



Proposal to Provide Engineering Support
Services During Construction

Huston Creek Wastewater Treatment Plant

Prepared for





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November 1, 2021

Rick Dever, Operations Manager
Crestline Sanitation District
24516 Lake Drive
Crestline, CA 92325

**RE: Proposal for Engineering Support Services during Construction for the
Huston Creek Wastewater Treatment Plant Primary Clarifier and
Dewatering Building Improvements Project**

Dear Mr. Dever:

Enclosed is Albert A. Webb Associates' (WEBB) proposal to provide Engineering Support Services during Construction for the Huston Creek Wastewater Treatment Plant Primary Clarifier and Dewatering Building Improvements Project for the Crestline Sanitation District (District). The District needs a trusted and experienced team to represent the District on this project.

The WEBB Team fully understands the importance of this project contributing to the District's overall goals. WEBB's proposal delves into the success factors of the project by providing the District a clear path to meeting project objectives, illustrates our approach, and lays out a work plan.

WEBB is committed to providing the highest quality assistance possible to the District. We look forward to the opportunity to discuss our qualifications. Should you have any questions, please contact me directly at 951.830.5746.

Sincerely,

A handwritten signature in blue ink, appearing to read "Reed Chilton", is written over a light blue circular stamp.

Reed Chilton, PE, QSD - Director, Construction Management & Inspection
Albert A. Webb Associates
951.830.5746
reed.chilton@webbassociates.com



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Section 1. Understanding, Description, and Approach

Project Understanding

The District is seeking consultant Engineering Support Services During Construction for the Huston Creek Wastewater Treatment Plant (WWTP) Primary Clarifier and Dewatering Building Improvements Project. The services under this contract will include meeting attendance, submittal review and approval, RFI review and response, review change order requests, prepare design revisions, and review final as-built drawings. We will also be involved to review startup and commissioning plans, instrumentation and controls plans, testing procedures, O&M manuals, and Maintenance of Plant Operations Plans for shutdowns and by-passes. The WEBB Team will act as an extension to District Staff and look out for the District's best interests.

It is our understanding that Dudek, the Engineer of Record, may not be involved for Engineering Support Services during construction for the day-to-day tasks. Our team will review the contractor's documents in accordance with the approved plans and specifications. Contractor questions and minor changes can be addressed with redlines to the drawings.

We reserve the right to defer any questions or changes to the Engineer of Record. Examples may include items such as impact the overall operation of the plant, structural issues, or detailed design questions. WEBB will not assume the position of the Engineer of Record. We anticipate handling the majority of all reviews and will notify the District when the Engineer of Record is needed. WEBB will make minor modifications and notes on the PDF copies of the plans only and will not modify Dudek's CAD files.

WEBB will take the lead for the majority of the engineering support services and team with SKM for electrical items and Kleinfelder for structural items. WEBB's services will start after the contract is awarded to the contractor. Dudek and the District will cover the bid phase, bid addenda, and award of the project.

Project Description

The District desires to upgrade the Huston Creek WWTP located at 24516 Lake Drive in Crestline. The project consists of the following:

- New dewatering building with new sludge holding tank, new thickened sludge feed pumps, screw presses, screw conveyors, chemical feed systems, odor control system, and appurtenant mechanical, electrical, and controls improvements
- Replacement of thickened sludge transfer pumps in existing dewatering building
- New primary clarifier structure and appurtenant mechanical, electrical, and controls improvements
- New emergency generator
- Replacement of trickling filter recirculation pumps and appurtenant mechanical, electrical, and controls improvements
- Associated site improvements, including grading, retaining walls, drainage, paving, and fencing

The District is obtaining SRF Funding for the project. The engineer's opinion of probable costs is \$9,000,000 and the contract time is 500 calendar days. Our proposal covers the scope of this project for the project duration, and 30 additional days for project closeout. In the event the contractor exceeds the schedule for any reason, we will review the status of the work to determine the need for an adjustment in the budget amount.

Project Approach

Our goal is to make the project run as smoothly as possible for the District through a well thought out plan managed by our Engineering Support Team. Our approach commences with assembling a highly qualified team with the experience, skills, and expertise needed to oversee the District's Huston Creek WWTP Primary Clarifier and Dewatering Building Improvements Project through construction. WEBB is committed to maintaining consistency in personnel assigned to the project. WEBB will team with Kleinfelder and SKM to provide structural and electrical design support, who will also be assisting with field inspections under the Construction Management and Inspection contract.

Reed Chilton, PE, QSD, will be the overall project lead for the District for Construction Management, Inspection, and Engineering Support services. All project documentation will run through Reed and will be dispersed to the appropriate team member for engineering review. The united team has worked on multiple wastewater treatment plant projects and will have common goals of detailed review, responsiveness, and technical excellence. Resumes of team members are attached.

If WEBB is selected to perform Construction Management, Inspection, and Engineering Support Services, the District will benefit from a local presence, consistent staffing, and a full team effort to watch out for the District. Having a fresh set of eyes from the design engineer will help assure a clear understanding and that project expectations are met for the District.

WEBB uses Procore Construction Management Software (Procore) to help manage project documents, assignments, and plans. Procore allows all members of the project team, including the District and the contractor, to have access to all the latest construction documents and communication. Procore automatically tracks and logs document approvals and project issues which allows WEBB to focus on planning and problem-solving rather than filing paperwork. Knowledge, experience, and responsiveness are key elements of a strong team needed to exceed the District's goals and expectations. WEBB has a team of professionals that will deliver these key elements to your project.

Section 2. Key Personnel Resumes



Brian Knoll, PE

Chief Operations Officer

Brian Knoll, PE, is WEBB's Chief Operations Officer. Brian has been responsible for the design and direction of capital improvement projects throughout southern California. Brian's expertise lies in planning, design, and construction oversight of water and wastewater facilities. Brian has been involved in numerous large multi-discipline water and wastewater projects including the City of Riverside's 26 MGD expansion of their water quality control plant, the City of Beaumont's advanced water treatment facility and brineline, the 14 MGD expansion of the Western Riverside Wastewater Treatment Plant, and the 6 MGD expansion of the Calipatria Water Treatment Plant. He has worked extensively with the City of Imperial, Western Municipal Water District, Golden State Water Company, the City of Corona, Crestline Lake Arrowhead Water Agency, Eastern Municipal Water District, the City of Riverside, and WRCRWA. Brian has also worked closely with other engineering partners such as CDM Smith, Black & Veatch, and CH2M Hill. His macro style in water resources leadership coupled with a practical approach, enhances Brian's

REGISTRATIONS

Registered Civil Engineer C 65690 (CA)
Registered Civil Engineer C 42407 (AZ)

EDUCATION

MS, Civil Engineering
Brigham Young University
BS, Civil Engineering
Brigham Young University

AFFILIATIONS

American Water Works Association (AWWA)
American Society of Civil Engineers (ASCE)
Water Environment Federation (WEF)
Inland County Water Association (ICWA)

Wastewater Treatment Plant Expansion and Salt Mitigation Project, City of Beaumont - Brian serves as

Principal-in-Charge for the City's project which consists of two major components:

Waste Water Treatment Plant (WWTP) Expansion and Upgrade - Final Design

- The existing WWTP needs to be expanded and upgraded. The WWTP is currently treating over 75% of its permitted capacity and therefore must begin the expansion process. Per the new Regional Water Quality Control Board's updated Basin Plan, the City must begin reducing TDS being discharged from the plant. The City completed a feasibility study to identify the best way to expand and upgrade the plant. The Plant will be converted to an MBR process followed by RO for TDS reduction. The Plant will also add screening, EQ, sludge dewatering, and drying.

Brine Line - Final Design

- Brine disposal is an integral part of this project and was a key driver in the selection of this project. Without a safe, reliable, and cost effective way to dispose of the brine, this project cannot move forward and compliance with the Basin Plan would be impossible. The brine pipeline connecting to the Inland Empire Brine Line (IEBL) was determined to be the best option during the feasibility study, due to cost and certainty of operation. The brine line has been sized at 12-inches and will be approximately 23-miles long. The pipeline begins at the City's WWTP and ends near the City of San Bernardino's WWTP on Waterman Avenue.

14 MGD Expansion Project, Western Riverside County Regional Wastewater Authority (WRCRWA), City of Eastvale

- Brian is the Principal Engineer and Project Manager for the 14 MGD expansion of the WRCRWA Plant. The existing plant capacity is 8.0 MGD following

Brian Knoll, PE

Senior Vice President

the Aeration Upgrade Project. Due to growth in the service area, the plant is nearing its new capacity. The improvements to the plant include new headworks screening, primary clarifiers, post primary flow equalization, secondary clarifier, tertiary filters, chlorine contact basin, sludge thickeners, new centrifuges, conversion of existing aerobic digesters to anaerobic digesters, full plant odor control, and enclosed solar dryers. The project also includes chemical storage and pumping (Ferric chloride, alum, polymer, and sodium hypochlorite). The total construction cost is \$61 million.

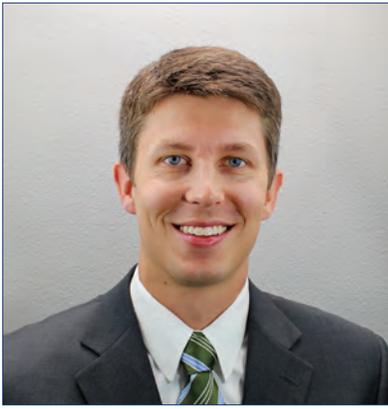
Replacement of Two Lift Station Pumps - Gateway of the Americas, Sewer Lift Station No. 2, Imperial County Department of Public Works (ICDPW) - Brian served as the Principal-in-Charge for the replacement of two 5-hp submersible sewage pumping units for ICDPW's Lift Station No. 2. Project specifications included the replacements of equipment and pump appurtenances systems, pump guide rail system (to support three pumps), level control system, and all hardware inside the wet well, replacement of motor control center, and electrical wiring.

Firehouse Sewer Lift Station, Olivenhain Municipal Water District - Brian served as project manager for the District's project. The existing Firehouse Lift Station was constructed as a below grade packaged lift station within a steel enclosure. The enclosure was failing and also represented a safety hazard for operators due to the small exit. The existing control building was also in disrepair with a leaking roof. This project included the construction of a new dry pit, with improved access, new 750 GPM pumping units, new control building, bridge crane for pump removal, and miscellaneous site improvements. Our work also included preparation of a sewer bypass plan to allow uninterrupted service during construction.

Claypool Lift Station and Force Main, City of Imperial - Brian served as a Principal-in-Charge for the replacement of the Claypool Lift Station and new associated force main. The City of Imperial was experiencing reduced pumping capabilities in a damaged portion of force main that required the replacement of an existing pump station and the installation of a new force main. The project included the removal of the existing pump station, installation of two new pumps with controls, and the installation of 3,100 LF of 8-inch diameter PVC force main.

Sewer Lift Station #12, Lake Arrowhead Community Services District - Brian served as a Principal-in-Charge for the Sewer Lift Station #12 project for the District. WEBB provide engineering design services associated with the design of additional emergency storage at Sewer Lift Station #12. peak flow there is approximately fifteen minutes of emergency storage in the existing wet well. WEBB designed a new below grade emergency storage vault immediately adjacent to the existing wetwell to expand that capacity to approximately one hour. The proposed vault will is located within the existing access road for Lift Station #12. The vault has an overflow weir to accept sewage flows when the sewage level in the existing wet well exceeds the high water level, a level sensor and alarm intertied to the existing SCADA system, a bottom outlet with slide gate to drain the vault and a sloped bottom to facilitate cleaning.

Beaumont Feasibility Study and Preliminary Design, City of Beaumont - Brian served as Project Manager for the WEBB Team that prepared the project feasibility study, which analyzed two different options. The first was the Beaumont option which expands and upgrades treatment at the City's WWTP. For this option three different WWTP configurations were evaluated. In addition, options were explored to dispose of waste brine from the advanced treatment system. The second option was to consolidate treatment with YVWD and deliver all wastewater flow there. For each option detailed cost estimates were developed taking into account capital cost and O&M costs. In the end the City Council selected the Beaumont option. The preliminary design includes the preparation of 20%-30% plans for both the WWTP expansion as well as a 23-mile brine disposal pipeline connecting to the IEBL in San Bernardino.



Reed Chilton, PE, QSD

Director - Construction Management and Inspection

Reed Chilton, PE, QSD, is Director of WEBB's Construction Management and Inspection Department. Reed has worked on a variety of private and public projects and has established a strong foundation in the engineering and construction management profession. His project experience includes sewer lines, drainage facilities, water lines, recycled water lines, wastewater treatment facilities, dry utilities, street improvements, street lighting, traffic signals, and landscaping. Specifically, his involvement with these projects includes preparation of specifications and bid documents, contract management and administration, permitting, submittal and RFI review and coordination, leading meetings, field investigations, project documentation, review and approval of change orders and pay estimates, project close-out, and managing day-to-day needs for owners and contractors. Reed manages and schedules WEBB's Inspection Team.

REGISTRATIONS

Registered Civil Engineer C 83827 (CA)

EDUCATION

BS, Civil Engineering
Brigham Young University
MS, Civil Engineering
Brigham Young University

CERTIFICATIONS/TRAINING

Qualified SWPPP Developer (QSD) C83827

Construction Manager for the \$25M Project on the City of Imperial Wastewater Treatment Plant. WEBB performed Construction Management, Inspection, and Engineering Support Services for Imperial's \$25M WWTP Upgrade project. This project includes construction of a new MBR treatment system including MBR Basins, waste-activated sludge pumps, blowers, air compressors, permeate storage tank, and non-potable water pumps. A pre-engineered metal building was installed for the MBRs system which included a monorail bridge crane, office spaces, and lab room. A dewatering system with screw conveyors was also installed inside a pre-engineered metal building. Electrical improvements include a new transformer, main breaker, automatic transfer switch, and Emergency Power Generator. Site improvements include yard piping, paving, and rock installation. The project also includes modifications to existing facilities, shut-downs, and tie-ins to the active wastewater treatment plan.

Western Riverside County Regional Wastewater Authority's \$55 Million (14 MGD) Plant Expansion Project in Eastvale. This project includes improvements to the headworks, fine screens, grit chamber, primary clarifiers, bio-reactors, secondary clarifiers, equalization tank, disc filters, chlorine contact basin, digesters, thickeners, centrifuges, and solar drying beds. For the Design Team, Reed was responsible for document management oversight, routing and processing of the hundreds of submittals and RFIs. He was also involved in the change order management, pay estimate reviews, and onsite inspections of the SWPPP.

Project Manager for the Benedict Reservoir 8, Jurupa Community Services District. WEBB provided construction management, inspection services, and engineering support for the Benedict Reservoir B project for Jurupa Community Services District. The existing project site includes two tanks. This project includes demolishing one existing tank and installing a new 1.1 MG welded steel reservoir (Benedict B) adjacent to the existing 1.0 MG reservoir (Benedict A).

Reed Chilton, PE, QSD

Director, Construction Management and Inspection

Exterior coating of both tanks will be performed. Benedict Reservoir B will have a nominal diameter of 91-feet and shell height of 26-feet, including a reinforced concrete ring-wall foundation. This project includes a temporary by-pass to provide service to the 1200 pressure zone during construction, grading on the hillside in rock, site improvements, and re-vegetation.

Project Manager for the \$3M College Tank Replacement, Golden State Water Company.

For the College Site in Placentia, an existing concrete tank was demolished and replaced with two 0.5 MG welded steel tanks along with a new site storm drain and site improvements. The existing concrete tank remained in service during construction of the new steel tanks and was then removed. A 1,000-LF, 12-inch diameter PVC overflow drain line was constructed in the College Plant access road from the new reservoir to an existing storm drain catch basin. This project also included landscaping to screen the tanks from nearby residents.

This project included coordination with MWD for improvements near their existing facilities, CEQA compliance with environmental mitigation measures, asbestos survey of existing facilities, coordination with nearby residents and working with GSWC operations staff.

Construction Manager for the \$5.2 million Sky Country Trunk Sewer Project for Jurupa Community Services District.

The project included over 8,000 LF of 8-inch to 18-inch PVC and (PS 115 and SDR 35) and no dig VCP pipe with a construction cost of \$5.5 million as well as Jack and Bore installation of PVC and VCP sewer ranging in size from 8-inch to 18-inch. Performed air pressure testing and vacuum testing of sewer pipe and manholes. Observation of trench excavation, backfill, fill material moisture conditioning, densification, and asphalt paving. Coordinated road closures and traffic detours with city, local residents, and local businesses. Inspected installation of work area traffic control for compliance with approved plans.

Project Manager for the \$3.6M Golden Tank Replacement, Golden State Water Company.

Golden Tank Project in Yorba Linda included demolition of the existing tank, installation of a new 1.5 MG welded steel tank, and installation of a new pump station. The existing concrete tank was removed prior to construction of the new steel tank. The booster station includes two 30 Hp vertical turbine pumps designed to pump 500 gpm and one 60 Hp vertical turbine pump designed to pump 1000 gpm with associated piping, valves, and appurtenances. The project also includes revisions to the on-site storm drain system, tie-ins to the existing water system, coordination with GSWC operations, removal of existing asbestos pipe, and coordination with the nearby park facilities.

Construction Manager for the \$5.7 million Rider Distribution Center 3.

Offsite Improvements project for IDI Logistics in the City of Perris. The project was led by the developer of multiple nearby distribution warehouses. The improvements included in the contract were reimbursable by RBBD funds through the City of Perris. The purpose of the project was to widen Rider Street to ultimate width, construct Redlands Avenue including storm drain improvements, and curb and gutter, sidewalk, parkway landscaping, medians, median landscaping, street lighting, and traffic signals. Construction coordination included the on-site builder, off-site underground utilities including EMWD recycled and domestic water, dry utility installation, and SCE transmission pole relocation. Scheduling work between all trades and contractors was critical to meeting aggressive deadlines.

Construction Manager for the \$8.5 million Madison Street Improvement Project for the City of Indio.

This project consisted of widening Madison Street from Avenue 50 to Avenue 52 from a two-lane road to a four-lane road. This project included grading, over-excavation, asphalt paving, concrete construction, drainage installations, drywells, traffic signal installations, landscaping and irrigation, water relocations and upgrades, traffic control, surveying, conduit installation,

Reed Chilton, PE, QSD

Director, Construction Management and Inspection

pot-holing, and related work to widen to a four-lane road. Transmission power poles were required to be relocated during the project along with underground improvements for fiberoptic facilities. This project was located along the frontage of the Coachella Festival and Stagecoach concerts. WEBB coordinated with the property owners, City of Indio, City of La Quinta, and concert schedules to provide safe access throughout the project.

Construction Manager for the \$3.1 million John J. Benoit Detention Center. Off-site Storm Drain, Street, and Traffic Signal Improvement project for the County of Riverside Economic Development Agency. Storm drain improvements consisted of excavation/grading of retention basin of approximately 18,040 CY, installation of 3,660 LF of RCP ranging in sizes from 18-inch to 48-inch, and construction of 161 LF of curb inlet catch basins. Installation of RCP required multiple water relocations and modifications including vertical offsets ranging in sizes from 1-inch to 2-inch services and 6-inch to 12-inch mainline along with sewer lateral modifications. Coordination with the following agencies was required: Indio Water Authority, Valley Sanitary District, City of Indio Public Works, and Imperial Irrigation District. Reed also coordinated soils testing with local business owners.

Construction Manager of a \$1.3 million headworks upgrade for the City of Imperial. Improvements included headworks modifications, installation of fine screens, micro screens, splitter box, piping, shade structure, and electrical modifications.



Justin R. Logan, PE

Vice President and Principal
AQUA Engineering

Registered Civil Engineer C 73749 (CA)

EDUCATION

MS, Civil Engineering, Brigham Young University
BS, Civil Engineering, Brigham Young University

Justin Logan is a Vice President and Principal at AQUA Engineering. Justin leads AQUA's efforts in water and wastewater treatment. He focuses on treatment facility planning, design and construction projects, with emphasis on providing clients effective and affordable solutions to their individual challenges. Justin has worked on more than 50 treatment facilities, developing his extensive experience with a variety of processes and equipment. His responsibilities include project master planning, facility evaluations, process development, design layout, plant configuration, design efficiency and construction drawing development of water and wastewater treatment facilities.

2017 - City of Imperial Wastewater Treatment Plant Upgrade – Imperial - \$15 million - Conversion of existing plant from extended aeration to a 2.4 mgd membrane bioreactor (MBR) plant capable of producing recycled water. This project includes upgrading the existing headworks, constructing new process treatment tanks with nitrogen removal, a new building housing the membrane equipment, incorporation of the existing UV disinfection, and the additional of solids dewatering. Much of the existing facility is being reused and care is being taken to keep the plant fully operational while making these improvements.

2016 - City of Beaumont Wastewater Treatment Plant Expansion and Salt Mitigation Project – Beaumont - \$50 million - Existing treatment plant modifications and expansion from extended aeration to a 6.0 mgd membrane bioreactor (MBR) plant followed by reverse osmosis (RO) to meet salt reduction requirements. The project includes upgrading the headworks with additional screening and grit removal, the addition of equalization, fine screening, new process basins including nutrient removal (nitrogen and phosphorus), a building to house the MBR and RO equipment, solids dewatering, solids drying, and recycled water storage. Project phasing has been considered and implemented to allow this project to be constructed while maintaining existing treatment.

2016 - City of Corona Dewatering Upgrade – Corona - \$1 million - Modification of existing dewatering belt press facility to include a single centrifuge capable of dewatering for the plant and also capable of adding another centrifuge in the future. The existing canopy covering this process is being modified and replaced to allow for access and maintenance of the equipment.

2015 - Puako Preliminary Engineering Report – Puako, HI - \$9 million - Preliminary feasibility of treatment & sewer collection options for the Community of Puako with the preparation of a Preliminary Engineering Report. Various solutions were evaluated to determine the best solution for this community to not only collect its sewer but to treat it to recycled water standards. The project will protect the adjacent reefs and ocean environment from impacts of untreated sewage and nutrients migrating to the ocean.

Justin R. Logan, PE

Vice President and Principal

AQUA Engineering

2015 - Las Gallinas Valley Sanitary District Secondary Treatment Upgrade, San Rafael - \$45 million - Planning and design work for the upgrade of the secondary treatment processes from trickling filter to activated sludge to improve nutrient removal and effluent quality. Additionally, the project includes UV disinfection, mechanical thickening, and expansion of the recycled water facility. A complex phasing plan was required to allow for project construction while continuing to treat existing flows.

2015 - City of Imperial Headworks Upgrade – Imperial - \$1.5 million - The existing facility headworks experienced extreme corrosion and was not functional. New fine screens and a micro-screen were selected for installation. The project included an awning and discharge facilities for all the equipment along with a foul air removal system to reduce corrosion potential of the equipment.

2014 - City of Rexburg Water Reclamation Facility Solids Handling Project, Rexburg, ID - \$6 million - The solids handling processes at the facility were not sufficient and incurred extremely high power demands and costs. The City's solids disposal site could no longer be used. The project included adding a solids pasteurization system and the existing aerobic digesters were converted to anaerobic digesters. These improvements greatly reduce the power requirements at the facility while producing a Class A biosolids for disposal or reuse.

2013 - Western Riverside County Regional Water Authority 14 MGD Plant Expansion - Eastvale - \$72 million A plant evaluation and plan were developed at the beginning of this process to guide the improvements for this facility as it expanded from 8 mgd to 14 mgd. Along with increased capacity, the Authority wanted to improve processes and efficiency. The project was designed and constructed to improve the headworks, add primary clarification, expand secondary treatment, add tertiary disk filters, add chlorination disinfection, convert to mechanical WAS thickening, convert aerobic digester to anaerobic digesters, and add solar drying. The expanded facility is expected to use less power at 14 mgd than it was using at 8 mgd.

2013 - Western Riverside County Regional Water Authority Aeration Upgrade- Eastvale - \$5 million - Existing mechanical aeration equipment was not able to treat the design flow of 8.0 mgd. Blowers and fine bubble diffusers were designed and installed without removing the ditch from operation. These improvements restored the treatment capacity of this process.

2013 - Rexburg City Wastewater Treatment Plant - Rexburg, ID - \$9 million - Expansion and Upgrade utilizing a fixed film process followed by existing oxidation ditches to bring the plant to capacity of 4.8 mgd, adding ultraviolet disinfection, and belt press facility.

2013 - Fort Shafter Flats Pump Station Conversion - Honolulu, HI - \$25 million - Planning and complete design for the conversion of the existing pump station to a 2 mgd membrane facility to produce recycled water.

2012 - Tooele City Water Reclamation Facility - Phase 1B Upgrade - Tooele, UT - \$4 million - Design and construction which added UV disinfection, digestion, and solar drying to the facility. Expansion and Upgrade utilizing an MBR process to bring the plant to a capacity of 2 mgd.



Boris Petkovic, P.E. | Principal

Phone: 801.683.3734 | Email: boris.petkovic@aquaeng.com

Mr. Petkovic has nearly a decade of experience in water resources and wastewater engineering with a focus on wastewater treatment facility design. Boris has established a reputation for his extensive expertise in designing headworks, clarification/sedimentation facilities, biological reactors, tertiary treatment processes, disinfection facilities and biosolids stabilization and handling facilities. Boris has a background in modeling wastewater systems, including mass balance and hydraulic profile modeling and calculations. He also has completed several storm water, culinary water, and wastewater master plans and studies.

Project Experience

City of Moab Water Reclamation Facility, City of Moab, UT. – 10.0 million

Construction of a new 2.0 MGD Water Reclamation Facility. Sequencing Batch Reactor treatment facility, intermediate pump station, headworks facilities (screenings and grit removal), bio-solids holding and dewatering facilities, and UV disinfection facility.

City of Rexburg Water Reclamation Facility Solids Handling Project, Rexburg, ID - \$6 million

Expansion of solids handling process by converting to anaerobic digestion and pasteurization to produce Class A biosolids and provide for solids storage.

City of Elko Solids Handling Building Upgrades City of Elko, NV. - \$1 million

Existing solids handling building upgrades. The work included the analysis of odor control equipment and design of a new bio-solids truck loadout building.

City of Elko Secondary Clarifier Upgrades, City of Elko, NV. - \$500,000

Upgrades of existing secondary clarifiers. The work included the analysis of clarifier performance and algae growth prevention measures, selection and procurement of new clarifier mechanisms, and installation of Stamford baffles.

Fort Shafter Flats Pump Station, Honolulu HI, Water Reclamation Facility Construction Project - \$25.0 Million

Construction of a new Membrane Bio Reactor (MBR) water reclamation facility at the Fort Shafter Army Base. The project includes modification of a seventy-year-old pump station to anoxic basins, construction of new aeration basins, construction of a new MBR basin, new headworks and solids handling equipment.

City of Provo Water Reclamation Facility UT, UV Disinfection, Digester Mixing, and Headworks Modification Project - \$5 Million

Existing WRF upgrade project. The project includes modification of the existing headworks building, construction of a new UV disinfection building, and installation of new digester mixing equipment.

Western Riverside County Regional Wastewater Authority (WRCRWA), Riverside CA, Plant Expansion Project – 45 Million

Specific duties included design of a new bioreactor basin, tertiary filtration system, sludge solar drying facility, and existing digester modifications (conversion from aerobic to anaerobic digesters).

Western Riverside County Regional Wastewater Authority, Riverside CA, Expansion Study

Developed a study for a 5 MGD plant expansion. The study involved evaluation of process modifications, different solids stabilization and handling processes as well as an evaluation of overall plant energy consumption.

City of Corona Wastewater Treatment Plant Sludge Holding Project, Corona, CA – \$2.0 Million

Plant modifications which included conversion of an existing chlorine contact basin to a sludge holding tank. Installation of primary and Waste Activated Sludge (WAS) screens, odor control, and associated pumping in a very complex site.

Education

B.S. Civil & Environmental Engineering,
University of Utah, 2005

M.S. Civil & Environmental Engineering,
University of Utah, 2008

Registration

Professional Engineer:
UT

Work Experience

10 Years

Affiliations

WEAU, WEF

Boris Petkovic, P.E. | Principal

Project Experience (continued)

City of Elko Water Reclamation Facility Upgrade, City of Elko, NV. – \$6.0 Million

Analyzed potential biological treatment process alternatives, selection of the biological treatment process, and final design. The final design included the construction of a new IFAS process basin and modification of several existing hydraulic and process structures (secondary clarifiers, hydraulic control structures, etc.)

Western Riverside County Regional Wastewater Authority, Riverside CA, Aeration Upgrade - \$5 Million

Conversion of existing Ox. Ditches to staged aeration. The work included process design, selection of the fine bubble aeration equipment, aeration blowers, and the design of blower building and aeration piping.

Tooele City UT, Water Reclamation Facility Upgrade, Phase 1B - \$4 Million

Upgrade of the existing facility including new circular, concrete sludge holding tank with fine bubble diffuser mixing, modifications of the existing solids handling building, design of a new UV disinfection system and building (existing chlorine contact basin retrofit), and the design of a new solids dewatering building and sludge solar drying facility.

Elwood Town Corporation UT, Wastewater Treatment Plant Construction Project - \$3 Million

Construction of a new wastewater treatment plant. The project included construction of a new concrete tank for a sequencing batch reactor, construction of a new headworks/blower building, and the construction of a new disinfection building. Also, the project includes construction of several earthen basins, an effluent winter storage pond, and an irrigation pump station for the reclaimed effluent.

West Wendover NV, Water Reclamation Facility Phase II Upgrade – \$9.0 Million

Construction of a new influent lift station, addition of a new grit trap, construction of a new MBR facility with UV disinfection and modifications of the existing aeration basins. The project also included the expansion of the dewatering facility and the construction of a new building to house tertiary filters for the treatment of the stored effluent.

City of Page AZ, Water Reclamation Facility Upgrade - \$500,000

Evaluated existing facility process and hydraulic capacity and designed required modifications to allow de-nitrification in the existing oxidation ditches in order to produce Class A effluent.

California City CA, Feasibility Study and Engineering Report

Prepared a feasibility study and as subsequent engineering report for the potential expansion of the California City Water Reclamation Facility.

City of Payson UT, Dewatering Building - \$700,000

Construction of a new solids dewatering building with a screw press and cake conveyor system. Also, included modifications in the digester control building.

Brigham City UT, Waste Water Treatment Plant (WWTP) Upgrade - \$4.0 Million

Project included addition of a new secondary clarifier with a scum pump station, addition of a new UV disinfection system and UV building, and an addition of a new solids dewatering building with new dewatering screw presses. The project also included modifications to the existing WAS/RAS pump station and modification of existing headworks building.

Spanish Fork City Water Reclamation Facility UT, Anaerobic Digester Tank Addition

Addition of an anaerobic digestion tank and modifications of the existing digester control room. The project included the design of a new concrete tank, mixing system (Linear Motion Mixer), modification of the sludge recirculation pumping and piping, addition of a new heat exchanger and boiler, as well as modification of the existing anaerobic digestion tank (addition of Linear Motion mixer).

City of Provo Water Reclamation Facility UT, Solids Handling Building Expansion

The project included solids dewatering building expansion, addition of a new centrifuge, screw conveyor, sludge feed pump, mixing system for the sludge holding tank, and modifications of the existing solids hopper.



Mark Jeppsen, EE

Principal Engineer

SKM, Inc.

Registered Civil Engineer EE 18627 (CA)

EDUCATION

BS, Electrical Engineering, University of Utah

Mark Jeppsen specializes in electrical engineering in the water and wastewater industry. He has a very broad range of experience from motor control and power distribution, instrumentation and controls, programmable logic controllers (PLC's) selection and programming, human machine interface (HMI) programming, and supervisory control and data acquisition (SCADA) systems. He has experience with various PLC's such as Allen Bradley, Siemens, Modicon, Control Micro Systems, Koyo, and many others. Mark also has designed numerous HMI's using programs such as Intelution and Wonderware. He has designed and implemented multiple SCADA systems with functionalities that include control, monitoring, alarming, reporting, and maintenance. Mark also has experience with fiber optic networks, as well as wireless networks using various types of radios with variable frequency drives, PID based control, and various process control instruments used in the water and wastewater industry.

- **Beaumont WWTP Expansion/Upgrade Preliminary Design**
City of Beaumont
- **WRCRWA Aeration Upgrades**
Riverside County
- **WRCRWA Expansion**
Riverside County
- **Water Treatment Plant Electrical, Instrumentation, and Controls Engineer**
Riverside County
- **Niles Plant, Golden State Water Company (GSWC)**
Riverside County
- **Lake Arrowhead Willow Creek Project**
Lake Arrowhead
- **HPUD Wastewater Treatment Plant (WWTP) Upgrade**
Heber
- **Imperial Mesquite Lakes Wastewater Treatment Plant (WWTP)**
Imperial County
- **Imperial WTP SCADA Project**
Imperial County
- **Imperial Shop Booster**
Imperial County
- **Well Nos. 27 & 28, Jurupa Community Services District (JCSD)**
Riverside County
- **Jewel Street Booster Station**
Riverside County
- **Imperial Valley WRF**
Electrical Designer, Imperial Valley



Carolee Hale - Electrical Designer

(801) 683-3743 - carolee.hale@skmeng.com

Ms. Hale has three years of experience as an electrical designer with SKM. She has successfully overseen the design process for multiple projects primarily for the water and wastewater industry. She has worked with electrical utilities such as Southern California Edison (SCE) and Rocky Mountain Power (RMP) to establish new service for new facilities. She has been in charge of the development of electrical, instrumentation and process control specifications. She has developed control panel drawings for motor controllers, programmable logic controllers and network cabinets. Ms. Hale plays a key role at SKM in project management and CAD coordination for various projects. She participates in client coordination meetings to insure that what is delivered is in the best interest of the client. She works closely with process, mechanical, civil and other electrical engineers to coordinate the electrical, instrumentation and controls design. She oversees the CAD designers in their implementation of the design drawings for each project. During construction, she has helped respond to RFI's, review submittals and oversee the implementation of record drawings.

Work Experience

3 Years

Her previous work experience was in the computer and pharmaceutical industries with data management, process documentation, and implementation.

Education

Master of Engineering, Electrical Engineering, University of Utah, 1990

Bachelor of Science, Mechanical Engineering, Brigham Young University, 1981

Project Experience

County of Los Alamos Wastewater Treatment Upgrades, 2020 – Current

Electrical Designer

Imperial Wastewater Treatment Plant Upgrade, 2018 – Current

Electrical Designer | Electrical & Instrumentation Design, Project Management & Construction Management Design and coordinate drafting tasks in preparation for project milestones; provide engineering specifications; utility power liaison; construction management responsibilities including submittal reviews, clarification preparation, and documentation for record set.

Central Weber Sewer Improvement District Upgrades — 2019 - Current

Electrical Designer | Generate PLC submittal and loop drawings and provide project coordination.

Chino Basin Well II-12 Equipping, 2019 - 2020

Electrical Designer | Coordinate electrical & instrumentation design with client requirements including security interface and engineering specifications.

Jurupa Community Services District Lift Station Modifications, 2018 - 2019

Electrical Design & Construction Management | Electrical & instrumentation design and drafting coordination for project milestones; utility power liaison; construction management responsibilities including submittal reviews.

Salt Lake City Water Recovery Facility Atmospheric Monitoring, 2018 - 2019

Electrical Designer | Electrical & instrumentation design for gas detection system upgrade. Conduit Schedule and Development to include appropriate sensor placement for area classification as well as gas specific detection.

Specialties

- Electrical
- Instrumentation Design
- Construction Management





Christina Nishimoto, PE, SE

Senior Engineer

Kleinfelder

Registered Civil Engineer C 73208

Registered Structural Engineer SE 6084

EDUCATION

BS, Electrical Engineering, University of Utah

Christina Nishimoto has nine years of professional experience including working with steel, concrete, masonry, and timber structures and is knowledgeable in the design considerations of all four materials and their respective governing codes. Her design phase work has included attending meetings, coordinating with other professional trades, structural analysis, and detailing.

Plant 150, East Valley Water District - Christina serves as Project Engineer providing foundation calculations, drawings, and specifications for Plant 150, a centralized water treatment plant. The scope of work includes a ring foundation for two 500,000 gallon steel tanks for surface water, concrete foundations for an operations building, chemical building, and multiple ion exchange tanks.

Miramar Clearwell Improvements, City of San Diego Public Utilities Department - Christina serves as Project Engineer providing the design of two new rectangular hopper bottom reservoirs, totaling 58.3 MG. The structural system is a two-way reinforced concrete roof with drop panels supported seismically by perimeter concrete shearwalls. Christina is also designing a 5 MG chlorine contact chamber of similar structural system and assisting in managing the work of a number of subconsultants, including the water disinfection process, architectural, civil, landscaping, and environmental permitting.

Point Loma Sedimentation Basin Rehabilitation, City of San Diego - Christina served as Project Engineer on the Point Loma Wastewater Treatment Plant project that consists of 12 existing sedimentation basins constructed as several different projects starting in 1962 through 1996. The result of the varying projects is non-uniformity within the 12 basins. Christina provided support on structural engineering services provided by KLF|SWE which included site evaluation, design and drafting, and construction administration during the construction process. Additionally, Christina provided the design of a pipe support rack.

Pump Stations 1 and 2, City of San Diego Metropolitan Wastewater Department - Christina provided structural calculations and construction support for this design-build project. KLF/SWE's scope of work included the design of a two-story concrete masonry building at Pump Station 2 as a sub-consultant to Carollo Engineers. The first floor of the building is an electrical room and the second floor is used for storage. The structural system of the building consists of long span trusses for the roof framing, composite floor, and a mat foundation.

Twin Oaks Central Basin, Central Basin Municipal Water District - Christina served as Project Engineer providing design calculations for the 50 MGD design/build water treatment plant. The design included pump stations, arc flow treatment barriers, two 14 MGD reservoirs, and an ozone treatment facility and filter basin.

Pala Casino Wastewater Treatment Plant, Pala Band of Mission Indians - Christina served as Project Engineer providing the design calculations for this project, which provided the Pala Band of Mission Indians a new wastewater treatment plant and upgrades to the existing lift station.

Phase I Expansion, Riverside Regional Water Quality Control Plant - Christina served as the Project Engineer and provided construction support services for the Phase I expansion. KLF/SWE's scope of work included design consulting services for this project. The expansion scope was to replace 20 MGD of existing conventional activated sludge capacity with 26 MGD of membrane bioreactor capacity.

Section 3. Support Scope of Services

Engineering Support Scope of Services

WEBB will provide the District with engineering support services for the project as follows:

- Maintain project communications with construction manager
- Attend pre-construction conference
- Attend bi-weekly progress meetings (40 meetings are anticipated)
- Provide for the review of an estimated 200 submittals and 100 re-submittals
- Review the Contractor Requests for Information and Clarifications (assume 100 RFI/RFC total)
- Review contractor change order requests and make recommendations to the construction manager (assume 30 change order requests)
- Visit the site to resolve field issues such as design clarifications, utility conflicts, or review potential change conditions (assume 20 issues)
- Testing, startup, and commissioning support
- Close-out Services
 - » Generate a preliminary punch list
 - » Attend final walk through with contractor and District
 - » Generate a final punch list
 - » Review and forward record quantities
 - » Review contractor's as-builts and confirm completeness
- Prepare minor design revisions (up to 10 revisions)

Section 4. Cost Proposal



Huston Creek WWTP Primary Clarifier and Dewatering Building Crestline Sanitation District

Item	Description	Principal II	Constructoin Manager	Project Coordinator	Process Engineer	Senior Engineer	Electrical Principal Engineer	Electrical Senior Engineer	Total Hours	Subtotal - Labor	Sub-consultant budget	Expenses	Total/task ¹
	Billout Rate	\$ 273	\$ 252	\$ 104	\$ 219	\$ 196	\$ 219	\$ 196					
Task 1 - General Engineering Support During Construction													
1.1	Project Communication and Management	4	40	40	10	20	10	20	144	\$ 27,552	\$ -		\$ 27,600
1.2	Meetings and follow up (40 meetings)	10			10	40	10	40	110	\$ 22,790	\$ -	\$ 2,500	\$ 25,300
1.3	Submittal Review (200 submittals and 100 resubmittals)				40	400	40	300	780	\$ 154,720	\$ 17,250		\$ 172,000
1.4	Requests for Information Response (100 RFIs)				20	250	20	100	390	\$ 77,360	\$ 5,750		\$ 83,100
1.5	Change Order Requests Review (30 change order requests)	4			20	40	20	40	124	\$ 25,532	\$ -		\$ 25,500
1.6	Field Issues (20 site visits)	4			10	40	40	10	104	\$ 21,842	\$ 5,750	\$ 1,000	\$ 28,600
1.7	Testing, Startup, and Commissioning	4	40	20	20	80	40	80	284	\$ 57,752	\$ -		\$ 57,800
1.8	Punchlist and Final Walk	4	40	40	10	20	10	20	144	\$ 27,552	\$ -	\$ 1,000	\$ 28,600
1.9	Record Drawings	4	10	40	10	20	10	20	114	\$ 19,992	\$ -		\$ 20,000
Task 2 - Design Revisions													
					20	80	20	80	200	\$ 40,120	\$ 17,250	\$ -	\$ 57,400
Total		34	130	140	170	990	220	710	2394	\$ 475,212	\$ 46,000	\$ 4,500	\$ 525,900

1. Rounded to the nearest \$100.