (400' cased, open hole to 600'), site improvements, shall/deep monitoring wells, Aquifer Performance Testing, water quality sampling/analysis, and well completion report.

Central Hillsborough Water Treatment Facility, Hillsborough County, Florida

Client Services / Project Manager. Responsible for client interface and overall management of the team and subconsultants. Project consists of a new 19 MGD water treatment facility with two 5 mg ground storage tanks, chemical addition (5), high-service pumping station, operations and maintenance buildings, emergency power, SCADA and controls, 3,400 feet of 36-inch pipelines, yard piping, and site improvements.

Water Quality and Corrosion Investigation – Deer Creek, Sarasota County, Florida

CSM/Project Manager. Provided team oversight, client coordination, and assistance relative to water quality and performed the following tasks: reviewed existing water treatment and distribution practices and available historical information regarding water quality delivered to the Deer Creek development; assessed water quality data collected within the distribution system; and performed a workshop with County staff to review/discuss issues and provide technical information regarding the topic of pitting corrosion of copper tube in residential water distribution systems, highlighting the existing experience with water systems regarding impacts and causal factors surrounding pitting corrosion.

Orange Valley High Service Water Pump Station, Chemical Feed, Pipeline, and Building Improvements, Dade City, Florida

CSM/Project Manager. As a result of water supply planning, the team was authorized to master plan, design, permit, and provide limited construction services for a high service pumping station, chemical feed facilities, building, backup power, well, transmission main, and retrofit to existing tank fill pumping station. This fast-track project was executed so the improvements can be operational before new developments were completed.

Water Treatment Plant Liquid Ammonia Conversion, City of Tampa, Florida

Principal in Charge. Project consisted of the study, design, permitting, and limited construction phase services for the conversion from gaseous ammonia to liquid ammonia at the City's Water Treatment Plant.

Calcium Scale Evaluation and Control, City of Tampa, Florida

Principal in Charge. Project consisted of the study and development of computer program for calcium scale evaluation and control at the City's Water Treatment Plant.

Reclaimed Water Systems

Reclaimed Water Storage and Aquifer Storage and Recovery Study, City of Tarpon Springs, Florida

CSM/Project Manager. Responsible for project oversight. Scope of services included an investigation and evaluation of suitable reclaimed water storage options (tank, pond, aquifer storage and recovery) and locations for each in order to provide the city of Tarpon Springs with additional storage for optimizing and expanding a reclaimed water system. This project is cooperatively funded by Southwest Florida Water Management District.

Reclaimed Water Feasibility Study and Phase I Design, City of Quincy, Florida

CSM/Project Manager. Responsible for study, planning, final design, and permitting. The study phase included evaluation of a new reclaimed water system for the City to serve Engelhard Corporation, Golf Club of Quincy, and Imperial Nurseries. Phase I design of the project included a 10-inch transmission main constructed through directional boring, new 1.5 MGD pumping station at the WWTP, and control valving to regulate flows to each customer's storage ponds. The pumps will be controlled based on system demand and pressure and levels in the customer's storage ponds. Several special crossings were required including FDOT SR 12, Quincy Creek, and CSX Railroad.

Urban Reuse System, City of Sarasota, Florida

Project Engineer. Responsible for design of the pumping station and pipeline. This project consisted of a 2,700 gpm reclaimed water pumping station with four, constant speed, vertical turbine pumps and a 6,000-gallon pressurized hydropneumatic tank at the City's existing wastewater treatment plant and 6,900 feet of a 24-inch reclaimed water pipeline through heavily congested downtown Sarasota to the bay front.

Effluent Reuse System, Phase 1C, City of Wauchula, Florida

Project Engineer. Preliminary and final design of upgrade to the City's WWTP. Scope of services included modifications to the City's WWTP to meet high level disinfection standards for application of reclaimed water to citrus groves. The design included new effluent filters, chlorine contact tank, reclaimed water pumping station, dechlorination facility, ground storage tank, percolation ponds and an irrigation pumping station. Survey and permitting services were also provided.

North County Reclaimed Water Distribution System – Phase 2A, Pinellas County, Florida

Principal in Charge. Responsible for client interface and resource allocation. Professional services included the planning, survey, geotechnical investigations, preliminary design, hydraulic modeling, construction drawings, bid phase, and construction observation. The project consists of an expansion to the county's north reclaimed water distribution system. More specifically, 130,000 feet of 4- to 16-inch reclaimed water transmission and distribution mains will be constructed in residential neighborhoods and commercial areas to service approximately 2,500 customers. The project is bounded to the west by the intercoastal waterway and includes several major roadway and environmental crossings.

Old Oakhurst Reclaimed Water Distribution System, Pinellas County, Florida

Client Services/Project Manager. Responsible for planning, preliminary design, construction drawings, bid phase, and construction observation. Scope of services included planning, preliminary design, hydraulic modeling, survey, final design, permitting, bid and construction phase services for an expansion to the county's reclaimed water distribution system. The project services approximately 2,000 customers (residential, commercial, and golf course) and includes over 100,000 feet of reclaimed and potable water distribution piping ranging in size from 2 to 16 inches.

South Loop Reclaimed Water Transmission Main, City of Sarasota, Florida

Technical Leader. Responsible for preliminary design memorandum, final design, permitting, cost estimating, and technical specifications. Scope of services included survey, design and permitting for the South Loop

pipeline consisting of 6,900 feet of 12-inch reclaimed water pipeline which completes the inner loop of the City's reclaimed water system. The pipeline included a subaqueous directional bore crossing of Hudson Bayou and directional bore crossing of US 41.

Downtown Loop Reclaimed Water Transmission Main, City of Sarasota, Florida

Project Engineer. Responsible for preliminary design memorandum, final design, permitting, cost estimating, and technical specifications. Scope of services included survey, design and permitting for the Downtown Loop pipeline consisting of 6,000 feet of 16-inch reclaimed water pipeline through the heavily congested downtown area. The pipeline included special crossings of US 41.

Venice Reuse Project A – Distribution and Transmission Main System, City of Venice, Florida

Task Manager. Responsible for planning, preliminary design, and preparation of drawings and specifications. Scope of services included expanding the City's existing reclaimed water system. The expansion included 120,000 feet of pipe ranging in size from 4 to 24 inches, five special pipeline crossings including an 18-inch directional bore crossing of the intracoastal waterway, reuse booster pumping station, dechlorination stations, phasing out the City's Island Beach WWTP, and modifying the City's sanitary sewer system to pump raw wastewater to the Eastside WWTP.

Continuing Services Contract – Multi-Year/Multiple Work Order, Pinellas County, Florida

Principal in Charge/Client Services Manager. Oversaw this \$1.5 million contract for a variety of water, wastewater, and reclaimed water services.

Wells, Wellfields, ASR, and Deep Well Injection

Hydrologic and Environmental Monitoring, City of Oldsmar, Florida

Project Manager. Provide technical oversight for the City of Oldsmar's Water Supply Project Environmental Monitoring. The City is developing a new wellfield, ROWTP, and byproduct disposal system. This work consists of Statistical trend analysis, such as double-mass curve analysis, multiple linear regression, time series analysis, and factor analysis shall be performed to analyze the interactions of rainfall and pumpage on movement of the fresh/saltwater interface, surficial water levels, potentiometric surface levels in the semi-confined aquifers, and stream discharge.

Reverse Osmosis Water Treatment Plant By-Product Deep Well Injection – Phase IIIB, City of Oldsmar, Florida

Project Manager. Responsible for the overall direction of the project. Professional services included preparing the well siting report, FDEP UIC permit application, final design, bid documents, bid phase, and CEI services. The project consists of the construction of a 1.1 MGD brackish water reverse osmosis byproduct deep injection well at the City's WWTP.

Wastewater Deep Well Injection, City of Punta Gorda, Florida

Technical Leader. Responsible for planning, preparation of construction drawings and specifications, permitting, bid and construction phase. This project entailed effluent disposal through deep well injection. Phase I includes modifications a new effluent injection well pumping station and deep injection well and corresponding monitor wells. The well was permitted for a peak flow of 12 MGD.

Water Supply Planning and Well Evaluation, Dade City, Florida

Project Manager. Responsible for project oversight. Under an on-call service agreement, assisted the City by conducting water planning studies and modeling to address anticipated growth that is expected to occur through annexations and new development. Growth projections show that the City could double in size in the next five years. Evaluated the groundwater resources and the potential use of existing irrigation wells for conversion to public supply.

Infrastructure – Pumping Stations

Landings, Riverview, Golden Rod, and Webber/Beneva Road Lift Stations Rehabilitation Assessment and Design, Sarasota County, FL

Project Director/CSM/Technical Advisor/QC. After completing the hydraulic modeling for Lockwood Ridge Project, the County determined that there was a need to rehabilitate five lift stations in that area. This project

scope of services is to perform updated hydraulic modeling, prepare a preliminary design letter report (PDLR), develop construction drawings/specifications, and permitting assistance for rehabilitation for five existing wastewater lift stations that were experiencing very high-water levels or were predicted by modeling to have SSOs in the future. Improvements include replacement of the pumps with larger pumps and VFD control to address flow contributions from growth in the area, new force main interconnect, motor control panels and remote telemetry unit's replacement. Other tasks included survey and bid phase assistance.

Lift Station#005 Replacement, City of Orlando, FL

CSM/Project Manager. Lift Station 5 has reached the end of its useful service lift and is experiencing a number of issues to high maintenance and inadequate depth and capacity. City of Orlando authorized a detailed final design, permitting, cost estimating, bidding/construction services and other related work for the installation of a new submersible type pump station on the empty City owned land parcel adjacent to the existing lift station. The new lift station will be designed to handle 30-year projected future flows, have a building with three rooms including a ventilated pump room, an air-conditioned room for electrical and controls and a ventilated room for generator. The station will be encompassed within an 8-foot high security wall and the area outside the walls be landscaped to blend with the surrounding area and provide natural screening with trees.

Lift Station 365 and Force Main Improvements, City of Cape Coral, Florida

Technical Leader. Responsible for evaluation phase and preliminary design. Scope of services included hydraulic modeling with CYBERNET, evaluation of alternatives, a preliminary design technical memorandum, final design, permitting, bid, and construction phase.

Heritage Harbour Master Lift Station, Manatee County, Florida

Project Manager responsible for preliminary design. Scope of services included engineering services for the 4.3-MGD Heritage Harbour Master Wastewater Pump Station. The station conveys wastewater from the Heritage Harbour subdivision to the Manatee County wastewater system. The pump station accommodates flows from 5,500 connections including both residential and commercial properties. The project also included utility building housing the VFDs and controls, flow meter vault, emergency generator, and site improvements.

South Pasadena/Lift Station #61 Improvements, City of St. Petersburg, Florida

Principal in Charge/Quality Control. Project consisted of upgrading/rehabilitating a 10 MGD master dry pit/wet pit lift station.

Infrastructure - Pipelines

North County Transmission Main Asset Improvements – Engineering Analysis, Pinellas County, FL

Technical Advisor/Quality Control. The primary goal is to provide isolation improvements to the County's North Transmission Water Main system (36", 48", and 60"). There are multiple direction connections; both direct water connections and fire hydrants to the transmission mains making the system vulnerable in the case of a water main break. The County would also like to evaluate if additional distribution mains and valves would improve water service reliability. Services consisted of data review, hydraulic/modeling analysis, collaborative workshops, preliminary engineering analysis including recommendations and cost estimating, and final technical memorandum.

Sanitary Sewer System Wet Weather Monitoring and Pumping System Project, City of Largo, FL

Project Delivery Officer/Quality Control. Authorized under the City's GEC contract services included completion of a comprehensive Basis of Design Report, provided to the City with the detailed improvements necessary to accommodate the Wet Weather system and prepared final design documents around the resulting recommendations. Within BODR, tasks were performed that enhanced the City of Largo's existing hydraulic model to understand the critical monitoring locations with the sanitary sewer collection system and establish operating protocol to allow the new Wet Weather System to respond to potential SSOs within the collections system. Services included performing the Basis of Design Report (Hydraulic Modeling, Preliminary Design, Force Main Route Analysis and Standard Operation Procedures), Final Design (4 Lift Station Reconstruction, 2 Lift Station Rehabilitations and approximately 60,000 linear feet of Force Main), Bid Phase Services and Limited Construction Phase Services.

Northwest Sanitary Sewer Expansion Project, City of Largo, Florida

Project Delivery Officer/Quality Control. Authorized under the City's GEC contract project included adopting a previously designed project, which had been put on hold for over 5 yrs., and prepare the project for permitting,

bidding and construction. The project consists of demolishing the existing LS 06 and construction of a new gravity sewer system to convey wastewater to an existing LS 03. Improvements to LS 03 include a complete rebuild of the station and a new force main (approximately 10,000LF of 12-inch pipe) to convey the flow from LS 03 and the subcatchment flow of the previous LS 06 location.

Spring Haven Force Main, City of North Port, Florida

Project Manager. Assisted the City with professional engineering services in connection with performing the management, utility coordination, geotechnical investigations, final design, permitting support, bid, and limited construction phase services for the Spring Haven Force main. This 12-inch force main extends from the intersection of Price Boulevard and Spring Haven Drive along Spring Haven Drive to the intersection of Pan American Boulevard and Appomattox Drive where it connects to a 16-inch force main that was also installed as part of the overall Wastewater Program. The force main's length is approximately 8,000 linear feet. The following tasks were performed through this work assignment: Project management, Utility coordination, Geotechnical investigations, design and contract documents, permitting support, limited bid phase support, and limited construction phase support. The survey for Pan American Boulevard was provided by Van Buskirk Engineers and the existing survey along Spring Haven was provided by the City.

2-inch Galvanized Water Main Replacement, Pinellas County, Florida

Client Services Manager. Responsible for overall program management and engineer of record on several individual projects. Professional services in connection with providing surveying services, utility coordination and pipe verification, preliminary and final design to prepare construction plans, specifications, permitting, and CEI services required for 25 miles of 2-inch galvanized water pipe replacement.

Bahia Vista Force Main, Sarasota County, Florida

Client Services Manager/Project Manager. Responsible for preliminary design, preparation of construction drawings, and permitting. Scope of services included preliminary design, preparation of construction drawings, permitting support, bid phase, and construction phase services for approximately 15,000 linear feet of 18-inch and 30-inch force main constructed through directional boring along heavily congested Bahia Vista Street. The project included two subaqueous directional bore crossings of Philippi Creek.

Grassy Prairie Rehydration Evaluation, Tampa Bay Water, Tampa, Florida

Project Manager. Grassy Prairie is an 84.7-acre deep marsh located within the J.B. Starkey Wilderness Park and Wellfield in Pasco County. The Pasco County Engineering Services Department obtained an Environmental Resource Permit from the Southwest Florida Water Management District (SWFWMD) to enhance the hydrology of Grassy Prairie as compensation for wetland impacts that will occur as part of the Rock Sink/Boggy Creek Watershed Improvements Project. The Watershed Improvements Project implements certain recommended improvements contained within the Bear Creek Stormwater Management Plan that are intended to lessen the duration and levels of periodic flooding of homes, yards, and roads in the vicinity of nearby Lakes Worrell, Garden, and Worley. The improvements will cause increased flow of up to approximately 194 acre-feet of annualized discharge volume through over drainage to the Pithlachascotee River. This loss in fresh water and historic basin storage will be mitigated by pumping approximately 200 acre-feet annually from the Pithlachascotee River to Grassy Prairie.

Tampa Bay Water was required by their water use permit to develop restoration plans for wetlands not expected to recover fully to acceptable water levels under the reduced levels of pumping mandated by the Consolidated Water Use Permit obtained in 1999 for the eleven (11) central system Florida Wellfields. The "Starkey Surface Water Diversion to Grassy Prairie" project was given high priority because of its location on public lands, a relatively low cost per acre, and the potential for teaming with Pasco County and the SWFWMD on an existing project.

The project's objective is to perform a feasibility study to maximize the ecological benefit of the proposed rehydration and facilitate Tampa Bay Water's involvement in the mitigation process. Services will include providing engineering services such as hydraulic and infrastructure analysis as a subconsultant to GPI for the Starkey Surface Water Diversion to Grassy Prairie project.

South Gate Force Main Routing Study, Sarasota County, Florida

Client Services Manager/Project Manager. Responsible for preparing sanitary sewer force main routing study covering area from the South Gate WWTP to the intersection of Bahia Vista and McIntosh Road. The purpose was to help the County relative to determining the optimal route for the force main.

Henry Ranch Water Main Extension, City of Venice, Florida

Qualified Technical Reviewer. Responsible for quality control. Scope of services included preliminary design, hydraulic computations, and construction drawings for construction of approximately 13,380 linear feet of 12-inch watermain along Pinebrook Road and Laurel Road to the Henry Ranch property.

G. Pierce Wood Memorial Hospital Fire Loop Main, City of Arcadia, Florida

Project Engineer responsible for water distribution modeling, master planning, preliminary design, final pipeline design and specifications, and construction phase services. Scope of services included permitting, survey, design, and construction phase services for approximately 3,500 linear feet of new 10-inch water main around the hospital's inner loop. The project was accomplished to comply with fire flow requirements.

U.S. 1 Water Main Replacement, City of Key West, Florida

Technical Leader (design & permitting). Scope of services included design and bid- and permit-phase services for the water main replacement that consisted of 6,500 feet of 12-inch water main along heavily traveled U.S. 1 in Marathon, FL. This project required close coordination with FDOT and a utility right-of-way permit.

Peace River Option – Transmission Pipelines, Sarasota and Desoto Counties, Florida

Technical Leader responsible for design team oversight. This project consisted of the construction-phase services for pipelines incorporated into Peace River Option Contract 2: Kings Highway and Peace River Facility Transmission Pipelines.

G. Pierce Wood DJJ Utility Extension and Planning, Desoto County, Florida

Project Manager responsible for survey, final design, permitting, construction, and resident project representative phase services. Scope of services included the design of 3,110 feet of 10-inch water main; 2,140 feet of 4-inch sewer force main, 140-gpm master lift station, and upgrades to existing lift station in order to serve the DJJ complex from the G. Pierce Wood water and wastewater systems. The project also includes assistance with planning and facilitating bulk utility services for the G. Pierce Wood Hospital campus in Desoto County. The facility is to be turned over to Florida Department of Juvenile Justice from the Department of Children and Family Services.

Florida State Hospital Water System Improvements and Elevated Storage Tank, City of Chattahoochee, Florida

Project Manager. Responsible for preliminary design, modeling, final design, permitting, bid, and construction phase services. Scope of services included a 250,000 gallon “multi-column style” water storage tank, new water mains to connect to the existing water distribution system, and demolition of existing storage tanks that contained lead-based paint. The pipeline construction includes approximately 2,600 feet of 10-inch water main to connect the new tank to the water distribution system.

Florida State Hospital Water Distribution System and Wastewater Alternatives Evaluation, City of Chattahoochee, Florida

Project Engineer responsible for fire flow analysis. Scope of services included an evaluation of alternatives to replace an old, elevated potable water storage tank. The evaluation also compared land application with surface water discharge for effluent disposal from the existing wastewater treatment plant.

River Shores/Dyer Point Water Main, Martin County, Stuart, Florida

Qualified Technical Reviewer responsible for quality control. Scope of services included the design, permitting, bidding and construction of approximately 12,000 linear feet of 16-inch watermain and includes approximately 4,000 feet of 24-inch diameter HDPE underneath the St. Lucie River via directional drilling. The objective of the project was to inter-connect the service areas of the north and south side of the St. Lucie River, providing overall system pressure flexibility and flow assurances.

Utility Relocations, City of Largo, Florida

Project Manager. Responsible for design, bid, and construction phase services. Project included utility conflict resolutions for the City's 18-inch reclaimed water main and two existing 14-inch force mains associated with a new Pinellas County roadway project. Two of the City's main lift stations pump into these existing force mains; therefore, maintaining the operation of the lift station through bypass pumping or tanker trucks was critical. The team worked within the tight schedule provided by the City to successfully complete this project.

SR 207 Utility Relocations, City of St. Augustine, Florida

Utility Engineer of Record. Responsible for utility design relocations. The scope of work for this project included the development of roadway plans, technical management, roadway design, roadway quantities, drainage design, utility relocations, CADD services, and construction phase services in connection with State Road 207 reconstruction. The major rural highway, which crosses urban areas, was redesigned from two lanes to four with substantial environmental considerations, geometric improvements, and access management issues.

Sewer Systems

Kent Place/I-9 Sanitary Sewer Collection System Evaluation, City of Largo, Florida

Project Delivery Officer/Quality Control. Helped the City evaluate SSOs reported by residents of the Kent Place/I-9 subdivision and made recommendations for possible improvements to resolve SSOs. The I-9 sanitary collection system, is a 24-inch (in.) interceptor that travels from the start of the interceptor, at Belcher Road and Kent Place, to a tie-in point upstream of the City Wastewater Reclamation Facility (WWRF) along 150th Avenue N. Collected wet weather data by installing temporary flow monitors in the collections system (with rain gauges) and updated the model to more accurately simulate the identified results. This information was used to update the City's existing InfoWorks hydraulic model to simulate similar results. The model was then used to evaluate the potential for occurrences of SSOs for up to a 10 year/24-hour storm event. and to identify possible hydraulic conditions in the system that may contribute to grease accumulation and need for weekly line cleaning by City crews with the goal of identifying improvements to reduce the accumulated material and the frequency of line cleaning. This project also includes assisting the City to identify potential odor problems, determine if they are caused by the sanitary sewer system, and develop recommended solutions.

Kent Place/I-9 Sanitary Sewer Collection System Design, City of Largo, Florida

Technical Advisor/Quality Control.

The City has received recurring SSOs, frequent line cleaning activities, and recurring odor complaints from residents of the Kent Place Property Owners Association (POA) regarding the I-9 Interceptor within their subdivision. The City Staff, based on a previous study, requested to provide design and coordination services for the recommended improvements. The selected improvements options include evaluating adding chemical treatment (Thioguard) and/or ionization at LS 24 to address grease and sulfides (odor). Additionally, other improvements focus on eliminating the low points in the collection system, where the grease currently accumulates, by improving the connection from the El De Oro East neighborhood. Services will also conduct further investigation to determine whether the existing laterals from the homes serviced by the existing 8-in. pipe are high enough to permit the reconstruction. The benefits of this improvement include reducing/eliminating the frequency of O&M at this location by allowing the smaller sewer system to flow freely into the I-9 system.

Lake Tarpon Sewer System, City of Tarpon Springs, Florida

Client Services Manager/Project Manager. Responsible for study (environmental information document - EID) and preliminary design report. Project consisted of the replacement of failing septic tanks through the extension of approximately 6,000 feet of gravity sewers, services, and manholes. This project received partial funding assistance from the EPA.

Northwest Sanitary Sewer Extension, City of Largo, Florida

Principal in Charge/Client Services Manager. Responsible for quality control, client coordination, and resources planning. Scope of services included preliminary design, final design, bid phase assistance, and construction phase assistance for approximately 2,000 feet of gravity sewer, a new master lift station, upgrades to existing master lift station, and approximately 15,000 feet of 12-inch force main.

Florida Keys Aqueduct Authority Vacuum Sewer Collection System, Little Venice, City of Marathon
Project Engineer. Responsible for the preparation of construction plans, specifications, and permitting for a vacuum sewer system that serviced 600+ residents in the Florida Keys. Final design included a vacuum sewer pumping station, vacuum pipeline plan and profile, valve pits and service laterals.

Little Venice Vacuum Sewer, Marathon, Florida

Project Engineer. Responsible for pipeline design. Scope of services included design of approximately 24,000 lineal feet of vacuum sewer mains located along neighborhood streets and U.S. 1. The sewer system provides approximately 600 connections for local homes and businesses. The project also includes a vacuum pumping station, design and construction of an advanced wastewater treatment plant and effluent disposal wells.

Big Coppit Wastewater Collection System, Big Coppit Key (Florida Keys), Florida

Technical Advisor/Quality Control. Project consisted of gravity sewers, lift stations, and force mains to service a previously unsewered area. Services included planning, modeling, design, and permit.

Lakeview/East Pierce Street Sewer Extension, City of Lake Alfred, Florida

Project Engineer. Design, FDEP permitting, and bid phase services for a gravity sewer extension to the City's existing wastewater collection system. Scope of services included design and construction of sewer extensions for the city of Lake Alfred.

Meiners Oaks Trunk Sewer, City of Ojai, California

Qualified Technical Reviewer responsible for quality control. Scope of services includes construction of an inverted siphon beneath the Ventura River replacing two sections of vulnerable pipeline. The siphon consists of casing pipe, 36-inch-diameter with several smaller carrier pipes. The alignment will extend 3,200 feet from the eastern abutment of the highway 50 bridge. Also included pre-design, overall technical support, surveying, final design, development of plans and specifications and quality control.

Transbay Sewer Force Main, City of Coronado, California

Qualified Technical Reviewer responsible for quality control and quality assurance. Scope of services included an alternatives evaluation of a proposed sewer force main that would run under the San Diego Bay. The Project includes an underwater geotechnical investigation and preliminary design for a pipeline to replace the existing force main that was constructed in the early 1970s. The force main is 24 inches in diameter and runs for more than 4,000 feet under San Diego Bay from Coronado to Seaport Village.

Facility/Master Plans & Modeling

Automation and Energy Master Plan, Orange County, Florida

QC / MM. This project included developing and assisting in the implementation of a Utility-wide Automation Master Plan (AMP) including these major tasks: Process Area Automation and Condition Related Project Identification, Control System and Communications Network Conceptual Development, Strategy Development – Project Plan and CIP, Water and Wastewater Facility Energy and Chemical Audit, AMR Update, Staffing Evaluation and Succession Planning, Replacement Planning and Budgetary Capital Cost Estimate, Automation Master Plan, Route Optimization Software and Mobile Data Collection and SCADA Access Software/Hardware Evaluations. Significant collaboration with OCU staff was in part of the integrated approach. The recommendations were consolidated from the systems review, energy and chemical audits into an actionable plan that will set the stage for the next 5-10 years, and will include the resources – people, processes and technology need to accomplish OCU's goals

Continuous Potable Water Hydraulic Computer Model Updates, Dade City, Florida

CSM/Principal in Charge/Quality Control. Responsible for resource allocation and quality control for updating the City's hydraulic water model on an ongoing basis.

Hydraulic Modeling and Planning for Lockwood Ridge Model, Sarasota County, Florida

CSM/Project manager. This project included updating the Lockwood Ridge hydraulic model, to evaluate the subarea's capacity, identify potential system deficiencies and prepare planning level recommendations for future improvements to the area. Scope of services included data collection and review; verify accuracy of existing model, estimate sewer flows, and update hydraulic model in area of analysis; prepare capital improvement recommendations, develop opinion of probable construction costs, and summarize findings in a technical memorandum.

Hydraulic Modeling WA309, Sarasota County, FL

CSM/Project Manager. Work Assignment consisted of wastewater hydraulic modeling of an existing manifold force main system for current, 20-year, and build out flows based on one new pump station and one new large transmission force main (20-inch) being connected to this smaller (Lockwood ridge) sub area. Tasks included project management, workshops, data collection and review, verifying existing infrastructure within model, estimating current/20-year/build out wastewater flows, modeling proposed system, developing three alternatives, preparing cost estimates, and producing technical memorandum summarizing the results.

Big Lagoon State Park Hydraulic Analysis, Pensacola, Florida

Project Manager. Florida Department of Environmental Protection (FDEP) owns and operates a domestic wastewater collection and disposal system at their Big Lagoon State Park in Pensacola, Florida. FDEP has plans to expand the park to include additional on-site wastewater grinder pumping station and convert their existing master wastewater lift station/on-site disposal system to a new master wastewater lift station and off-site force main to connect to Emerald Coast Utility Authority's (ECUA) 12-inch force main on Big Lagoon/Perdido Key.

Served as ACE's wastewater hydraulic modeling environmental engineering consultant. Scope of services for the new master lift station and force main were as follows: Project Management/Quality Control, Preliminary Investigations, and Hydraulic Modeling.

SWWRF Capacity Analysis Report (CAR) and Operation & Maintenance Performance Report (OMPR), City of St. Petersburg, Florida

Technical Advisor/Quality Control. Completed the City's SWWRF CAR and OMPR for the renewal of their 20 mgd AADF wastewater reclamation facility.

Airport Subregional Wastewater Treatment Plant Site Master Planning Study, Hernando County, FL

Project Manager. Prepared a master site planning study for the County's Airport WWTP site in order to estimate the potential build-out capacity of the approximately 160-acre site, to include total treatment capacity and effluent disposal capacity through the use of percolation ponds, reclaimed water with either on-site or off-site storage, and a hybrid system of both.

Water Supply and Hydraulic Modeling Planning Report, Dade City, Florida

CSM/Project Manager. Responsible for project oversight. Under an on-call service agreement, assisted the City by conducting water planning studies and modeling to address anticipated growth that is expected to occur through annexations and new development. Growth projections show that the City could double in size in the next five years. Services included estimating future demand, evaluating existing water supply/treatment/storage/distribution facilities, preparing a hydraulic model of the existing and future model with recommended upgrades, CIP planning, and assistance with financial planning.

201 Water Facility Plan, Dade City, Florida

Principal in Charge/Quality Control. Project consisted of preparing a 201 Water Facility Plan in support of FDEP SRF Loan and Grant funding for \$10 million in water improvements.

201 Water Facility Plan, City of Oldsmar, Florida

CSM/Project Manager. Project consisted of preparing a 201 Water Facility Plan in support of FDEP SRF Loan and Grant funding for \$17 million in water supply, treatment, pumping, storage, and by-product disposal improvements.

201 Facilities Plan Reuse Revision, City of Wauchula, Florida

Project Engineer. Responsible for a reuse alternative analysis, reuse water balance model, and master planning of the selected plan including wastewater treatment plant improvements, piping network, storage facilities, and pumping stations. Scope of services included assisting the City in pursuing FDEP funding for construction of reuse project components. Also responsible for providing services in connection with wastewater treatment plant permit renewal, a capacity analysis report, and an O&M evaluation.

201 Facilities Plan Wastewater Update, City of Punta Gorda, Florida

Project Engineer. Responsible for a wastewater alternative analysis, and master planning of the selected plan including wastewater treatment plant improvements, disposal system, and pumping. Scope of services included assisting the City in pursuing FDEP funding for construction of Phase I project components.

Reclaimed Water Feasibility Study/Planning Document, City of Quincy, Florida

Project Manager. Responsible for study and planning. The study/planning document included evaluation of a new reclaimed water system for the City to serve Engelhard Corporation, Golf Club of Quincy, and Imperial Nurseries. The report recommended several phases based on funding and constructability issues.

Comprehensive Plan Revision, City of Venice, Florida

Project Engineer. Responsible for reviewing the existing plan, documenting actual operations, and projecting future needs. Scope of services included preparation of revisions to the water and sewer elements of the City of Venice's comprehensive plan.

Water System Master Plan, City of Lake Alfred, Florida

Project Engineer. Responsible for water distribution modeling for proposed expansions to the Lake Alfred Water Distribution System. Tasks included data gathering, water distribution modeling, master planning, and cost estimating. This project consisted of the development of a water system master plan for city.

Wastewater Treatment Master Plan, City of Tarpon Springs, Florida

Principal in Charge/Client Services Manager. Responsible for quality control and resource allocation. Scope of services included wastewater flow projections (including Lake Tarpon Sewer Area), WWTP rerate evaluation, WWTP master plan, mixing zone evaluation, and preparation of FDEP permit application.

US Highway 41 Corridor Master Plan, City of North Port, Florida

Project Manager. Responsible for preparation of master plan and managing multi-discipline team. Scope of services included development of a corridor master plan for 3.5 miles of a highway, including analysis of transportation, drainage, utility, landscape architecture, mass transit and environmental issues.

Parks and Recreation Master Plan, City of North Port, Florida

Project Manager. Responsible for preparing master plan. Scope of services included preparation of a master plan for the development of new park facilities, evaluation of the city's existing parks, and a start-up plan for a parks and recreation department.

Stormwater/Water Resources**Peer Review of the Sarasota County's SWIRP Manual, Sarasota County, Florida,**

CSM/Project Manager. Bryan lead of team of senior level technical experts to provide a peer review of the County's draft SWIRP Manual.

North Tower Park Low Impact Development (LID) BMPs, Sarasota County, Florida

CSM/Project Manager. The purpose of the project was to develop LID BMPs to treat stormwater runoff from approximately 98 acres of highly urbanized watershed to remove approximately **209 pounds/year of Total Nitrogen (TN)** currently discharging into Whitaker Bayou, a tributary to Sarasota Bay. This is multi-jurisdictional between Sarasota County, SWFWMD (funding), City of Sarasota (land), and Sarasota Bay Estuary Program (SBEP). This project is part of a larger program to restore Sarasota Bay.

Developed an alternatives analysis, modeling, design, drawings and technical specifications, cost estimates, permitting support services, bidding phase assistance, and limited construction phase services.

Watershed Model Updates and Peer Review of Development Submittals – 2017 to 2019 (ICPR Modeling / Drawings / Calculations), Sarasota County, Florida

Project Director/CSM/QC. As-needed ICPR modeling and peer review services for Sarasota County via GEC. Served as extension of County staff in performing these services: Updated "record" models and associated geodatabases with Approved Project Models, update As-built Models and associated geodatabases with constructed projects, general watershed ICPR model maintenance, and peer review of land development ICPR models and plan submittals. Assisted the County with converting their ICPR version 3 models to version 4.

47th Street Drainage Improvements, Sarasota County, Florida

Project Manager. This project consists of alternative analysis, modeling, design, permitting, bid phase, and engineering services during construction to address flooding problems in a residential area in a long, narrow drainage ditch along rear lot line. Project improvements will include channel widening and new stormwater conveyance system including 19 x 30 pipe, MES, other structures and utility relocations. This project is

adjacent to North Water Tower Park which is a LID improvements project. These two projects will be designed, permitted, modeled and constructed as one.

Box Turtle Circle Drainage Improvements, Sarasota County, Florida

Project Manager. This project consists of design, model, and assist in permitting stormwater improvements in the Box Turtle Circle/Honore Ave. intersection area. The project objective was to make modifications to the current drainage system to help alleviate observed flooding at the intersection of Honore Ave. and Box Turtle Circle by providing a positive outfall for offsite stormwater runoff. The County's existing ICPR model was used for the existing and proposed conditions modeling and Bryan helped the County obtain a SWFWMD permit exemption to construct the project.

Gottfried Creek Stormwater Improvements, Sarasota County, Florida

Project Manager. Developed a Preliminary Design Report (PDR) and Construction Plans for required repair and replacement or rehabilitation of the local stormwater drainage system in the Gottfried Creek Basin area. Scope included cleaning and inspecting stormwater structures and pipe, prepare a stormwater evaluation and categorization, perform modeling, develop opinion of probable construction costs, summarize findings in a preliminary design report, prepare existing conditions survey and design for the recommended improvements, and limited construction phase services.

Euclid Avenue Storm Sewer Replacement, City of Sarasota, Florida

Project Engineer. Design of a storm sewer replacement system including preliminary design with hydrologic and hydraulic modeling, and final design including construction plans and specifications. Scope of services included survey; design, permitting, and construction phase services for storm drain improvements involving approximately one-half mile (2,500 feet) of pipe up to 36 inches in diameter storm piping in a well-developed neighborhood.

Oldsmar ROWTP and Wellfield Environmental Monitoring, City of Oldsmar, Florida

Project Manager. As a subconsultant to GPI Southeast, provided technical oversight for the City of Oldsmar's Water Supply Project Environmental Monitoring. The City is developing a new wellfield, ROWTP, and byproduct disposal system. This work consists of providing baseline and annual environmental monitoring (wetlands, wildlife, water level, etc.) for the wellfield.

Channel I Drainage Study/Improvements, City of Largo, Florida

Principal in Charge/Client Services Manager. Responsible for client coordination and resources planning. Scope of services included a design report of a highly urbanized basin of approximately six square miles. The area has numerous identified stormwater related problems including flooding, erosion, sedimentation and insufficient conveyance capacity through bridge/culvert crossings in the main channel. The intent of the study was to improve existing infrastructure, reduce flooding, provide additional storage in Lake Killarney and make conveyance improvements. Modeling was performed using ICPR to simulate runoff characteristics for existing conditions and identify level of service deficiencies based on city guidelines. Alternatives included culvert replacement, channel stabilization, foundation grouting, and channel and lake dredging. Design drawings, specifications, and permit applications were prepared for the recommended alternative.

Dale Mabry Highway Stormwater Improvement, City of Tampa, Florida

Quality Control. Project consisted of two-mile long trunk storm sewer consisting of large box culverts and multiple 60-inch pipes with water, wastewater, and reclaimed water relocations. This is a high-profile project complicated by its location in the historic and very desirable Palma Ceia neighborhood that requires deep excavations under narrow streets, extensive utilities and major road crossings and an expressway prior to outfall.

Sarasota County Southwest Florida Water Management District Cooperative Funding Assistance – 2003, Sarasota County, Florida

Project Manager. Responsible for funding assistance for this project including preparation of the applications and supporting documentation for SWFWMD cooperative funding for four stormwater projects within Sarasota County for 2003.

Eastern Parkway Drainage Improvements, Sarasota County, Florida

Project Engineer. Responsible for the modeling and design of a new stormwater facility and piping network. Scope of services included preliminary design report, construction plan set, SWFWMD permitting, and assistance during bidding for drainage improvements to a residential neighborhood that was subject to flooding during minor storm events.

Celery Fields Regional Stormwater Facility, Sarasota County, Florida

Project Engineer. Responsible for stormwater pollutant modeling to assess the impacts on water quality associated with the hydrologic runoff from the Philippi Creek Basin and Celery Fields Project Area. The goal of the modeling was to quantify the reduction of pollutant loadings to Sarasota Bay from post-construction conditions at the facility. This project involved the planning, preliminary and final design for a 500-acre, multi-purpose stormwater treatment/flood control facility. This facility stores up to 1,000 acre-feet of stormwater during infrequent storm events. In addition to providing attenuation during flood conditions, the site has been designed to provide water quality treatment of base condition flows, storage for possible reuse of stormwater, wetland community habitat throughout the system, a dedicated mitigation bank, and recreational facilities. The project also included widening and realignment of three roads. This project was jointly funded by SWFWMD and Sarasota County.

Hudson Bayou Regional Stormwater Facility, City of Sarasota, Florida

Technical Leader. Planning and design of a sedimentation and wetland cell within an existing drainage canal. Scope of services included improvements to an existing natural channel which included the survey, modeling using ICPR, design and permitting services through SWFWMD. The project was coordinated with the school board and involved the replacement of box culverts.

Little 5 Points Stormwater Improvements, City of Sarasota, Florida

Project Engineer. Scope of services included management of civil design of stormwater retrofit, identification of existing underground utilities, construction assistance, civil design of retrofit, and utility relocation design to prevent flooding in an historical, urbanized section of Sarasota. It also included hydraulic modeling, plans and specifications preparation, and construction management assistance.

Roadway and Drainage Improvements

Bispham Road Drainage Improvements, Sarasota County, Florida

Project Engineer. Responsible for modeling and preparing plans and specifications. Scope of services included evaluating alternatives to Bispham Road's existing drainage system, including modifications to roadside ditches, online attenuation and treatment, discharging to adjacent drainage systems, and modifications to the existing roadway.

Osprey Street Roadway and Drainage, Sarasota County, Florida

Project Engineer. Performed design of two-lane asphalt road with curb and gutter, drainage improvements, and permitting with Army COE and SWFWMD. This project included permitting and design of roadway and drainage improvements to Osprey Street and slope stabilization to an outfall ditch into Roberts Bay.

Nassau/Trinidad Street Drainage Improvements, Sarasota County, Florida

Project Engineer. Design of a piping system and outfall network. Scope of services included modeling, design, permitting, and construction phase services for stormwater improvements that will help alleviate flooding in the cul-de-sac areas of a densely populated residential neighborhood.

US Hwy 41 and Frontage Road Traffic Study, City of North Port, Florida

Project Manager. Responsible for preparing traffic study. This project consisted of the traffic study for the evaluation of diversion of U.S. Highway 41 traffic to adjacent frontage roads.

Permitting

Spring Hill Wastewater Treatment Plant Storm Water Pollution Prevention Plan, Hernando County Florida

Client Services Manager. Responsible for client interface. Professional services to assist HCUD with the preparation of a Florida Department of Environmental Pollutant Discharge Elimination System SWPPP and NOI permit application for the Spring Hill WWTP.

Water Use Permit Renewals, Cities of Tarpon Springs, Lake Alfred, Wauchula, and Venice, Florida

Project Manager. Assisted these cities with the successful renewal of their SWFWMD water use permits (WUP).

New Water Use Permit for Brackish Groundwater Withdrawals, City of Oldsmar, Florida

Project Manager. Prepared SWFWMD water use permit application, modeling, and other supporting technical documentation for RO brackish groundwater supply project.

Water Reclamation Facility Florida Department of Environmental Protection Permit Renewal, City of Largo, Florida

Principal in Charge/Client Services Manager. Responsible for quality control for preparation of FDEP WRF Permit application for renewal of City's permit.

Florida State Hospital Wastewater Treatment Plant Permitting Support, City of Chattahoochee, FL

Project Manager responsible for permitting. This project consisted of general permitting support for assisting FSH with renewing its WWTP permit. The team prepared the permit application, a Level I WWBEL study, and responded to requests for additional information from FDEP. The WWTP currently discharges to an unnamed tributary north of Mosquito Creek.

Water Use Permits, City of Lake Alfred, Florida

Project Engineer responsible for permitting. This project consisted of providing services for renewal of the City's Water Use Permit for potable supply wells and for agricultural wells used as an alternative water source for the City's reuse irrigation system.

Wastewater Treatment Plant Permit Renewal, City of Wauchula, Florida

Project Engineer. Responsible for data gathering, flow projections, a capacity analysis report, an operation and performance evaluation report, and preparing permit application. Scope of services included assisting the City in the preparation of a renewal application for their FDEP WWTP permit.

Miscellaneous Environmental Resource Permits, Various Municipalities, Florida

Assisted various municipalities in support of utility and public works projects that included stormwater improvements and wetland impacts for the preparation of FDEP/WMD Environmental Resource Permits (ERPs).

Miscellaneous Florida Department of Environmental Protection Wastewater Collection System Permits, Various Municipalities, Florida

Assisted various municipalities in support of wastewater collection, pumping, and transmission projects for FDEP permitting.

Miscellaneous Florida Department of Environmental Protection/Health Department Water System Permits, Various Municipalities, Florida

Assisted various municipalities in support of water distribution, storage, pumping, and treatment projects for FDEP/Health Department Permitting.

Annual Air Reporting for South Cross Bayou Water Reclamation Facility, Pinellas County, Florida

Project Manager. As a work assignment made under our Utilities Engineering Consulting Services contract, prepared and submitted its electronic annual operating report (EAOR) to the FDEP by the submission deadline of April 1, 2013. Coordinated with the SCBWRF, the county's Fleet Management Department (generator diesel consumption) and Synagro (the county's sludge pelletizer contract operator) to obtain the monthly operating hours, production rate and other pertinent information necessary to calculate the emissions deemed applicable to SCBWRF.

Miscellaneous

Venice Bypass Park, Sarasota County, Florida

Project Engineer. Responsible for the preparation of plans and specifications. Scope of services included design of a 40-acre park site. Engineers designed a 1,500-square-foot maintenance building and a two-story restroom and concessions building. Other aspects of the project included landscape architecture with irrigation systems, tennis courts, softball fields, parking for 260 vehicles, picnic areas, stormwater facilities, and other utilities.

Replacement Power Line, Sarasota County, Florida

Project Engineer. Responsible for preparing Army Corps of Engineers dredge and fill permits for two subaqueous power lines. The project involved plans, specifications, and permitting to replace two subaqueous power lines owned by Sarasota County crossing the Intracoastal Waterway at Albee Road and Venice Avenue. These power lines provide power to two bascule bridges.

Field Operations Center, Sarasota County, Florida

Technical Leader. Responsible for on and off-site related utilities. Scope of services included off-site utilities including two subaqueous directional bores crossing Main "C" Canal to service the 60-acre County Field Operations Center Development, new SWFWMD Sarasota Office, and new County Library. The team designed all the off-site utilities including approximately 3,200 linear feet of 4-inch force main, 1,800 linear feet of 12-inch water main, 1,600 feet of 8-inch gravity main and a 220 gpm lift station. The team also designed improvements for 3,000 feet of Fruitville Road and 3,000 feet of Coburn Road.

17th Street Park, City of Sarasota, Florida

Project Engineer. Responsible for design and permitting. Scope of services included design of an aboveground lift station, 3,400 linear feet of force main, and a new water main for a new concession/restroom facility at a softball complex.

Narramore Sports Park, City of North Port, Florida

Project Manager. Responsible for planning, design, survey, permitting, bid and construction phase. Scope of services included planning, design, survey, permitting, bid, and construction phase for the development of a 6.6-acre athletic park, including two lighted softball fields, stormwater management system, parking lot, restroom facility, and created wetland system.

North Port Plan Review Services, City of North Port, Florida

Project Engineer. Responsible for construction plan reviews. Scope of services included plans review for proposed subdivisions, major and minor site developments, and other miscellaneous projects in the City. The review was for compliance with City standards and permitting requirements relating to utilities, street improvements, and stormwater management.

North Port High School, City of North Port, Florida

Project Engineer. Responsible for utility design. Project included infrastructure, drainage design, site design, utilities design, permitting, and limited bid and construction-phase services for the site of a new 100+ acre development for North Port High School (2,400 faculty and students). The project also included integration of stormwater treatment and wetland mitigation systems to maximize developable land. Offsite utilities consisted of approximately 9,200 linear feet of 12-inch water main with a 450-foot, 14-inch directional bore across environmentally sensitive Myakkahatchee Creek, 220 gpm master lift station, and 6-inch force main.

General Consulting Services, City of Lake Alfred, Florida

Project Engineer. Responsible for preparation of permits and cost estimates for small projects. Scope of services included a variety of general consulting services such as plans review for streets, drainage, water, and sewer facilities.

Publications

1. Veith, Bryan, "Integrated "1Water" Approach to Restore Beautiful Lake Eva", ASCE Suncoast Branch, January 2019
2. Veith, Bryan, "Integrated 1Water Approach to Evaluate Lake, Groundwater & Ecosystem Restoration", ASCE Florida Section Conference, July 2018
3. Veith, Bryan, "Alternative Project Delivery: How to and Lessons Learned", ASCE Florida Section Conference, July 2015
4. Veith, Bryan, "Lower Hillsborough River and Sulphur Springs Run While Minimizing Impacts to Tampa's Potable Water Supply", Published in Florida Water Resources Journal, February 2014
5. Veith, Bryan, "How are Florida agencies addressing the need for Alternative Water Supply?" WaterReuse Symposium, Tampa, Florida, 2007
6. Veith, Bryan, Becotte, K., "A Tale of Two Projects - The Old Oakhurst Road/Seminole Area - Phase IA and IB Reclaimed Water Distribution Projects," 2004
7. Veith, Bryan, Mulvihill, J., Bishop, J., "Optimizing Water Supply, RO Treatment, and Concentrate Disposal. Oldsmar Independent Water Supply Development Project Phase II," 2004
8. Veith, Bryan, "Protecting the Environment - Directional Bore Crosses Hudson Bayou," ASCE Trenchless Pipeline Projects Conference Proceedings.
9. Veith, Bryan, "Optimizing Urban/Agricultural Reuse, Storage, and Surface Discharge," Florida Water Resources Conference Proceedings.
10. Veith, Bryan, "Putting the Pieces Together - Expansion of the Venice Reuse System," Florida Water Resources Conference Proceedings.

Memberships

1. American Society of Civil Engineers (ASCE)
2. American Water Works Association (AWWA)
3. Design Build Institute of America (DBIA)