Lake Don Pedro Community Services District

Regular Meeting of July 16, 2018

AGENDA SUPPORTING DATA

5. DISCUSSION AND ACTION ITEMS

c. Discussion and action related to the review of qualifications/proposals and award of a consulting contract for services as District Engineer

RECOMMENDED ACTION

Staff recommends the following motion:
Authorize the General Manager to enter into contract with the desired Engineering firm

SUMMARY

In June 2018 the Board learned that District Engineer Binkley was retiring, and a new engineer would need to be contracted. In June, a Request for Proposals was circulated to six local and regional engineering firms and posted on the CSDA proposal distribution website. By the proposal due date, we had received three proposals from engineering firms, each of which are attached. Each firm delivered a technical proposal, and a separate fee schedule. Since we are not awarding an engineering contract for a specific project, there is no way for the firms to "bid" the District's work. Therefore, the firm's rate sheets list the hourly billing rates for the various levels of expertise and specialty. For reference, Binkley currently charges the District $175 per hour.

The District is not required to award professional services agreements based on cost alone, such as bidding. In fact, the District should be evaluating the proposals based on a combination of best fit, experience, assigned staff and their experience, and fees.

By entering into agreement with a particular firm, we are not guaranteeing them a certain amount of work, nor are we reassigning any projects to them for which we already are under contract, such as the grant application currently being prepared by Kennedy Jenks. If the Board is not prepared to recommend a firm for contract, please direct a process by which we can come to agreement and potentially a special meeting can be scheduled for contract award.

FINANCIAL IMPACTS

None

ATTACHMENTS

Engineering services proposals

July 11, 2018

Lake Don Pedro Community Services District

Statement of Qualifications to Provide District Engineering Services

Kennedy/Jenks Consultants

Table of Contents

1. EXECUTIVE SUMMARY

DELIVERING TECHNICAL EXCELLENCE AND RESPONSIBLE CLIENT SERVICE

This section includes a brief overview of Kennedy/Jenks' background, specialization, and responsible local office and subconsultants that will assume all contract responsibilities. Kennedy/Jenks' team brings an extensive experience and a history of providing on-call and as-needed engineering services.

FIRM OVERVIEW

Kennedy/Jenks Consultants (Kennedy/Jenks) is a full-service, multidiscipline engineering consulting firm with a strong Northern California-based proposed District Engineering Team. Our Sacramento office will be the hub of water resource professional services. This full-service office hosts a staff of 22 professionals providing civil, mechanical, structural, electrical, and environmental engineering disciplines. In Northern California, our firm has a professional staff of over 100 located in five offices, all less than a few hours drive from the District's office at La Grange, California. Nationally, Kennedy/Jenks has nearly 400 professionals in 27 offices throughout the United States to support any water project challenge, no matter how large or small, or how complex. Our primary focus is to provide you personalized engineering service.

THE RESOURCES YOU NEED:
Where You Need Them, When You Need Them

SPECIALIZING IN WATER RESOURCES MANAGEMENT AND ENGINEERING

Kennedy/Jenks' has specialized in water resource management and engineering for more than 99 years. We offer our clients expertise in water resource management and engineering through planning, design, and construction. We excel in tried and true water conveyance and treatment approaches to innovative treatment and construction methods, including infrastructure design and rehabilitation, and energy management, while also providing other services supporting the water industry.

We are currently executing work on 21 on-call engineering assignments in Northern California, including the cities of Davis, Sacramento and Modesto, Carmichael WD, Linda County WD, Twain Harte CSD, and Tuolumne Utilities District. Our clients trust us to collaborate to acquire just the right amount of information to work independently, and take that knowledge to develop solutions to their challenges.

HISTORY WORKING WITH THE DISTRICT

Since 2015, we have been able to assist the Lake Don Pedro Community Services District (District) in leveraging $379,000 to obtain an additional $2.9 million in grant funding for new wells, water system efficiency improvements, and water service line replacements. Kennedy/Jenks was contracted by the District on January 31, 2015 to prepare funding applications, a feasibility study, design, bidding and construction for three new wells to address an emergency water shortage during the drought. In addition, Kennedy/Jenks has assisted in the preparation of both the 2013 Tuolumne-Stanislaus and the 2014 Yosemite-Mariposa Integrated Regional Water Management Plans which involved District projects, completed a design for the existing intake barge modification project, and successfully completed and

submitted another grant proposal to fund the replacement of leaking water service lines. We are currently working to complete another grant application for funding assistance to address three District priorities: (1) replacement of the District's intake pumps, pipeline and system controls; (2) evaluation of the water treatment plant control systems, pipes, valves, and fittings; and (3) evaluation of the distribution system.

LOCAL EXPERIENCE

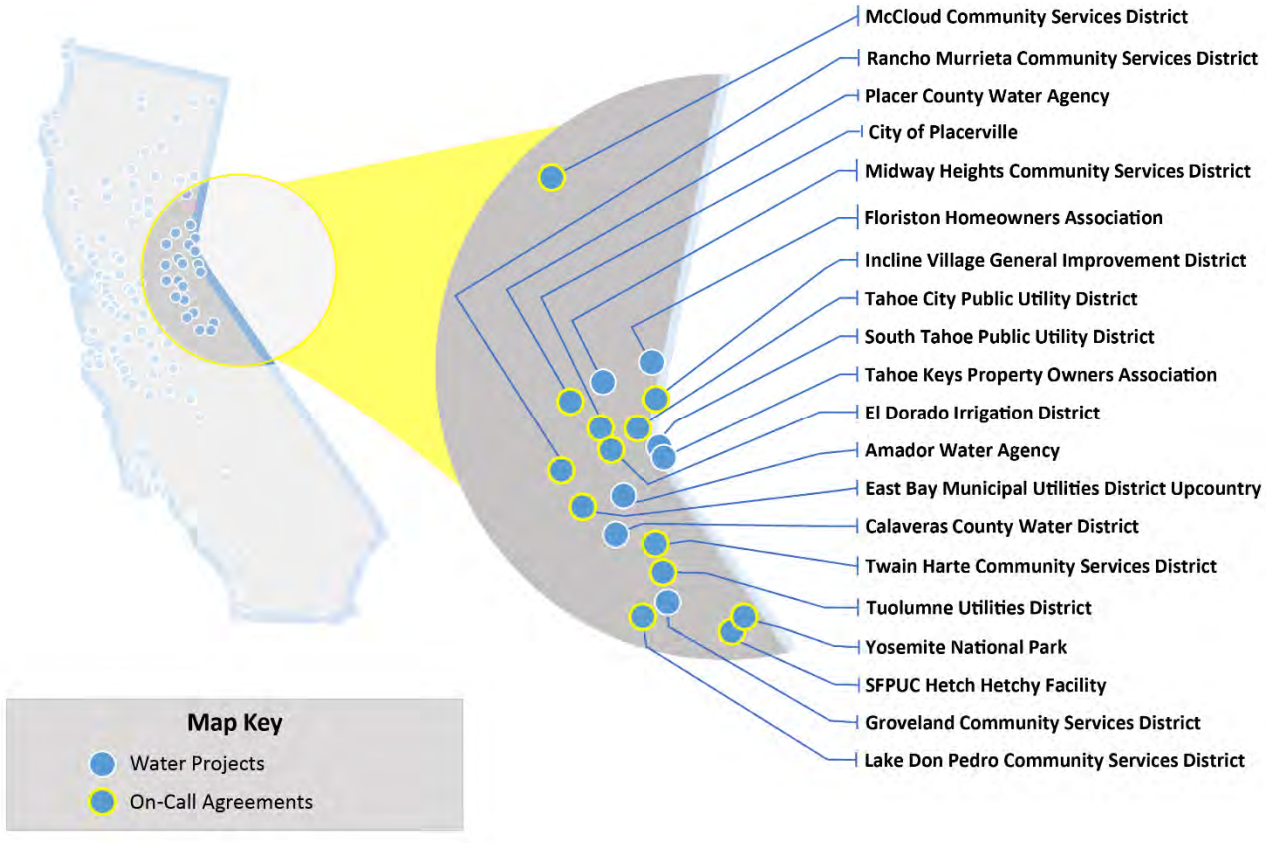
We have completed a significant number of projects for smaller rural utility clients like the District located within the foothills and High Sierra (e.g., TUD, Twain Harte CSD, Calaveras County WD, Amador WA, Groveland CSD, El Dorado ID, Yosemite National Park, South Tahoe PUD, EID, and many others as shown in the figure below) that must address the challenges of limited funds, hilly terrain, utility conflicts, challenging construction like rock excavation, narrow corridors, and sensitive environments requiring permitting and Environmental Non-Government Organizations (ENGO) coordination, a mixture of surface water and groundwater supply sources, and construction cost estimating nuances such as limited contractor competition and increased distance to deliver equipment and materials.

SUBCONSULTANTS

Kennedy/Jenks typically uses subconsultants for specialties we do not have in-house, including services related to obtaining environmental clearance and documentation, geotechnical services, and surveying services. Therefore, we propose the following subconsultants to supplement our District Engineering Team who are all located close to the District's office:

- Augustine Planning Associates, Inc. – Environmental Documentation and Clearance (Sonora, CA)
- Condor Earth – Geotechnical and Materials Testing Engineering Services (Sonora and Merced, CA)
- O'Dell Engineering – Land Survey Services (Modesto, CA)

Kennedy/Jenks' Foothills and High Sierra Experience



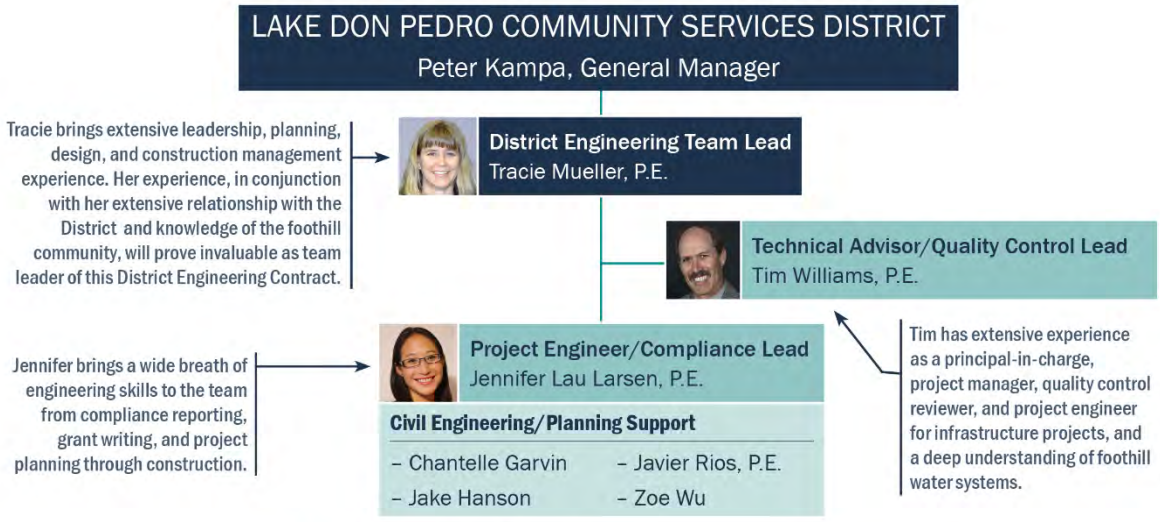
2. PROJECT TEAM

OUR DISTRICT ENGINEERING TEAM WILL SERVE AS AN EXTENSION OF YOUR STAFF

Kennedy/Jenks Consultants will serve as the District's Engineer utilizing a team of talent, knowledgeable and local staff that have worked with the District, and have a long standing and trusted working relationship with the District's General Manager, which will make working as an extension of the District's staff seamless. We have utilized three key steps to create a successful project team including: identifying the best possible members, organizing those members into an efficient operating unit, and obtaining team commitment. This team development and team district engineering approach has worked successfully on our long-standing District Engineering contract with Linda County Water District.

PROJECT TEAM

Kennedy/Jenks has assembled a Northern California based team with outstanding qualifications and experience capable of serving all the District's engineering needs from general engineering support, map and plan review and approvals, and project planning, design, bid, and construction services. Our District Engineering Team includes civil, structural, architectural, electrical and mechanical engineers, and specialists in cost estimation, condition assessment, construction management and inspection, planning, compliance and funding. This team has the right mix of capabilities, resources, and talents to meet the District's on-call engineering needs. Our project team members are shown on the following organizational chart.



AS-NEEDED TECHNICAL SERVICES

Electrical
– Sandy Schuler, P.E.

Structural
– Aaron Taylor, P.E., S.E.

Building Mechanical
– Zac Harris, P.E., LEED® AP

Architect
– Mark Preston, R.A.

Cost Estimating
– Janet Hoffman, P.E.

Surveying
– Dylan Crawford, P.L.S. (1)
– Scott Roberts, P.L.S. (1)

Geotechnical
– Ron Skaggs, P.E., G.E. (2)
– Narciso Garnica, E.I.T. (2)

Environmental
– Amy Augustine, A.I.C.P. (3)

SUBCONSULTANTS

(1) O'Dell Engineering • (2) Condor Earth, Geotechnical Engineering • (3) Augustine Planning Associates, Inc.

KEY PROJECT STAFF

Our key team members were selected based on wide breath of engineering experience required to support the engineering work anticipated by the District, expertise in their area of practice, prior work with the District and within the surrounding foothill communities, availability, and team commitment. Brief summaries of the roles, responsibilities, and qualifications of key personnel follow, and resumes of all staff identified in the organization chart are included in Appendix A.

Tracie Mueller, P.E. – District Engineering Team Leader | Tracie brings over 20 years of experience in water engineering industry, and has served as Project Manager on more than 25 projects, including the District's Barrett Cove Barge Rehabilitation Project. Tracie has extensive experience coordinating with clients, subconsultants, multi-discipline teams, regulators, permit agencies, and the general public. Her people skills and communication strengths, as well as the fact that she grew up on Lake Don Pedro, play well into Tracie's capabilities as a District Engineering Team Leader, allowing for an increased ability to confidently, coordinate with the team, District and the community every step of the way. With the accessibility of over 350 specialists within Kennedy/Jenks, as well as her background with the District's and the local foothill community, Tracie will provide the District responsive and high-quality district engineering services.

Tim Williams, P.E. – Technical Advisor/Quality Control Lead | Serving as Technical Advisor and Quality Control Lead, Tim offers over 41 years of overall experience in the water industry and has served as Quality Control Reviewer on over 20 projects. Tim will be able to use his extensive experience working on water projects within the Sierra Foothill Community as the technical advisor on this team. Tim and Tracie have a long and strong working relationship having worked together for over 18 years. This relationship will provide a through approach to every District Engineering task while maintaining schedule and budget to exceed the District's expectations.

Jennifer Lau Larsen – Project Engineer and Planning/Compliance Lead | Jennifer will serve as Project Engineer and Planning/Compliance lead for any requested services, with 9 years of experience in water resources compliance, planning, design, and engineering services during construction. Jennifer has worked with both Tracie and Tim on multiple projects as Project Engineer and project team coordinator, supporting her Project Managers to maintain project budget and schedule.

SUBCONTRACTORS

O'DELL ENGINEERING

O'Dell Engineering was founded in 1994 and offers civil engineering, land surveying, landscape architecture, and land use entitlement & land planning services. They are located in Modesto, CA and are highly experienced in providing professional services in Tuolumne and Mariposa Counties. O'Dell specializes in survey support public infrastructure projects and has over 20 highly skilled surveyors who specialize in similar assignments.

CONDOR

Condor Earth (Condor) is a multi-disciplinary organization of geologists, environmental scientists, geotechnical and civil engineers, materials and engineering technicians, special inspectors, and other specialists located in Sonora and Merced, CA. Their laboratory is accepted and approved by the Division of the State Architect (DSA), Structural Safety Section, as qualified to perform geotechnical and construction materials testing services for government facilities.

Augustine Planning Associates, Inc. (APA), was established in 1994 in Sonora, Tuolumne County, CA, and is an association of small firms that has worked together for no less than three and in some cases more than 25 years. This alliance allows APA to provide a broad range of highly experienced technicians with low overhead costs and maximum flexibility.

3. TECHNOLOGICAL ABILITY

FACILITATING THE WORK WITH PROJECT RESOURCES AND TOOLS

In addition to the project team resources and abilities described in Sections 2 and 4, Kennedy/Jenks has a wealth of technological tools to facilitate project work and provide certainty that work tasks are completed in an efficient and quality-controlled manner. Our team has the technological ability and tools needed to support our civil, structural, mechanical, electrical and geotechnical engineering designs, as well as, architectural, surveying and construction management, inspection and support services.

PROJECT TECHNOLOGICAL RESOURCES

To provide quick turnaround times and efficient engineering services to meet the needs of the District, the Kennedy/Jenks District Engineering Team is equipped with and available to offer in-house technological skills and abilities. Our project resources and tools span a variety of categories, including field equipment, communication resources, computer software and online platforms, and quality assurance/quality control (QA/QC) templates, procedures, and personnel. A summary of our software resources and tools that may be used on for the District Engineering Services are indicated in the table below.

DESIGN & DRAFTING SOFTWARE	ADDITIONAL SOFTWARE	WATER MODELING SOFTWARE
> AutoCAD	> Microsoft Excel	> WaterCAD
> Autodesk Revit	> Microsoft Word (including communication templates)	> InfoWater
> ESRI ArcGIS	> Microsoft PowerPoint	> H2O Map
> ProjectWise Explorer	> Microsoft Access	> H2O Net Analyzer
> AutoTURN	> Adobe Illustrator	
> Visual Lighting Design	> Bluebeam	
> SKM Arc Flash	> CostWorks	
> Various Generator Sizing Software	> Cost Estimating Templates	
	> Google SketchUp	
	> Google Earth Pro	

4. INDIVIDUAL QUALIFICATIONS AND EXPERIENCE

OUR TEAM'S EXPERTISE PROVIDES FOR FLEXIBILITY WHILE MEETING YOUR DELIVERY GOALS

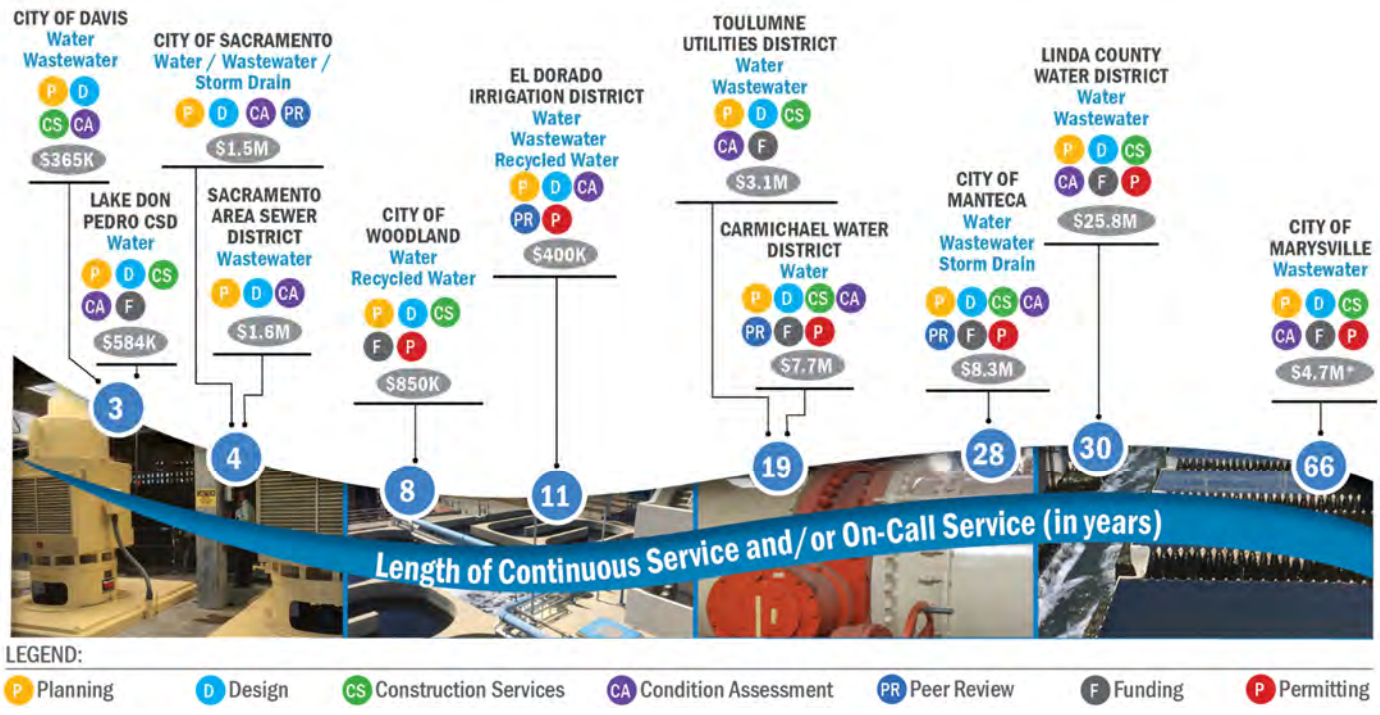
This section includes our team's expertise through three examples of recent projects. This experience includes a small sampling of the projects that provide our team with the knowledge of the District's water system, the typically issues faced by foothill systems, and required District Engineering services. The projects below also demonstrated our proposed team's expertise working on a wide range of projects that will help our team be responsive to the District's needs. Tailored resumes for staff included within our District Engineering Team are included in Appendix A.

DISTRICT ENGINEERING TEAM MEMBER EXPERIENCE AND REFERENCES

Kennedy/Jenks' ongoing success with similar assignments in rural Northern California communities foster:

- **INCREASED RESPONSIVENESS:** Our experience with local on-call contracts enables us to quickly assess your needs, make collaborative decisions, and execute appropriate actions.
- **BETTER FLEXIBILITY:** Our core, local team regularly works together on water systems like yours and knows how to shift resources to align staff with project and service needs.
- **PEACE OF MIND**: We have identified an experienced and responsive team to provide you with tested solutions for local challenges.

The three project descriptions on the following pages summarize a small sampling of Kennedy/Jenks' representative experience and have been selected to demonstrate our team's relevant experience addressing similar needs and challenges to yours. We invite you to contact the references listed at the end of this section to verify our responsiveness and quality of service on similar projects. The graphic below illustrates Kennedy/Jenks' relevant continuous service and/or on-call contracts with local, Northern California municipalities.



GENERAL AND WATER SYSTEM DISTRICT ENGINEERING SERVICES

Linda County Water District, Marysville, CA

Firm's Role: District Engineer for General, Planning, Design, Construction, Grant, and As-Directed Services

Project Description: In 2017, Kennedy/Jenks renewed its contract for General Engineering Services with Linda County Water District (LCWD) to provide District Engineering services such as initial planning, permitting assistance, grant applications, design of new and or upgrades of existing water and wastewater infrastructure and facilities, and follow-on engineering services during construction. Kennedy/Jenks has been LCWD's District Engineer for over 30 years.

Current water system assignments under this Kennedy/Jenks' District Engineering contract include:

- Groundwater wellhead treatment, storage, and conveyance facilities design, permit coordination, and bidding and construction support services. Kennedy/Jenks previously prepared an approved grant application through DWR Proposition 1 SGWP for $1M in construction for the new water storage tank.
- Valve replacement design, bid and construction services funded through DWR Construction Grant Funding Program based on Kennedy/Jenks grant application.
- Hydraulic water model development and analysis for the water distribution system.
- Water System Master Plan development.
- Potable Water Audit funded through Clean Water SRF based on prior grant application prepared by Kennedy/Jenks.

Team Members:

- Tracie Mueller: Principal in Charge/Quality Control
- Tim Williams: Quality Control
- Javier Rios: Project Manager/District Engineer
- Jennifer Larsen: Project Engineer
- Chantelle Garvin: Staff Engineer
- Zoe Wu: Staff Engineer
- Jake Hanson: Staff Engineer
- Aaron Taylor: Project Structural Engineer
- Janet Hoffman: Cost Estimator
- Zachary Harris: Mechanical Engineer
- Mark Preston: Project Architect
- Sandy Schuler: Project Electrical Engineer
- O'Dell Engineering: Surveying

General Engineering and Water Systems Contract Amount: $2.4M

Completion Date: On-going

Client Reference: Brian Davis, General Manager, (530) 743-2482

"Kennedy/Jenks Consultants has been the Linda County Water District's District Engineer for more than 30 years. In recent years, I have been impressed with the Kennedy/Jenks team under Tracie Mueller's leadership. Their thoroughness, responsiveness, and dedication help to assure that our needs are met. They are always courteous, professional, and willing to work with us so that our requirements, both contractually and regulatory, are met. I would not hesitate to recommend Kennedy/Jenks."

–Brian Davis, District Manager, Linda County Water District)

DROUGHT EMERGENCY SERVICES

Lake Don Pedro Community Services District, La Grange, CA

Firm's Role: Consulting Engineer for Design, Construction and Grant Services

Project Description: Kennedy/Jenks worked closely with the District General Manager to find a supplemental water supply during the 2015 drought emergency. Together we procured $2M in project grant funding from six different funding sources, prepared preliminary designs, found three suitable groundwater well locations out of drilling 15 test holes, performed water quality and 10-day water capacity pump tests, prepared drilling and site equipping designs for each new well, and oversaw construction. The project was completed to the point where the wells were operational and connected to the District's raw water system within the 9-month emergency schedule. The project was completed within the contract budget.

Team Members:

- Tracie Mueller: Principal-in-Charge
- Tim William: Quality Control Reviewer
- Javier Rios: Project Engineer (Design)
- Jake Hanson: Staff Engineer
- Jennifer Lau Larsen: Project Engineer (Grant Applications)
- Zoe Wu: Staff Engineer

Contract Amount: $484,231

Completion Date: July 6, 2018

Client Reference: Pete Kampa, General Manager, (209) 591-7100

TREATED WATER SYSTEM OPTIMIZATION PLAN (TWSOP)

Tuolumne Utilities District, Sonora, CA

Firm's Role: Extension of Staff for Engineering Planning Services

Project Description: Kennedy/Jenks is currently supporting Tuolumne Utilities District (TUD) with the completion of a water treatment consolidation plan as part of their overall Treated Water System Optimization Plan (TWSOP) to evaluate solutions for TUD to optimize and consolidate 11 separate treated water systems. Currently the work consists of reviewing existing information and reports including the partially completed 2012 TWSOP previously developed by TUD and Kennedy/Jenks (work halted in January 2012 due to TUD's economic concerns), refining six alternatives, completing an alternatives analysis and evaluation, and site screening and selection assistance. Newly executed project is on time and within budget.

Team Members:

- Tim Williams: Project Manager
- Tracie Mueller: Project Engineer
- Zoe Wu: Staff Engineer
- Janet Hoffman: Cost Estimating Engineer

Contract Amount: $421,957 ($351,851 paid in original contract and $108,874 contract for 2018 work)

Completion Date: In progress – 95% complete

Client Reference: Erik Johnson, District Engineer, (209) 532-5536 ext. 520

5. STATEMENT OF UNDERSTANDING AND SCOPE OF WORK

UNDERSTANDING YOUR DISTRICT ENGINEERING NEEDS

Kennedy/Jenks understands that the District is looking to select a District Engineer to perform long term, responsive, and appropriate professional engineering services to support continual operations, upkeep and repair/replacement of the District's public water system to fulfill the District's customers' needs and regulatory requirements. We also understand that the role of District Engineer includes being representative of the District, providing continuity through possible changes in the District employees and board members, and securing and documenting water system records.

STATEMENT OF UNDERSTANDING

The District's water system is supplied through a combination of groundwater wells and surface water from Lake McClure which all feed into the raw water pipeline and flows through a water treatment plant to the water distribution system, which ultimately serves potable water to a rural residential subdivision of approximately 3,300 parcels. Approximately 1,500 of these parcels are currently active meter customers.

The original water system is aging, as it was built in the mid to late 1960's and has been minimally improved to meet updated regulatory compliance and to address failing components or system capacity issues. The District has limited project funds and has and will continue to rely on grant and loan funding to make necessary improvements.

The District is currently working to improve water supply reliability and optimizing the efficiency of its water system. As the District Engineer we will help to assess the water system's needs, develop an updated water system capital improvement plan, and work with the operations staff to address deferred or required routine maintenance to help the District improve water system reliability and efficiency.

We understand that, in addition to identifying and implementing critical maintenance, repairs, and upgrades, it is imperative to identify and secure funding for these improvements, in which we have been assisting the District in the past, and continue to do so currently. Based on prior work performed by the District, the District's prior District Engineer, and Kennedy/Jenks, the following have been identified as some of the District's priority existing water system needs:

- Barrett Cove Surface Water Intake Facility replacement, including development of funding sources, evaluation, planning, design, bidding and construction. The existing intake system is unreliable and currently is operating with a single pump that is aging and has electrical and control issues. Our proposed District Engineering Team is currently preparing a $500,000 State Water Resources Control Board (SWRCB) Drinking Water State Revolving Fund (DWSRF) Program Planning Grant application to help fund the evaluation and planning of the replacement of the intake system.
- Barrett Cove Barge upgrade or replacement which is needed if the existing Barrett Cove Surface Water Intake Facility cannot draw water out of Lake McClure at lower water elevations, and currently more importantly, the barge would serve as necessary backup to the existing intake facility. Kennedy/Jenks has developed plans for upgrades to the existing District barge, and has reviewed a proposal for a new aluminum barge. We will work with the District to develop a plan to move this necessary project forward.
- Surface Water Treatment Plant Upgrades, giving priority to evaluating and upgrading control systems, and addressing pipeline and valve corrosion issues. A portion of the $500,000 SWRCB DWSRF Program Planning Grant discussed above is for evaluation and planning of this project.
- Water system upgrades to reduce water system losses. District water loss data indicates water loss averages over 30 percent of production, the majority of which is assumed to be caused by leaking water service lines that were improperly installed. In recent years, the District has made a significant effort in trying to mitigate water loss by applying for funding and has started replacing the high priority leaking water service lines. The

District has existing grants to replace additional water service lines, but time is running out and the District needs to move fast to use the remaining funds. Our proposed District Engineering Team has submitted a proposal to the District to help facilitate the procurement of a contractor to complete this work based on a design initiated by the District's prior District Engineer. We would like to help move this project forward as quickly as possible to assure the District can utilize the existing grant funds to replace the water laterals and repave the laterals that have already been replaced.

- Water Treatment Plant Effluent Meter replacement to accurately monitor production and estimate water loss. The District suspects that some of the 30% water loss experienced throughout the system may be due to inaccurate water meters readings. This replacement project includes installation of a new vault and sump to eliminate flooding of the meter during wet weather. This replacement project design was included in the proposed District Engineering Team's proposal discussed above for replacement of the water laterals and we would like to help the District to move this project forward as well to assure the grant funds are completely utilized.
- Master Meters evaluation to determine if meters need to be calibrated or if they need to be replaced in order to collect accurate data and calculate the District's actual water loss. The District Engineering Team can use the prior quotes that the District has received from Aqua Sierra Controls, Inc to review the site. Then the District Engineering Team can request additional quotes to evaluate the overall needed improvements and work to implement the recommended improvements with the appropriate parties.
- Raw Water Main replacement is rated as a high priority project for 2018 in the District's preliminary 5 Year Capital Improvement Plan and is a project that needs to be further evaluated by the District's Engineering Team. The District Engineering Team can start with a review of existing documentation and conduct a condition assessment of the pipeline if this has not been done previously.

Our knowledge of the above list of projects and their urgency is based on discussions with District staff during our previous and current efforts to obtain funding for the District. Many of these have already received funding or are in the process of applying for funding, but there may be other priority improvements developed based on further review of the Preliminary 5 Year Capital Improvement Plan dated 2 August 2018, review of other documents prepared by the prior District Engineer, and additional discussions with District staff. As part of the District Engineering first steps, we propose scheduling a face-to-face meeting with the District's prior District Engineer, Elizabeth Binkley, to get a complete transfer of knowledge, data and documents. We understand that Ms. Binkley has a long history with the District and that part of the new District Engineering Team's job will be to preserve knowledge and documentation transferred as to no lose any momentum and hopefully increase it with our dedicated District Engineering Team.

SCOPE OF WORK

Below is a summary of our proposed District Engineering Scope of Work which is based on the District's list included in the request for qualifications. Our proposed District Engineering Team is committed, qualified and experienced to the District with the following scope of work on an as needed basis:

A. Preparing engineering calculations, plans, specifications, schedules and cost estimates for water infrastructure and capital improvement projects that have been identified as necessary and have an established funding plan.

B. Monitoring project schedules and budgets to ensure projects stay within established guidelines.

C. Keeping District staff apprised of project status and notifying the District should significant issues arise, both verbally and in written form.

D. Functioning as project manager and managing contracts with District contractors. District contracts will be signed by the District's General Manager.

E. Providing construction management and/or inspection services on District projects as assigned.

F. Creating reports in accordance with District requirements for actions to be taken by the Board of Directors, including, but not limited to, approval of plans and specifications, authorization to advertise for bids, recommendations for award of construction contracts, and notices of completion.

G. Assisting in the review, modification and/or creation of ordinances and resolutions as necessary.

H. Presenting information to the Board of Directors and/or other groups, as requested by the District's General Manager.

I. Providing technical engineering review and recommendations in matters related to District's provision of public works services to the populace.

J. Providing engineering review of legal documents, such as rights of entry, right-of-way legal descriptions, construction contracts, and professional services agreements and submitting recommendations to District Counsel for review.

K. Composing correspondence required as part of any assigned project, from planning and development through construction and closeout.

L. Working cooperatively with other District staff and/or other contractors to deliver projects on schedule and within budget.

M. Coordinating with other agencies/jurisdictions to ensure that environmental and funding requirements for assigned projects are met.

N. Ensuring environmental (e.g. – NEPA/CEQA) clearance and applicable permits are obtained prior to construction of projects.

O. Supplying other engineering services as deemed necessary by the District's General Manager and within standard engineering practices.

Additional services that our District Engineering Team has experience in to support our execution of water resources project assignments or to support the District in executing a project include the follow as needed:

- Funding assistance including grant writing and administration.
- Development and update of the District's Capital Improvement Plan including development of planning level cost estimates and project assumptions and summaries.
- Geotechnical investigations and development of engineering recommendations.
- Surveying support for project improvements.
- Development of regulatory compliance reports.

APPROACH TO ADDRESSING YOUR KEY ISSUES

We understand the challenges of working in the foothill/high sierra environment and have gained our experience and expertise by providing water resource engineering services not only for the District, but also for similar foothill/high sierra water agencies including Calaveras County WD, Twain Harte CSD, Groveland CSD, Yosemite National Park, El Dorado Irrigation District, Tahoe City PUD, South Tahoe PUD, Tahoe Keys and Floriston HOAs, Lake Don Pedro CSD, Nevada Irrigation District, Amador Water Agency, SFPUC Hetch Hetchy, EBMUD upcountry facilities, and McCloud CSD.

Kennedy/Jenks' philosophy is to take advantage of our multiple decades-long experience by:

> **Developing a Cohesive Team –** We assemble our team, including subconsultants, with individuals who have successfully worked together on numerous projects, so we can efficiently and effectively complete project design, bid, and construction.

- **Listening to Staff –** Kennedy/Jenks is known for our strength and ability to work across the board with District staff to develop design solutions that meet the District's needs. A critical part of every project is to listen to the operators as they often know the District's facilities the best. Our goal is to design facilities that promote ease of use and maintenance for the operations staff.
- **Keeping the Public in Mind –** Our strategy for successful project execution includes considering how facility location, design, and construction may affect the public, trying to minimize disruptions, and educating customers as to why improvements are necessary.
- **Agency Coordination and Communication –** Our team will communicate early and often with affected agencies (i.e., California Department of Water Resources, State Water Resources Control Board, Central Valley Regional Water Board, Tuolumne and Mariposa Counties, Corps of Engineers, etc.) so requirements are understood and implemented early into the design.
- **Utilizing Tools Developed In-house –** Our team will utilize tools, such as our Condition Assessment standardized form, and our Civil Design Standard Checklist, to promote efficiency, accuracy, and consistency.
- **Developing Accurate Cost Estimates –** Accurate cost estimates allow the District to confidently budget for the project. Cost estimates for the planning phases (i.e. District budgeting, Capital Improvement Planning) through the bidding and construction phases.
- **Early Contractor Meetings –** Meeting on-site with Contractors early on during the design process allows for the discussion of constructability, site constraints, appropriate materials, and costs.

KENNEDY/JENKS INTEREST AND COMMITMENT TO THE DISTRICT

Being local to and experienced within the region, our team knows the District and we recognize the significant role you have in providing, maintaining, and operating water services and facilities for approximately 3,300 rural residential parcels. We understand the magnitude of your mission to safeguard the health and well-being of the public by providing a reliable source of water that is conveyed to the customers through a reliable, safe and properly maintained raw water, treatment, and distribution systems. We are in alignment with your mission, understand the challenges you are faced with, and we have the capabilities and the desire to work with you as a committed partner to help you fulfill your mission.

APPENDIX A

Team Resumes

Tracie R. Mueller, P.E.

District Engineer/Project Manager

Education

BS, Environmental Engineering, Summa Cum Laude, California State Polytechnic University, San Luis Obispo, 1998

MS, Water Resources Engineering, California State University, Sacramento, 2007

Registrations

Professional Civil Engineer, California (63295)

Professional Summary

Tracie Mueller brings extensive planning, design, and construction management services for treatment plants, storage tanks, pump and metering stations, large-and small diameter pipelines, and site utilities. Her experience also includes condition evaluation of existing water systems, and preparation of repair and facility improvement recommendations. She is also proficient in water system hydraulic modeling and development of master plans and capital improvement plans, as well as, development of regulatory related plans such as Urban Water Management Plans and Water Supply Assessments. Tracie has helped clients plan, design and construct projects using millions of dollars in grant and loan funding from multiple agencies, and has been involved from project inception through startup on many of these projects.

Tracie works on a variety of projects and teams in multiple roles including principal in charge, project manager, project engineer, design manager and quality control reviewer. She has extensive experience coordinating with client management, operations, administration and public officials, as well as, other consultants, multi-discipline teams, regulators, permit agencies, and the general public.

Water Resource Project Experience

2018 DWSRF Planning Application Funding Services, Lake Don Pedro CSD, La Grange, CA– *Project Manager* – Currently preparing a planning grant application for the Drinking Water State Revolving Fund (DWSRF) Program to plan for future improvements to the LDPCSD water system. The grant funds would be used to cover the costs of completing planning and design-related work to improve the LDPCSD surface water supply reliability and evaluate the LDPCSD surface water treatment plant's control systems and the plant's pipeline and valve corrosion issues.

Lake Don Pedro Barrett Cove Pump Barge Rehabilitation Project, Lake Don Pedro CSD, La Grange, CA – *Project Manager and Quality Control Reviewer* - Provided project management and quality control review of as-built drawings, structural calculations, and value-engineered drawing modifications based on manufacturer and District input for existing floating barge pumping unit to provide a sustainable and reliable emergency surface water supply system.

Lake Don Pedro Drought Emergency Services, Lake Don Pedro CSD, La Grange, CA – *Quality Control Reviewer and Principal in Charge* - The District was tasked to find and implement a new water supply within a 9-month period to comply with minimum pool pumping restrictions and dry intake conditions at Lake McClure during a drought emergency. A feasibility study was prepared and the drilling of groundwater wells was selected as the best fit. The project was funded with $2M in project grant funding from six different funding sources. Services included preparation of preliminary, drilling and site equipping designs for each new well, and construction oversight.

2010 and 2015 Urban Water Management Plans, Tuolumne Utilities District, Sonora, CA *Project Manager* Responsible for the completion of the 2015 and 2010 Tuolumne Utilities District (TUD) Urban Water Management Plan (UWMP) required by the Urban Water Management Planning Act. This project involved close coordination and collaboration with District staff to evaluate water supply reliability conditions, evaluation of SBX7-7 water use reduction targets, and development of a conservation plan reflecting the strategy that will be employed by District staff over the next decade to meet the targets. Primary issue with the 2010 UWMP project was meeting the tight schedule to demonstrate compliance with the UWMP Act to support the District's IRWM planning grant. The 2010 UWMP was approved by the Department of Water Resources (DWR) without revision meeting the planning grant requirements and schedule. The 2015 UWMP has been documented by DWR as meeting the requirements; however, it is still under their review.

Treated Water System Optimization Plan, Tuolumne Utilities District, Sonora, CA - *Design Engineer and Quality Control Review (2018) -* Kennedy/Jenks Consultants worked as an extension of TUD's staff to develop a Treated Water System Optimization Plan (TWSOP) to map out a vision to consolidate and improve the existing 19 separate water systems into the most optimal overall water system(s) to operate and maintain. The work included completing a condition assessment of the existing WTPs and water infrastructure; developing of consolidation alternatives to optimize the water system for the next 50-year planning period; completing hydraulic modeling updates of the existing model and overseeing the development of the consolidation alternative models and review of the results; developing an initial CIP for the necessary improvements over the next 20 years; and beginning the draft TWSOP. Tracie lead the update and consolidate the TUD's 7 hydraulic water models into one model and development of future water system consolidation scenarios. This TWSOP project has reconvened in 2018 and is almost complete with Tracie performing quality control services for the project team.

Tuolumne-Stanislaus Integrated Regional Water Management (IRWM) Planning Grant Application, Tuolumne Utilities District, Sonora, CA - *Project Manager* - Responsible for completion of the fast-track Tuolumne-Stanislaus IRWM Proposition 84 Planning Grant Application in a little over one month. Tracie was responsible for coordinating over 20 stakeholder and preparation all required grant application components to meet Department of Water Resource requirements. Although this grant application was prepared under a very tight schedule with a high level of completion from other IRWM regions for available funding, the high scoring application allowed the Tuolumne-Stanislaus Region to receive the full grant request of $636,380. Tracie also provided stakeholder and technical support for the development of Tuolumne-Stanislaus IRWM Plan.

TUD-Grand Yosemite National Water Supply Assessment Update, Tuolumne Utilities District, Tuolumne, CA – *Project Manager* – Provided technical assistance to the District in evaluating the SB610 Water Supply Assessment (WSA), required for CEQA documentation, for the Grand Yosemite National Golf and Wetland Preserve (development). Services included review and update of District water supply assumptions, calculation, and analysis of availability; review of developer-revised demand projections for the new development; and evaluation of the adequacy of water supply to meet the needs of the development. Work was documented in a WSA report and submitted to TUD.

Water System Transmission Pipeline, Amador Water Agency, Amador, CA - *Project Engineer/Project Manager* – As Project Engineer, Tracie provided services for 30-inch diameter raw water transmission pipeline design, bid and construction. She prepared preliminary design report, design drawings, specifications, cost estimates, and permitting and coordinated easement acquisition for the new 9-mile long welded steel pipe transmission main. As the Project Engineer, Tracie lead the onstruction

management administration of this project included preparation of bid addendum documents, response to requests for information, submittals review, preparation of change orders, and oversight of the development of record drawings.

Intake Spring Water System Replacement Project, McCloud Community Services District, McCloud, CA - *Project Engineer* - Provided funding acquisition, design, bid, and construction administration support services. Assisted in the development of a pre-design report that evaluated the District's existing water supply systems, design of 19,000 LF of new 14-inch and 16-inch ductile iron transmission main to replace an old and deteriorated 10-inch redwood pipeline, and design of a 1.2-mg steel water storage tank.

Jamieson Canyon Water Treatment Plant Upgrade and Expansion, City of Napa, Napa, CA - *Project Engineer* – Ms. Mueller developed an open channel hydraulic analysis of existing facilities for planned capacity increase of the City's existing 35-year-old water treatment plant. Also developed treatment process hydraulic model using Microsoft® Excel which was used to analyze new facilities to increase capacity from 12-mgd to 30-mgd, which was later fully designed by the Kennedy/Jenks Consultant team.

East Elk Grove Groundwater Treatment Plant and Storage Tank, Sacramento County Water Agency, Sacramento, CA - *Project Engineer* - Prepared plans, specifications and cost estimates for the design of two water wells, a groundwater treatment plant, 3.5-mg steel storage reservoir, booster pumping plant, and 20-inch to 24-inch diameter offsite raw and treated water ductile iron pipelines. Ms. Mueller also provided support during bidding and construction. The initial plant capacity was approximately 4.3 mgd with an ultimate capacity of 11 mgd.

Ebbetts Pass Water System Analysis, Calaveras County Water District, San Andreas, CA - *Design Engineer* - Modeled and helped analyze the Ebbetts Pass potable water transmission and distribution system. Services included data collection, H20Net® computer modeling and simulation of the system, and recommendations for improvements to increase pressure and flow capacity throughout the system, which included 64 pressure zones in a rural area of the Sierra Nevada Mountains.

Water System Master Plan, City of Placerville, Placerville, CA - *Project Engineer* - Developed a new WaterCAD® water system model for the Master Plan. The model was developed to be incorporated into the City's GIS. Specific project tasks included building the water model, assessing water demands, performing hydrant flow testing, calibrating the water model, developing appropriate alternatives and scenarios, evaluating existing facilities, and proposing facility improvements. Also developed a modeling report and assisted in the development of the master plan report. Following the development of the master plan, continued to analyze scenarios for the City based on multiple proposed developments improvements.

San Jose-Santa Clara Regional Wastewater Facility (RWF)'s Facility Wide Water System Improvements, City of San Jose, Water Pollution Control, San Jose, CA - *Design Manager* - The Facility-Wide Water Systems includes condition assessment and development of four hydraulic water system models and analysis, alternative analysis, design, bid and construction support services. Replacing and optimizing aging pipes, valves, meters, and other ancillary equipment and expanding existing infrastructure.

Freeport Pipeline Facilities, Freeport Regional Water Authority, Sacramento, CA - *Project Engineer* - Led the design of the Segment 1 design consisting of 5.1 miles of 84-inch diameter raw water pipeline and including 5 underground tunnels, 2 main drain structures, and over 25 easements. Led utility coordination, and permitting effort for entire four-phase pipeline consisting of 17 miles of 84-inch to 66-inch diameter pipe requiring 23 permits for installation.

Tim Williams, P.E.

QC Reviewer and Technical Advisor

Education
BS, Engineering, University of California, Davis, 1976

Registrations
Professional Civil Engineer, California (39104)
Professional Civil Engineer, Oregon (11847)
Professional Civil Engineer, Arizona (28340)

Memberships/Affiliations
American Water Works Association
CA/NV AWWA, Past Chair
CA/NV AWWA Engineering & Construction Committee
CA/NV AWWA Pipeline Rehabilitation Committee
CA/NV AWWA Water Well Technology Committee
CA/NV AWWA Student Chapter Committee
Central Valley Clean Water Association - Collection System Committee

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Professional Summary
Tim Williams has extensive experience as a project manager, quality control reviewer, and project engineer for the planning, design, and construction management of water and wastewater systems. He has completed extensive work in the foothills for various water and wastewater public agencies. These projects have included planning projects including master plans, facility plans, regional plans, condition assessment and asset management of infrastructure; design and construction management of treatment, pump and lift stations, storage, and pipelines; and securing and managing multiple sources of grant and loan funding.

Project Experience
Water Treatment Consolidation Study, Tuolumne Utilities District, Sonora, CA – *Project Manager* – Managed the project team that worked with the District staff and board to select the preferred regional water treatment consolidation alternative. Working as an extension of the District's staff developed seven potential consolidation alternatives to take the District's current 11 water treatment plants down to four regional water treatment plants. The study included developing and evaluating the seven alternatives and conducting an initial screening workshop to select the four most viable alternatives. This was followed up by conducting site visits, workshops, preliminary construction cost estimates, and a final screening of these four alternatives to select the preferred water treatment consolidation alternative.

Twain Harte Interceptor Condition Assessment Work Plan, Tuolumne Utilities District, Sonora, CA – *Technical Advisor/QC Reviewer* – Providing technical advisor and QC review to develop the Twain Harte Interceptor Condition Assessment Work Plan. The District was proceeding with conducting a condition assessment of the Twain Harte Interceptor, but realized they needed outside resources to be able to safely conduct the assessment field work. The 6.9 mile long 12" and 10" AC interceptor has 14 inverted siphons along the alignment. In addition, it was originally planned to only convey primary treated wastewater from the Twain Harte WWTP. Over the years as septic systems failed along the alignment the District allowed 350 direct connections by gravity (290 each) or pressure (60 each) to the interceptor. The age and type of pipe, no bypass system in place, and inverted siphons caused the District to pause. That is where Kennedy/Jenks entered as we will develop a plan for cleaning the interceptor and conduct a condition assessment of the interceptor assets (inverted siphons and gravity pipelines, manholes, air release valves, and blow offs). We are developing a detailed work plan to accomplish the District's goals in a safe, cost effective, and

adequate manner. The District plans to contract out for the condition assessment work. The data will then be used to determine what improvements will be needed to provide an adequate, reliable, and long-term wastewater conveyance system.

Tuolumne County Law and Justice Center (L&JC) Wastewater Screening Facility, Tuolumne Utilities District, Sonora, CA – *Technical Advisor and QC* – Providing technical advice on the basis of design/selection and field visit to locate a new wastewater screening/compactor and possibly grinding station upstream of TUDs sewer lift station. The County jail/juvenile hall is part of the L&JC, which has caused failure of the lift station due to excessive debris. Also providing QC review of the design documents.

Wastewater Treatment and Disposal System Feasibility Study, Tuolumne Utilities District, Sonora, CA - *Project Manager* - Developed a plan for expansion and improvements of existing regional wastewater treatment and reuse facilities for meeting current and projected growth and wastewater compliance regulations over the next 40 years in compliance with SWRCB small community grant requirements. An evaluation of the TUD Regional WWTP condition, operational and capacity challenges by process and recommendation for improvements was completed. Alternatives for improving the regional wastewater reuse and disposal facilities were developed, which included both land application and surface water discharge, evaluated and recommended a $32 million, phased improvement alternative to continue with all land disposal will be the plan for moving forward over the next 40 years. These alternatives included improvements at the WWTP, a new 600 acre-ft reclamation storage reservoir, expansion of the reclamation system with 400 acres of land application sites, relining of existing storage, and adding deadpool pumping to an existing Quartz reclaimed storage reservoir. The developed various alternatives for treatment, disposal and reuse including partial surface discharge with land application and full land application of treated wastewater. He conducted collaboration events between the other regional members, Jamestown Sanitary District (JSD) and Twain Harte Community Services District (THCSD). This included collaboration and coordination with key staff members and board members, including public meetings and a joint meeting between all three boards to obtain approval of the Feasibility Study. In addition, he completed a California Municipal Financial Report for TUD, JSD, and THCSD to evaluate long-term cost impacts to rate payers for funding the improvements.

Copper and Zinc Compliance Extension Request, Tuolumne Utilities District, Sonora, CA - *Project Manager* - Completed a successful justification and request to the RWQCB for a four-year compliance time extension for compliance with copper and zinc CTR regulations.

Treated Water System Optimization Plan, Tuolumne Utilities District, Sonora, CA - *Project Manager* - Kennedy/Jenks Consultants is working as an extension of TUD's staff to develop a Treated Water System Optimization Plan to map out a vision to consolidate and improve the existing 19 separate water systems into the most optimal overall water system(s) to operate and maintain. Managed Kennedy/Jenks efforts including completing a condition assessment of the existing WTPs and water distribution pump stations, hydropneumatic stations, and storage tanks; developing of consolidation alternatives to optimize the water system for the next 50 year planning period, completing hydraulic modeling updates of the existing model and overseeing the development of the consolidation alternative models and review of the results; developing a CIP for the necessary improvements over the next 20 years; and producing the Treated Water System Optimization Plan. Tim was also responsible for presenting the findings to the TUD Board and Committees to obtain their input and buy-in.

2010 Tuolumne-Stanislaus Integrated Regional Management Planning Grant Application, Tuolumne Utilities District, Sonora, CA - *Principal-In-Charge* - Completed the fast-track grant application for the Tuolumne-Stanislaus IRWM Group in a little over a one-month period. As PIC attended coordination meetings and weekly conference calls to present the progress of the application, identified data gaps and generated creative means to fill those gaps, and reviewed the draft application to produce a comprehensive application that the 20 stakeholders unanimously approved. In addition, reviewed, updated and finalized the cost sharing estimates to support the $1 million grant request and in-kind contribution. He is continuing as PIC for the IRWM Plan development attending stakeholder meetings and reviewing the Plan to ensure that the Group's expectations are met.

Tuolumne-Stanislaus Integrated Regional Water Management Plan, Tuolumne Utilities District, Sonora, CA - *Technical Reviewer* - Completed the fast-track grant application for the Tuolumne-Stanislaus Integrated Regional Water Management Group in a little over a one-month period. As PIC attended coordination meetings and weekly conference to present the progress of the application, identify data gaps and generated creative means to fill those gaps, and reviewed the draft application to produce a comprehensive application that the 20 stakeholders unanimously approved. In addition, reviewed, updated and finalized the cost sharing estimates to support the $1 million grant request and in-kind contribution. Currently continuing as PIC as the Plan is being developed over the next two years.

Cr6 Compliance Water System Improvements, City of Newman, Newman, CA - *Project Manager* – Managing the preliminary design and design of the City's SWRCB SRF planning grant to replace a City well that is exceeding Cr6 MCL by drilling and equipping a new 2,000 gpm Well #10, 1.5 MG water storage tank, 3,500 gpm booster pump station, disinfection system, and 8- to 16-inch water transmission main extension. The site improvements include site grading and paving, fencing, electrical service, and landscaping.

North Orchard Upper Pressure Zone Reservoir Project, City of Vacaville, Vacaville, CA - *Project Manager* – Managing the preliminary design of the City's optimization of three upper pressure zones and the Main Zone configuration to improve water service supply and pressure to established service area in the northwest section of the City. The preliminary design report evaluates the consolidation of the North Orchard, Hidden Valley, and Tranquility pressure zones into one Upper Pressure Zone to be served by a consolidation and upsizing of water storage facilities. Water storage will consist of two 1.0 MG prestressed concrete reservoirs that will replace three small bolted steel tanks and the existing Wykoff booster pump station will be modified to deliver water up to the higher in elevation storage reservoirs and increase capacity to meet the increased water demands and fire flow. Pressure reducing/sustaining valves will be added to intertie the new Upper Pressure Zone and Main Zone.

2000 Sewer Master Plan, McCloud Community Services District, McCloud, CA - *Project Engineer* - Main author of the sewer master plan report, completed in association with Schlumpberger Consulting Engineers, to evaluate upgrading the sewer system to modern industry standards. Conducted a public hearing on the report results. The report recommended replacement of about 55,000 LF of existing sewer with new sewer, rehabilitating about 6,000 LF of existing sewer, and reconnecting all 700 existing businesses and residences to the new sewer system. Also responsible for designing and evaluating results of an infiltration/inflow study, evaluating improvements to the existing 60,000-LF wastewater collection system, recommending improvements to the sewer system, and developing a preliminary design and Capital Improvement Plan.

Sewer System Replacement, McCloud Community Services District, McCloud, CA - *Project Manager / Project Engineer* - Design, bid, and construction management of the $11 million project. Responsible for completing the preliminary design report, directing and overseeing design of 55,000 LF of 6- to 15-inch sewer system improvements in three Phases, and directing and overseeing the bid and construction management of the project, including full time resident inspection/engineering. Completed Master Plan to evaluate aged, very poor condition of existing 60,000-LF wastewater system. Master Plan included infiltration/exfiltration/inflow study, condition assessment (CCTV inspection), capacity assessment, new sewer system alignment, and CIP. Also assisted the District in securing grant and loan funding from multiple sources (e.g., State Water Resources Control Board, Rural Development, Economic Development Department, and County Community Development Block Grant Program), especially legislative grant funding of $1 million to pay for the replacement of private sewer lateral construction not eligible for agency funding assistance. Organized and conducted two very successful public hearings. He was responsible for design of the sewer system replacement project including conventional open cut excavation for a majority of the system, and also jack and bore at two creek crossings and under a detached garage. Also responsible for developing bid documents and overseeing construction of private sewer laterals to serve buildings on private property.

Intake Spring Water System Replacement Project, McCloud Community Services District, McCloud, CA - *Project Manager* - Managed the preliminary design, design, and construction management for 18,000 LF of 14 and 16-inch transmission main to replace a deteriorated 10-inch redwood pipeline. The project included environmental documents and mitigation measures, permitting, structural improvements for spring water source protection, replacement of an open water storage tank with a new 1.2-MG steel ground level water storage tank, three new flow meters, vaults, and a telemetry monitoring system. Also conducted a study with Kleinschmidt Consulting for the feasibility to add in-line energy recovery system. The preliminary design included site layout and facilities along with over 1 mile of power transmission system to connect to the high voltage grid. The pipeline design included turnouts for the future energy recovery system. Also instrumental in obtaining $4.5 million in DWR grant funds for the project.

Water Master Plan and Water and Sewer Construction Standards, McCloud Community Services District, McCloud, CA - *Technical Advisor* - responsible for review of the District's first water system master plan, which includes the projection of future development, comparison of water supply and demand, evaluation of the existing water system, and development of a water system model, capital improvement plan and water connection fees.

Elk Springs Improvement Project, McCloud Community Services District, McCloud, CA – *QC Reviewer and Technical Advisor* - Preliminary design and technical review of the final design. Project included capping the spring water source, replacing piping and valving, improving security, and adding flow monitoring. Also instrumental in obtaining $300,000 in DWR grant funds for this project.

Jennifer (Lau) Larsen, P.E.

Civil Engineer/Planning/Compliance

Education
BS, Civil Engineering, University of California, Davis, 2009

Registrations
Professional Civil Engineer, California (81220)

Professional Summary

Jennifer Larsen is a registered civil engineer with a range of experience in water resources planning and design, increasing in responsibility through quality control reviewer, project engineer, deputy project manager, and project manager. Throughout her career she has worked on projects through planning, preliminary design, permitting, and design phases for municipal clients through California. Projects include grant applications and grant management, water supply assessments, regional water plans and master plans, design of treatment and storage facilities, and groundwater supply.

Project Experience

Drought Emergency Services, Lake Don Pedro Community Services District, CA – *Project Engineer* – Jennifer assisted in the successful development and submittal of an application for the 2015 Proposition 84 IRWM 2015 Implementation Grant in support of District activities to ensure water supply reliability. The District was awarded $1,001,547 for water service line replacement, a water use efficiency program, and construction of two new wells. Responsibilities included coordinating communication between project proponents as well as internal team coordination, developing content for application (project justifications, workplans, schedules, and budgets), and ensuring application completeness.

Sewer System Management Plan Review, Twain Harte Community Services District, CA – *Project Engineer/Deputy Project Manager* – Responsibilities include reviewing the current SSMP for compliance with the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems and the State Water Resources Control Board Monitoring and Reporting Program requirements. Based on the review, recommendations to update the SSMP will be documented in a technical memorandum.

Yosemite-Mariposa Integrated Regional Water Management Plan Preparation, Mariposa County Resource Conservatory, Mariposa, CA – *Staff Engineer* – Participated in site visits and documented the needs and conditions of 6 separate small water systems within the IRWM Plan boundary. Technical memorandums were developed for each participating small water system documenting existing conditions, recommended projects and technical justification, and preliminary implementation schedules and budgets for the purposes of developing the information needed to submit for future funding applications.

Grand Yosemite National Water Supply Assessment Update, Tuolumne Utilities District, Tuolumne, CA – *Project Engineer* – Provided technical assistance to the District in evaluating the water supply assessment, required for CEQA documentation, for the Grand Yosemite National Golf and Wetland Preserve (development). Services included review and update of District water supply assumptions, calculation, and analysis of availability; review of developer-revised demand projections for the new development; and evaluation of the adequacy of water supply to meet the needs of the development.

2015 UWMP Update, Tuolumne Utilities District, Tuolumne, CA – *Project Engineer* - Worked alongside District staff to prepare the 2015 Update to the District's existing 2010 UWMP. Tasks included updating population, demand and supply projections, SBX7-7 baseline and target water demands, and demand management measure implementation reporting.

South Y Feasibility Study of Remedial Alternatives, South Tahoe Public Utility District, CA – *Deputy Project Manager* – Assisting in the coordination of project team and subconsultants to conduct a field investigation involving the design and construction of a test well in the South Y area of South Lake Tahoe. The test well will inform a groundwater model and a feasibility study that will evaluate alternatives to address PCE impacting the groundwater supply. This project is grant funded, therefore additional responsibilities include ensuring that subconsultant contracts meet grant terms, preparing workplans and other deliverables for review by the grant manager, and submitting invoices and progress reports for grant quarterly reporting.

West Lake Tahoe Regional Water Treatment Plant Phase 2, Tahoe City Public Utility District, Tahoe City, CA - *Project Engineer* – Assisting in the design of the WTP building, coordinating and reviewing data from the bag filter pilot test, and assisting in permitting documents. Additional responsibilities include assisting the project manager with project budget and schedule updates, as well as document management. The project design includes submersible lake intake pump station and controls with standby power generator, lake intake raw water pipeline, pre- and post-chlorination with contact tank, membrane filtration, UV disinfection, bag filter backwash treatment process, and treated water storage underground clearwell and pump station.

Cr6 Compliance Water System Improvements, City of Newman, Newman, CA - *Project Engineer* – Assisting in the development of the preliminary design and 30% design of a well to replace an existing well that is exceeding Cr6 MCL. Preliminary design consisted of evaluating the City's water supply and demands, existing infrastructure, and potential project phasing. The design includes drilling and equipping a new 2,000 gpm Well #10, 1.5 MG water storage tank, 3,500 gpm booster pump station, disinfection system, and 8- to 16-inch water transmission main extension.

Water System Master Plan, Linda County Water District, CA – *Project Engineer* – The Water System Master Plan will provide the District with a road map and Capital Improvement Plan (CIP) for the next 10 years. The work in this project includes the development of a water distribution system hydraulic computer model as a tool for analysis. Jennifer developed the current and projected demand estimates for the Master Planning period.

North Orchard Upper Pressure Zone Reservoir Preliminary Design – *Deputy Project Manager/Project Engineer* – Project involves providing preliminary design (30%) services to the City of Vacaville to optimize the City's existing water pressure zones to more efficiently and effectively provide high quality water at a reasonable pressure to all customers. The intent is to be able to eliminate the use of three existing reservoirs and associated pump stations by identifying a new location for water storage tanks, upgrading existing pump stations, new transmission mains, and new pressure reducing stations. Jennifer serves as the internal project manager for the project with duties that include managing budget, schedule, and invoicing, and assisting in client and subconsultant coordination. Other duties include assisting in the preliminary design of the new reservoirs and modification of existing pressure zones and pump station to optimize the water service area as well as contributing to the preliminary design report.

Chantelle Garvin, EIT

Staff Engineer

Education
BS, Civil Engineering, California State University, Sacramento, 2016
AS, Engineering, American River College, 2014

Registrations/Certifications
Engineer-in-Training, California
Construction Document Technologist, CSI

Professional Summary

Chantelle has experience throughout Sacramento, Yolo, and Calaveras Counties. She spent three years as an engineering intern for Sacramento Suburban Water District where her responsibilities primarily focused on water main replacement projects. Her experience with local water and wastewater systems will be invaluable to the team in various aspects of GSP Preparation.

Chantelle Garvin has a Bachelor's degree in civil engineering along with hands-on experience in water resources engineering including the preparation of multiple GSP planning grant applications and IRWM Plan updates. Prior to joining Kennedy/ Jenks, she held an internship for a public water utility working on projects involving water system planning, specifications, design, and construction. Chantelle has worked on a variety of projects, including wastewater system planning, design, condition assessment, and grant writing.

Project Experience

Facilities Condition Assessment , Delta Diablo Sanitation District, Antioch, CA – *Staff Engineer* – for review of background data to support the desktop analysis and prepare for the field condition assessment effort. Site visits to photograph and inspect above-ground assets and identify challenging access points for CCTV. Assisted in evaluating the District's wastewater conveyance facilities, including specific gravity sewer mains and interceptors and sewer manholes.

Hydraulic Water Model, Linda County Water District, Linda, CA – *Staff Engineer* – Assisted in the development of a new hydraulic model using InfoWater software, including a geometric network model of the District's water distribution system, development and allocation of average annual demands, elevations, and other pipeline and facility attributes.

Water System Master Plan, Linda County Water District, Linda, CA – *Staff Engineer* – for development of a comprehensive plan that enables the District to accommodate future growth and continue to cost effectively provide a reliable supply of water to its customers. Current water usage rates and growth planning data was used to evaluate the distribution system , identify deficiencies and make recommendations for incorporation into the Water System Master Plan Capital Improvement Plan. The work in this project includes the development of a hydraulic computer model that was used as a tool to analyze existing system vulnerabilities and evaluate potential mitigation measures to reduce or eliminate them.

Pure Water Monterey System Expansion-CEQA Support Services, Monterey One Water, Marina, CA – *Hydraulic Modeler* – Assisted in the development of the expanded system using WaterCAD software and performed a hydraulic modeling analysis of the expanded system to understand if there are any constraints to maintaining adequate pressure and flow for injection capacity when the recycled water irrigation system is also operating at peak flow rates.

Facilities Condition Assessment , Delta Diablo Sanitation District, Antioch, CA – *Staff Engineer* – for preparation of a work plan to guide contractor in cleaning and inspection of the District's inverted siphon segments. Preparation of the work plan includes a two-day joint field inspection of the inverted siphon segments to review terrain and accessibility for construction and staging, access, potential bypass opportunities, current operational capabilities, traffic control needs, proximity to residents, and locations, number and types of direct connections and estimated flow for each connection to the interceptor.

Westside IRWM Plan Update, Solano County Water Agency, Vacaville, CA – *Staff Engineer* – for preparation of IRWM Plan Update compliant with 2016 IRWM Plan standards in preparation for Proposition 1 IRWM Implementation grant application. The IRWM Plan Update specifically included current climate change content, confirmed groundwater quality data, updated project lists, and included new water planning documents including the Yolo County Storm Water Resources Plan. Drafted updated plan sections including planning area, land use and water plans, water quality and prepared updated IRWM standards checklist.

Proposition 1 – Groundwater Sustainability Plan (GSP) Grant Application, Solano Collaborative, Solano County Water Agency, Vacaville, CA – *Staff Engineer* **-** for preparation of the Work Plan detailing of 16 tasks, integrating the Stakeholder Coordination and Engagement with Technical Data and Analysis to develop a compliant GSP and Section 5. Budget; coordinated with other consultant partners and Solano Collaborative Technical Advisory Committee. The Solano Collaborative was awarded $1 million grant to prepare to prepare a compliant GSP for the basin by 2022.

Prop. 1 Storm Water Resource Plan for Yolo County, Yolo County Flood Control and Water Conservation District/Yolo Water Resources Association, Woodland, CA – *Staff Engineer* **–** Part of the development team for the Storm Water Resource Plan for Yolo County in conformance with Proposition 1 Guidelines. Duties include preparing materials for and participating in Stakeholder/Outreach meetings, drafting sections, and assisting in project development/benefits quantification.

La Contenta and Copper Cove Wastewater Master Plan Updates, Calaveras County Water District, San Andreas, CA - *Staff Engineer* **-** Assisted in the assessment of existing wastewater treatment system processes and analysis of collection, treatment, and disposal alternatives to meet projected demands.

Pleasant Grove Wastewater Treatment Plant Expansion, City of Roseville, Roseville, CA - *Staff Engineer* **-** Assisted in completing the CWSRF Financial Assistance Application for the City of Roseville's Expansion and Energy Recovery Project. The application includes a Technical Package, Environmental Package, Financial Security Package and a Financial Budget Approval Package. Assisted in drainage calculations to size storm drain infrastructure in compliance with City of Roseville Design Standards.

12-inch Sewer Force Main Condition Assessment, Rancho Murieta Community Services District, Rancho Murieta, CA - *Staff Engineer* **-** Assisted in initial risk assessment, condition assessment, useful life calculations, and rehabilitation plan of an existing 12-inch sewer forcemain to plan and budget for future recycled water production.

Jake Hanson, E.I.T.

Staff Engineer

Education
BS, General Engineering, Degree Institution, California Polytechnic State University, San Luis Obispo, 2015

Registrations
Engineer-In-Training, California

Professional Summary

Jake Hanson is an E.I.T. and holds a Bachelor degree in General Engineering from California Polytechnic University, San Luis Obispo. Jake brings experience from a variety of areas including well equipping and design, water treatment plant design, and hexavalent chromium treatment research.

Project Experience

Final Design of Centralia Booster Pumps C and D, Golden State Water Company, Centralia, CA – *Project Team Member* - Aided in the design of a new booster pump station. Developed an engineering cost estimate for the project.

Final Design of Centralia Well 7, Golden State Water Company, Centralia, CA – *Project Team Member* - Aided in the design and development of a new well. Completed an engineering cost estimate for the entire project.

Hexavalent Chromium Management Study, City of Dixon, Dixon, CA – *Project Team Member* - Researched various hexavalent chromium treatment processes. Provided a 20-page report detailing various treatment options.

Design and Construction Support Services for Equipping of the Madison Well, Fair Oaks Water District, Fair Oaks, CA – *Project Team Member* - Designed the layout for the chlorine room. Provided assistance in designing the entire well site.

Design Support Services for Hexavalent Chromium Treatment of Well #16, Well #16 Improvements Project, City of Vacaville, Vacaville, CA – *Project Team Member* - Aided in the design and development of a hexavalent chromium treatment system for the existing Well #16. Provided support by completing headloss calculations and developing an engineering construction cost estimate.

WTP Flocculation/Sedimentation Basin 2015 Improvements Project, Pipeline Conveyance Project, San Juan Water District, Granite Bay, CA – *Project Team Member* - Designed the new sludge system being implemented. Provided design support for new flocculation equipment.

Design Support Services for Hexavalent Chromium Treatment of Well #14, Well #14 Improvements Project, City of Vacaville, Vacaville, CA – *Project Team Member* - Aided in the design and development of a hexavalent chromium treatment system for the existing Well #14. Provided support by completing headloss calculations and developing an engineering construction cost estimate.

Javier Rios Farias, P.E.

Civil Engineer

Education
BS, Civil Engineering, University of the Pacific, 2014
MS, Engineering, University of the Pacific, 2014

Registrations
Professional Civil Engineer, California (C 86012)

Certifications
Lateral Assessment and Certification Program, Certification Issuer
Manhole Assessment and Certification Program, Certification Issuer
Pipeline Assessment and Certification Program, Certification Issuer

Memberships/Affiliations
American Society of Civil Engineers
Society of Hispanic Professional Engineers
Tau Beta Pi

Professional Summary
Javier has experience working on projects involving planning and design of pipelines, signal and electrical ductbanks; groundwater treatment, water, wastewater, and stormwater infrastructure; condition assessment, wastewater treatment and conveyance; and engineering support during construction. Javier is currently the Project Manager for the Linda County Water District On-Call engineering contract. He has 10 projects underway that he is overseeing or managing.

Project Experience
Water System Optimization Plan, South Tahoe Public Utility District, South Lake Tahoe, CA - *Engineering Support* - Prepared a study which required working closely with the District to evaluate the condition of the existing critical assets, developing a level of service criteria, evaluating future regulatory impacts to the water system, using evaluation criteria and risk assessment to determine the necessary improvements to optimize the water system for the next 20 years, as well as developing a CIP.

On-Call General Engineering Services, Linda County Water District, CA – *Engineering Support* – Kennedy/Jenks currently holds an on-call general engineering services contract with the Linda County Water District. This contract allows Kennedy/Jenks to perform ongoing engineering services as the District Engineer. Under this contract, Kennedy/Jenks has 10 current task orders related to water and wastewater infrastructure.

Well #17 Improvements, Linda County Water District, CA – *Engineering Support* – Provided improvements for the equipping and treatment of an existing drilled well, also known as Well 17, as well as the construction of booster pump stations and a storage tank facility. These improvements will increase the District's capability of meeting maximum day water demands with acceptable quality water, increase the reliability of the existing water supply system, and allow for future growth.

Water System Master Plan, Linda County Water District, CA – *Engineering Support* – The Water System Master Plan will provide the District with a road map and Capital Improvement Plan (CIP) for the next 10 (near-term) to 20 (long-term) years. The work in this project includes the development of a water distribution system hydraulic computer model as a tool for analysis.

Echowater Project Site Preparation Project, Sacramento Regional County, Elk Grove, CA – *Staff Engineer* - Assisted in the development and review of design documents, prepared technical memos, created cost estimates, and prepared technical specifications and designs for the $40 million site preparation project. The project included roads, buildings, site security, utilities, and new site process piping.

EchoWater Project Site Preparation Project - Engineering Services during Construction, Sacramento Regional County, Sacramento, CA - *Engineering Support* - Provided assistance with engineering support services during construction. This included redesign of pipeline alignments, signal and electrical ductbanks and pipeline connections. Work also included attendance of construction meetings to discuss the feasibility of proposed design under verified field conditions as well as the development of cost estimates and revised design documents for changes due to unknown field conditions. Lastly, provided contractor support through response of Requests for Information and submittals.

Camp Roberts Main Garrison Wastewater Treatment Plant Repair, California Air National Guard, Camp Roberts, CA - *Engineering Support* - Provided assistance with engineering support services during construction. This included relocation and redesign of trickling filter effluent pumping station, design of pipeline connections, pipeline repair plans, construction meetings and contractor support through response of Requests for Information and submittals.

Primary Effluent Filtration as Intermediary Wastewater Treatment Step, California Energy Commission, Sacramento, CA - *Field Technician* - Responsible for monitoring and weekly process testing and adjustment of piloting conditions of five separate filtration technologies to measure the reduction in aeration power requirements utilizing filtration of primary clarifier effluent. This work included coordination with testing laboratories, manufacture representatives and Linda County Water District WWTP operators. Piloting strategies focused on extreme performance and upset conditions to establish full-scale design criteria. Work also included office engineering services, field plant operations, coordination and data analysis.

Lake Don Pedro Drought Emergency Services, Lake Don Pedro CSD, La Grange, CA - *Engineering Support* - Participated in site visits to determine potential well drilling location while working with local well drilling contractor and hydrogeologist. Assisted in obtaining well drilling permits as well as preparation of grant funding and emergency funding applications. Work also included preparation of aerial figures mapping out proposed well piping connection to District treatment facility and cost estimates for alternative pipe alignments.

Zoe Wu

Staff Engineer

Education

BS, Civil Engineering: Environmental & Hydrology, Rice University, 2015

MS, Civil and Environmental Engineering, University of California, Davis, 2017

Years of Experience

1 year

Professional Summary

Zoe Wu is staff engineer with experience in both water and wastewater funding, planning, design and pilot projects.

Project Experience

Drought Emergency Services, Lake Don Pedro Community Services District, CA – *Staff Engineer* – Zoe has assisted in development of grant administration documents for project closeout.

Treated Water System Optimization Plan (TWSOP) – Water Treatment Consolidation Evaluation, Tuolumne Utilities District, CA – *Staff Engineer* – Zoe has supported the team with the completion of the Water Treatment Consolidation as part of the Treated Water System Optimization Plan (TWSOP) to evaluate solutions for the District to optimize and consolidate 11 separate treated water systems owned and operated in the District's service area.

Water System Master Plan, Linda County Water District, CA– *Staff Engineer*– Zoe is assisting the team with a Water System Master Plan that will provide the Linda County Water District with a road map and Capital Improvement Plan (CIP) for the next 10 years. The work in this project includes the development of a water distribution system hydraulic computer model as a tool for analysis.

Primary Effluent Filtration as Intermediary Wastewater Treatment Step, California Energy Commission, CA– *Staff Engineer*– Zoe is assisting the team with a Pilot-scale demonstration of biofiltration as an advanced primary treatment (APT) method to reduce total organic load at wastewater treatment plants (WWTPs), before the secondary aerated activated sludge treatment processes, to achieve substantial energy and water savings.

Primary Effluent Filtration as Intermediary Wastewater Treatment Step, California Energy Commission, Sacramento, CA – *Staff Engineer* – Zoe is helping to provide planning, design and engineering services during construction through a design-bid-build project delivery approach for deployment of Cloth Depth Filtration for raw wastewater filtration at the Linda Wastewater Treatment Plant.

Sandy L. Schuler, P.E.

Sr. Electrical Engineer

Education
AS, Engineering, University of Kentucky, 1977
BS, Electrical and Electronics Engineering, University of Sacramento, 1979

Registrations
Professional Electrical Engineer, California (15453)
Professional Engineer, Colorado (0050906)
Professional Electrical Engineer, Nevada (21566)
Professional Electrical Engineer, Washington (53647)
Professional Electrical Engineer, Oregon (91207PE)
Professional Electrical Engineer, Guam (1993)
Professional Electrical Engineer, Texas (128339)
Professional Electrical Engineer, Hawaii (17857)

Memberships/Affiliations
National Fire Protection Association

Professional Summary
Sandy Schuler's professional engineering experience includes project/task management, mentoring, consulting, field investigation, technical analysis, design and develop construction documents, construction services, cost estimates, technical writing, proposals, and specifications. Sandy has over 25 years of experience during which most of her projects have been in the water and wastewater industry requiring coordination and collaboration with multi-disciplinary project teams.

Typically, design starts with developing the process and instrumentation drawings, coordinating equipment/instruments with the owner, establishing SCADA and plc signals, develop the physical plans for the process and instrumentation drawings which include onelines, load analysis, pump/motor/valve/lighting/control panel wiring diagrams, site drawings, area drawings, details, coordination with utilities, editing/writing specifications, and cost estimates at multiple percentage drawing phases. At construction, work effort is reviewing submittals and answering RFIs.

Project Experience
Groundwater Replenishment Projects, GWR Injection Well Phase I, Pure Water Monterey, Monterey, CA - *Electrical Engineer/Managed Electrical/Instrumentation Team* – Groundwater Replenishment Project included wells to contain water production from the AWPF project. Electrical installation included MV Switchgear, regenerative MV VFD for 500hp back wash pumps, new buildings, test wells, and site improvements. Communications and controls incorporated new control panel to covering backwash pumps and valve controls, multiple tower transmission sites, local controls for an in-ground reservoir, and Blackhorse reservoir modification. Primary responsibilities include engineering calculations, preparing plans and specifications, coordination with utility companies, design of lighting, power, controls, door access controls, security system, instrumentation, communications, PLC and SCADA systems, code analysis, construction support, and analyzed potential power regeneration.

Filter Rehabilitation Project, San Jose-Santa Clara Regional Wastewater Facility (RWF), San Jose, CA - *Electrical Engineer* – Led the conceptual and preliminary design for refurbishing tertiary filtration which operates at an annual average flowrate of 110MGD. Three switchgears (4160V and 480V) and six motor control centers including all cabling are deemed obsolete. The design included establishing critical loads; site investigations; replacing over 120 valves with new motor actuators; and upgrading motor control centers to smart MCCs. San Jose RWF DCS system will be tied to the new switchgear, MCC, switchboards, and motorized valve actuators utilizing Modbus protocol. The next phase is 60% contract drawings.

Pure Water Monterey - Advanced Water Treatment Facility and Pump Station Project, Monterey Regional WPC, Monterey, CA - *Electrical Engineer/Managed Electrical/Instrumentation Team* - Kennedy/Jenks is providing planning and engineering services for AWPF which will initially produce up to 4 mgd of product water, with space reserved for future expansion up to 6.5 mgd. Primary electrical/instrumentation responsibilities include engineering calculations, preparing plans and specifications, coordination with utility companies, design of lighting, power, controls, door access controls, security system, wi-fi access, paging, instrumentation, communications, emergency power, and PLC and SCADA systems, code analysis, and construction support. New 21kV switchgear feeding 6.5MVA loads tied to Monterey Landfill excess co-gen power to substantial reduce the overall load

Reservoirs Nos. 1 and 2, Sonoma State University, Rohnert Park, CA - *Electrical Engineer* – Kennedy/Jenks designed the replacement of two 250k gallon storage reservoirs and added a third new 350k gallon storage tank at Sonoma State University. Primary electrical/instrumentation responsibilities include engineering calculations, preparing plans and specifications, design of lighting, power, controls, instrumentation, communications, emergency power, and PLC and SCADA systems, code analysis, and construction support.

Dominion Water and Sanitation District (DWSD) – Sterling Ranch Water Tank – Electrical and I&C Engineering, Sterling Ranch, CO - *Electrical Engineer* – The project comprised of the design of the electrical power system, instrumentation and controls, and PLC/SCADA improvements. Project electrical, instrumentation, and control elements included coordination with Excel (utilities), service pedestal and distribution, lightning protection on tank, mixer and vendor control station, control panel, level controls in tank, tank security, and fiber optics connection back to SCADA system

Tesoro Viejo WTP/WWTP and Potable Water Tank Design, Madera County, CA - *Electrical Engineer* – Kennedy Jenks was task to design Water Treatment Plant, Wastewater Treatment Plant and a remote Potable Water Tank, the raw water pipeline (from the existing agricultural filters to the WTP site), and the recycled water effluent disposal system (land area application in the vicinity of the treatment plants site) for the Tesoro Viejo Master Planned Community. Primary electrical/instrumentation responsibilities include engineering calculations, preparing plans and specifications, coordination with utility company, design of lighting, power, controls, instrumentation, communications, emergency power, and PLC and SCADA systems, code analysis, and construction support.

Linda County Water District, LCWD Well 17 Design Project, Linda County, CA- *Electrical Engineer* – A new treatment facility and storage tank located on two separate parcels of land. Primary electrical/instrumentation responsibilities include preliminary engineering calculations, preparing plans, single lines for each site, client coordination, process and instrumentation plans communications, emergency power, and SCADA block diagram.

Lincoln Oaks Storage Tank, Pump Station, and Transmission Pipeline Project –California American Water Company, Citrus Heights, Sacramento County, CA - *Electrical/Instrumentation Engineer* **-** The Planning, designing, and engineering services during construction for a new 1.5 MG water storage tank and 2,500 gpm booster pump station. Project electrical, instrumentation, and control elements included coordination with Sacramento Municipal Utility District (SMUD), new motor control center with three booster pump, VFD controlled, standby generator, load bank, control panel, OIP, flow meter, valves, flow switches, pressure switches, level controls in tank, and remote SCADA system.

Aaron A. Taylor, P.E., S.E., G.E.

Senior Structural Engineer

Education

BS, Civil Engineering, San Diego State University, 1995
MS, Structural Engineering, University of California at Berkeley, 1996

Registrations

Professional Geotechnical Engineer, California (3078)
Professional Structural Engineer, California (4671)
Professional Structural Engineer, Oregon (91066)
Professional Structural Engineer, Arizona (49987)
Professional Structural Engineer, Hawaii (16897)
Professional Structural Engineer, Nevada (15211)
Professional Structural Engineer, Washington (37266)

Professional Summary

Aaron Taylor is a registered structural engineer with more than 20 years of experience as a project engineer and project manager. He has design-bid-build and design-build experience in public works, industrial, commercial, and multi-use projects. In addition, he provides value engineering support based on his experience as a licensed contractor.

Project Experience

Floating Barge Structural Rehab, Lake Don Pedro CSD, La Grange, CA - *Structural Engineer* - Provided as-built drawings, structural calculations, and value-engineered drawing modifications based on manufacturer and District input for existing floating barge pumping unit to provide a sustainable and reliable emergency surface water supply system.

EMWD-Tank Rehabilitation Study, Eastern Municipal Water District, Antelope, CA - *Structural Engineer* - Provided condition assessment, seismic analysis, and retrofit and replacement recommendations for 4 existing welded steel tanks in high seismic zone.

Wellfield Emergency Generators, Calleguas Municipal Water District, Thousand Oaks, CA - *Structural Engineer* - Provided structural design services for the Emergency Generator Building for a new 10 MW emergency power facility serving the District's entire ASR Wellfield and onsite treatment facilities. Project includes a new Emergency Generator Building housing five 2 MW diesel engine-generators and medium voltage switchgear, 80,000 gallons of exterior fuel storage, new electrical utility switchyard, new 4 KV electrical distribution throughout Wellfields 1 and 2, new access road and site improvements associated with the new building. The masonry and structural steel building has a high clearstory with steel truss framing at the discontinuous roof, adjacent recessed fuel tank yard for spill containment, and site retaining walls.

Pleasant Grove Wastewater Treatment Plant Expansion, City of Roseville, Roseville, CA - *Structural Engineer* - Provided structural design services for a $60M expansion that will add four primary clarifiers, two gravity belt thickeners, sludge thickening building, two prestressed concrete anaerobic digesters, digester control building, pedestrian access bridge between structures, and auxiliary systems, controls and process piping. In addition, the structural work also included retrofit openings in existing concrete tanks. The project will be delivered under a design-assist procurement and includes services for planning, design, contractor procurement, and engineering services during design.

Pumping Plants Overhead Crane Rehabilitation Study, Metropolitan Water District, CA - *Structural Engineer* - Provided extensive field condition assessment, detailed structural analysis of overhead bridge crane support framing down to the foundation, seismic evaluation of the structure, and retrofit recommendations for the crane systems rated up to 60 tons pick load at 4 pump stations.

Well #16 Improvements, City of Vacaville, Vacaville, CA - *Structural Engineer* - Provided structural design for the masonry structure of the City's first Cr(VI) treatment facility. The design approach includes the concepts that will 1) provide operator user-friendly Cr(VI) treatment system to fit on existing site; 2) integrate the treatment system with existing well and chemical systems; 3) convert the sodium hypochlorite disinfection system to City-standardized onsite hypochlorite generation system; 4) determine the impacts to existing well capacity with the addition of Cr(VI) treatment.

Well 34 Equipping Design, and Wells 31 & 33 VFD Conversion Design, City of Davis, Public Works Department, Davis, CA - *Structural Engineer* - As structural engineer of record, Aaron designed the steel equipment shelter for Well 34, which included well pumping equipment, wellhead facilities, disinfection system, and site improvements. The project was designed for a conjunctive use water system by integrating surface water with the deep groundwater wells.

EID Three Lift Station Upgrades, El Dorado Irrigation District, El Dorado, CA - *Structural Engineer* - Upgrades to three aging lift stations for the El Dorado Irrigation District (EID). Working closely with EID personnel, a list of problems with each lift station was identified, and then reviewed the existing plans and site layouts to determine the construction constraints for each site. Flow data and flow projections for each lift station were also reviewed, as well as the suitability of variable frequency drive (VFD) operation to finalize the lift station design criteria. After preparing a Basis of Design Report, the team proceeded with final design of the facilities. A public outreach program was used to inform the local residents of the anticipated construction and the benefits of the lift station upgrades. Designed an in-ground emergency storage basin, removable reinforced concrete retrofit lids to existing fiberglass wetwell pump stations, masonry screen walls, and reinforced openings in existing brick buildings.

Barrick Goldstrike Processing Building, Barrick Goldstrike, Elko, NV - *Structural Engineer* - Acted as lead structural engineer with design-build team, who teamed with a third-party consulting firm and manufacturer to provide a turn-key water and chemical treatment plant for proprietary gold ore processing. Provided structural design for a three-story steel eccentrically-braced frame industrial building with heavy process equipment floor loads and complex elevated large diameter piping supports at all floors.

City of Davis Wastewater Treatment Plant Upgrade, Yolo County, California, Yolo County, CA - *Structural Engineer* - Provided final design, and construction support services for the City of Davis' Wastewater Treatment Plant Rehabilitation and Replacement Project-the first of a two-phase project to improve plant performance, reliability, and effluent quality in support of a new National Pollutant Discharge Elimination System (NPDES) Discharge Permit. The project includes significant upgrades to the existing dry pit influent pumps, which are oversized for current flows and have significant operations and maintenance (O&M) challenges. Headworks improvements included new bar screens and modifications to existing influent channels to improve scour velocity. Primary clarifier improvements included new tank chain and flight scrapers equipment. Provided design for the new dividing walls inside existing channels, new overhead retrofit monorails to hoist pumps, new openings in existing concrete walls, elevated structural steel platform for screenings, and repair strategy for deteriorated concrete including stainless steel wall panels and infill grout.

Zachary D. Harris, P.E., LEED® AP

Building Mechanical

Education
BS, Mechanical Engineering, Stanford University, 1989

Certifications
Leadership in Energy and Environmental Design (LEED), Green Building Institute

Registrations
Professional Mechanical Engineer, California (28906)

Memberships/Affiliations
American Society of Mechanical Engineers
National Fire Protection Association

Professional Summary

Zachary (Zac) Harris has a mechanical background with an emphasis in the development and design of building mechanical systems, including plumbing, HVAC, fire protection, natural gas, and compressed air systems. This experience has been garnered through professional study in the areas of HVAC and Fire Protection Engineering and the application of these practices.

Zac has additional experience in the design of water and wastewater distribution facilities. This experience covers the design of mechanical, electrical, and control systems for water and wastewater pumping stations, flow regulating stations, and storage facilities. He also has experience in the planning, development, and design of water, sewer, natural gas, and steam infrastructure systems and the development and analysis of hydraulic networks using software modeling programs. Project management efforts in this area include the preparation of feasibility studies.

Project Experience

Compost Facility Condition Assessment and Repair, City of Santa Rosa, Santa Rosa, CA - *Mechanical Engineer* - Zachary performed an assessment of exhaust system design of 40,000 sf compost handling facility and biofilter odor control system. The assessment included analysis of fan system performance, evaluation of FRP duct systems, and sampling of digestion by-product (H2S, Ammonia, and methane) gas concentrations throughout the facility.

Pleasant Grove Wastewater Treatment Plant Expansion, City of Roseville, Roseville, CA - *Mechanical Engineer* - Providing mechanical engineering services for a $50M expansion that will add four primary clarifiers, two gravity belt thickeners, sludge thickening building, two anaerobic digesters, digester control building, and auxiliary systems, controls and process piping. The project will be delivered under a design-assist procurement and includes services for planning, design, contractor procurement, and engineering services during design.

Santa Clara Valley Water District, Almaden Campus Gas Generator and Heat Recovery System, as a subconsultant to, Cynthia Easton, Architect, Sacramento, CA - *Mechanical Engineer* - Incorporated the design of a normal 900 kW natural gas-fired, electric power generator system that will enable the District to remove its Almaden Campus (approximately 150,000 square feet of office/industrial space) from PG&E's electric power system during the District's weekday operating hours. A heat recovery system will be provided for the production of both chilled water (through a 100-ton absorption chiller) and hot water for the air conditioning and heating systems of the Campus' 40,000 square foot administration building.

Wastewater Treatment Plant Upgrades, Construction Period Services, Susanville Consolidated Sanitary District, Susanville, CA - *Mechanical Engineer* - Designed plumbing (water, sewer, natural gas), heating and ventilating systems for various process facilities developed during the Treatment Plant expansion. Design responsibilities included specification and layout of standby generator set and diesel fuel system.

Water and Wastewater Infrastructure Design for the Tesoro Viejo Community Development, Tesoro Viejo, Inc., Madera, CA - *Mechanical Engineer* - Designed Plumbing and HVAC systems for small (<1000 sf) office, locker/shower, and electric power distribution facilities for separate 0.6 MGD water and 1.0 mgd wastewater treatment facilities on a common site. Provided design support for plant water pump station and distribution system. Designed separate 3,000 gpm fire pump system for fire protection throughout planned development.

Northwest Precinct Utilities Assessment, University of California, Berkeley, Berkeley, CA - *Mechanical Engineer* - Reviewed consumption data on existing steam and natural gas system, assessed existing system capability handle present-day demands. Estimated future demands based on projected growth and building usage, prepared report outlining future capital projects to accommodate planned growth.

Wastewater Treatment Plant Upgrade and Expansion, Linda County Water District, Marysville, CA - *Mechanical Engineer* - Mechanical design services for the Wastewater Treatment Plant Upgrade and Expansion.

Water Recycling Facility for the City of Fillmore, Design-Build-Operate Project, American Water Operations and Maintenance, Fillmore, CA - *Mechanical Engineer* - Mechanical design services for the Water Recycling Plant.

Yosemite Village Integrated Utility Project, Yosemite National Park, U.S. Department of Interior, National Park Service, Yosemite, CA - *Mechanical Engineer* - Managed hydraulic modeling effort and design of two sewer lift stations (600 gpm and 1,200 gpm), a 9,000 LF sewer force main, 6,000 LF of gravity sewer main, and a 150-kW standby generator system.

Harry Tracy Water Treatment Plant (HTWTP) and Storage Reservoir Geotechnical Investigation and Condition Assessment, San Francisco Public Utilities Commission, Millbrae, CA - *Mechanical Engineer* - Provided design services for mechanical process piping systems at the reservoir Chemical Mixing and Injection Vault and Treated Water Sampling Station and pumped facility drainage systems. Provided construction support services for same and for in-plant water piping systems of sizes up to 72-inch diameter.

Southeast Quadrant Utility Assessment, University of California, Berkeley, Berkeley, CA - *Mechanical Engineer* - Reviewed consumption data on existing steam and natural gas system, assessed existing system capability handle present-day demands. Estimated future demands based on projected growth of athletic department and business school facilities, prepared report outlining future capital projects to accommodate planned growth.

Lake of the Pines Wastewater Treatment Plant Expansion and Design, Nevada County, Nevada City, CA - *Mechanical Engineer* - Designed plumbing and HVAC systems for facility upgrades for plant expansion from 0.7-mgd to 3.7-mgd (peak wet weather). Specific responsibilities involved design of building systems for a 1,500 square foot office/locker room facility.

Mark Preston, R.A.

Architecture

Education
BA, Environmental Design, University of Washington, 1978

Registrations
Registered Architect, Washington (4455)
Registered Architect, California (C-22375)
Registered Architect, Texas (25218)
Registered Architect, Hawaii (16913)
Registered Architect, Oregon (ARI - 11692)
Registered Architect, Colorado (ARC.00405194)

Certifications
NCARB Certification, NCARB

Professional Summary
Mark Preston is a senior architect with demonstrated ability to lead diverse teams in the successful design and construction of a variety of private and public sector projects. His architectural experience includes space planning, cost estimating, code analysis and compliance, conceptual/final design, facilities programming, building evaluation studies, facilities renovation and modernization, long-range planning, pre-engineered buildings, and construction administration.

Mark is an experience project manager with skill in overseeing teams of in-house production staff and coordinating subconsultants for successful project completion on time and within budget. He is familiar with various design processes for both private and public sector projects, and has provided plan review assistance with local county building departments. He has authored reports on facilities/program analyses and long-range building evaluation studies, and regularly prepares clear, concise construction drawings and specifications. He also provides full construction administration support, including pre-construction meetings with general contractors, owners, and major subcontractors; site reviews and progress meetings; change order negotiations; documentation of work in progress; compilation of as-built drawings and punchlists; and final project closeout and administration of associated paperwork. Following construction, he provides start-up assistance, record drawings, warranty review, and post-construction evaluation.

Relevant Project Experience
Predesign Documents, East County Advanced Water Purification Program, Padre Dam Municipal Water District, Santee, CA - *Architect* - The project includes assisting Padre Dam Municipal Water District to develop and implement its first-ever potable reuse program. The objective of the Program is to create a new source of local, reliable, and drought-proof water supply. Architecturally, this project included the programming and design of a new Visitor Center / Administration Building. This 12,000 s.f. steel-framed structure includes conference and multi-purpose rooms for educational plant tours, laboratory spaces, locker room areas, outdoor local plant displays and a decorative waterfall feature enhancing an outdoor gathering plaza. The adjacent water purification process equipment is housed in a 44,000 s.f. pre-engineered metal building.

Pure Water Monterey, Advanced Water Treatment Facility, Monterey Regional Water Pollution Control Agency, Monterey, CA - *Architect* - Design and construction of a 5-mgd Advanced Water Purification Facility (AWPF) and major equipment procurement. The AWPF treats secondary effluent with ozone, microfiltration, reverse osmosis and UV-advanced oxidation processes. Four (4) pre-engineered metal buildings were constructed to house process equipment and utilities. Their sizes,

in descending order, included: 19,000 s.f. (Membrane AOP Building), 3,000 s.f. (Ozone Building), 2,300 s.f. (Chemical Building) and 365 s.f. (Electrical Building).

Water and Wastewater Infrastructure Design for the Tesoro Viejo Community Development, Tesoro Viejo, Inc., Madera, CA - *Architect* - Architectural design for the 0.8 mgd water reclamation facility and the 1.6 mgd microfiltration/UV water treatment plant. Provided architectural renderings and new structures. New structures include: 1,400 s.f. pre-engineered metal Electrical and Maintenance Building, 1,200 s.f. pre-engineered metal Electrical Building, 400 s.f. CMU Potable Water Pump Building and various pre-engineered shade canopies for process equipment.

Cascadia Wastewater Treatment Plant at Tehaleh - Design Services, NASH Cascadia Verde, LLC, Pierce County, WA - *Architect* - Kennedy/Jenks is providing the design for a "greenfield" Membrane Bioreactor (MBR) wastewater treatment facility for a private developer. The Facilities will include the following new structures: 2-story, 1,700 s.f. CMU Headworks Buillding with work area on the lower level and headworks screens on the upper level; 6,700 s.f. CMU Mechanical Building with Chemical Room storage; and, a new 3,100 s.f. concrete and wood-framed Lab and Operations Building.

Predesign Documents, Sterling Natural Resource Center, East Valley and San Bernadino Water District, San Bernadino, CA - *Architect* – Architectural services included the programming and design for a new 10,000 s.f. concrete and steel-framed Emergency Operations Center / Administration Building. This facility is highly-used for community education/training programs and, in conjunction with the surrounding landscaped grounds, used for social events such as weddings, etc. A large 2,500 s.f. Multi-Purpose Room with operable walls was incorporated into the design along with kitchen facilities. The building can provide emergency shelter for the community in the event of a natural disaster (earthquakes, wildfires, etc.).

Well #16 Improvements, City of Vacaville, Vacaville, CA - *Architect* - Architectural design of the City's first Cr(VI) treatment facility. Architectural services included the design of a new CMU 2,400-square-foot Cr(VI) Treatment Building. The prototype design is scheduled to be used at the City's Well 17 site, also.

Williams Road Pump Station, Benbrook Water Authority, Benbrook, TX - *Architect* - Architectural services included the design of a new 700 s.f. CMU Pump Station Building and adjacent 64 s.f. CMU Chlorine Feed Building.

Janet L. Hoffman, P.E., CEP

Cost Estimating

Education
BS, Mechanical Engineering, University of Southern California, 1994

Registrations
Professional Mechanical Engineer, Washington (36133)

Certifications
AACE International / Certified Estimating Professional (CEP), AACE International

Memberships/Affiliations
AACE International

Professional Summary

Janet Hoffman is a mechanical engineer and Certified Estimating Professional (CEP) with experience in design and construction of public, industrial, and institutional facilities. She regularly provides cost estimating services for municipal and industrial wastewater, stormwater, and railroad fueling projects. She produces estimates at the preliminary and interim design stages. Janet also has extensive experience in the construction industry, leading the mechanical work on a variety of building, process, and industrial projects. Her construction experience includes preparing bids, scheduling, budgeting and cost forecasting, piping layouts, coordinating subcontractors, preparing submittals and O&M manuals, negotiating change orders and disputes, and starting up and commissioning systems using both the traditional design-bid-build and GC/CM contracting methods and has the unique perspective of having experience working both on the side of the contractor and as the engineer. She has a vast 20 year experience in working on construction cost estimates for water and wastewater facilities and specializes in construction cost estimating.

Project Experience

Well 10, Booster Pump, and Storage Tank Cr6 Compliance Design Project, City of Newman, CA - *Cost Engineer Estimator* - Provided cost estimating services for the predesign and design of a new groundwater well, storage tank, booster tank, chlorine disinfection, security, masonry wall, and transmission piping for the City of Newman.

Pleasant Grove Wastewater Treatment Plant Expansion, City of Roseville, Roseville, CA - *Cost Engineer/Estimator* - Providing cost estimating services for a $50M expansion that will add four primary clarifiers, two gravity belt thickeners, sludge thickening building, two anaerobic digesters, digester control building, and auxiliary systems, controls and process piping. The project will be delivered under a design-assist procurement and includes services for planning, design, contractor procurement, and engineering services during design.

Pure Water Monterey - Advanced Water Treatment Facility and Pump Station Project, Monterey One Water, Monterey, CA - *Cost Engineer/Estimator* - Prepared detailed construction cost estimates at the preliminary, interim, and final design stages for Advanced Water Purification Facility, injection wells, and conveyance pipelines.

Mesa 24-inch Transmission Main Design, Santa Clarita Valley Water Agency, Santa Clarita, CA - *Cost Engineer/Estimator* - Prepared detailed cost estimate for construction of a 24-inch diameter ductile iron water main, which included pavement restoration and connections to existing line.

Backbone Improvement Program: Calabasas and Agoura Hills Alignments Project, Las Virgenes Municipal Water District, Calabasas, CA - *Cost Engineer/Estimator* - Prepared detailed construction cost estimates at the preliminary, interim, and final design stages for installation of a 30-inch diameter welded steel water pipeline installed in city streets via open cut and jack and boring methods.

Lift Station 1 Replacement, Rainbow Municipal Water District, Bonsall, CA - *Cost Engineer/Estimator* - Professional engineering services for the preliminary and final design of the Lift Station #1 Replacement Project. Additionally, replacement of a force main and gravity main delivering wastewater from Lift Station No. 1 to Lift Station No. 2.

Valhalla Recycled Water Main System Extension, City of Burbank Water & Power, Burbank, CA - *Cost Engineer/Estimator* - Provided detailed cost estimates at interim design level for a recycled water pipeline that ranged from 8- to 12-inches in diameter.

Backbone Improvement Program: Calabasas and Agoura Hills Alignments Project, Las Virgenes Municipal Water District, Calabasas, CA - *Cost Engineer/Estimator* - Prepared detailed construction cost estimates at the preliminary, interim, and final design stages for installation of a 30-inch diameter welded steel water pipeline installed in city streets via open cut and jack and boring methods.

Design Review and Project/Program Management Services On-call, King County, Department of Natural Resources, Seattle, WA - *Cost Engineer/Estimator* - Provided cost estimating services in support of WTD facilities improvements and design/construction projects over the course of three consecutive on-call contracts. Provided review of construction sequence specifications.

Pierce County Chambers Creek Regional Wastewater Treatment Plant Expansion (as a subconsultant), Brown & Caldwell, University Place, WA - *Cost Engineer/Estimator* - Prepared detailed construction cost estimates for a $200M wastewater treatment plant expansion at the interim design stages for 20 separate new or renovated process facilities at the plant. Met with GC/CM to discuss and verify costs on each of the 20 new facilities. Provided review of the GC/CM's pricing at final detailed design. Prepared cost estimates to support Business Case Evaluations for design alternatives throughout the design process.

Bluffs Well Replacement Design and Construction Management, Clallam County Public Utilities District No. 1, Clallam County, WA - *Cost Engineer/Estimator* - Prepared detailed cost estimate for design and construction of new groundwater wells and pumping, storage, and treatment facilities. The team's collaboration with the client throughout the project resulted in a very low construction change order rate of 1.1% of the project cost.

Dylan Crawford, P.L.S.

Principal

CAREER EXPERIENCE
23 years in the Land Surveying Industry

FIRM EXPERIENCE
21 years at O'Dell Engineering

PROFESSIONAL REGISTRATIONS
Registered Land Surveyor No. 7788, California

PROFESSIONAL ASSOCIATIONS
California Land Surveyors Association,
American Council of Engineering Companies, Professional Surveyors Committee

SUMMARY - Since 1996, Mr. Crawford has been with O'Dell Engineering's survey division focusing on surveying for the public sector. His experience includes on-call surveying for public agencies, numerous design surveys, right of way engineering, surveying and staking of large scale construction projects, subdivision mapping, boundary retracement and establishment surveys, resolution of land title issues, and topographic surveying. He stays current with advances in survey technology, legislation affecting land development, the subdivision map act, and land title issues.

RELEVANT EXPERIENCE:

DONNELLS DAM
Mr. Crawford served as the Principal-in-Charge for this project requiring comprehensive as-built documentation of Donnells Dam in Tuolumne County, including the upstream and downstream faces, thrust block, outfall and spillway gate structures. The firm's completed work product would be used to further analyze the existing condition of the dam and associated structures and to meet the requirements of the Federal Energy Regulatory Commission. The team had several challenges to overcome in order to complete the measurement and documentation of the dam. The first was the remote location. Reaching the isolated canyon required traversing a boulder lined fire service road at low speeds in vehicles with high ground clearance. There was no cell phone coverage and the survey crew camped on site in a cabin provided by the Tri-Dam Project. Additionally, taking measurements would prove very difficult due to the dam's shape and the sheer canyon walls. Donnells Reservoir contains virtually no accessible shoreline and has no facilities of any kind. The O'Dell team partnered with the Tri-Dam Project to winch an aluminum boat down the face of the dam. The survey equipment was then carefully lowered by rope down to members of the waiting boat team, who had hiked around the dam to find an accessible location to safely access the boat. O'Dell Engineering utilized a combination of advanced measurement instruments, foremost among these was the Leica Geosystems ScanStation C10 3D Laser Scanner. Additionally, control and monitoring surveys were completed using one of the firm's five fully robotic total station surveying instruments. In only three days' time, the entirety of Donnells Dam was completely measured in the field. Over the next several weeks, the O'Dell Engineering team began producing high quality deliverables in the office. The final result was comprehensive as-built documentation of the dam, on time and on budget**.**

LUMSDEN FALLS FISH SCREEN, LAKE DON PEDRO
Mr. Crawford served as the Principal-in-Charge of Surveying for this project. O'Dell provided topographic mapping obtained through terrestrial laser scanning and traditional survey methods. Services included establishing survey control, terrestrial laser scanning of the area, and mapping. The project entailed determining the lowest elevation difference that would allow Salmon fish to swim upstream.

TUOLUMNE COUNTY 2017 STORM DAMAGE SURVEYING SERVICES
O'Dell Engineering provided land surveying services for various storm damage projects in Tuolumne County. Mr. Crawford served as the Principal-in-Charge for this effort. Projects included Kewin Mill Road at Five Mile Creek Culvert and Little Fuller Road at Sullivan Creek Culvert. For these projects, O'Dell provided survey control, topographic surveying, construction surveying, optional boundary/right-of-way surveying and optional as-built surveys.

PARROTTS FERRY BRIDGE ELEVATION MONITORING

On an annual basis, O'Dell Engineering provides bridge elevation monitoring services for the Parrotts Ferry Bridge located in Tuolumne County, CA. O'Dell performs a differential level loop across Parrotts Ferry Bridge through designated monitoring points to record raw level readings and temperature, report notable conditions or changes of the monitoring points, and list final adjusted elevation.

EXCHEQUER DAM SURVEYS, LAKE MCCLURE

O'Dell Engineering was retained by the Merced Irrigation District (MID) to provide survey support for the Exchequer Hydroelectric project. Services included establishing permanent dam monitoring control points with California State Plane Coordinate values, performing regular settlement and deflection surveys of the dam's crest and face for MID and the Division of Safety of Dams, performing a high definition laser scan of the downstream side of the dam and abutments, and topographic surveys for slope protection and design.

DELTA WATER SUPPLY PROJECT

The Delta Water Supply Project pumps surface water from the San Joaquin Delta to Stockton. This D-B project required design and installation of 12 miles of 54" raw water pipeline and over 6 miles of treated water pipeline and construction of 7 micro tunnels up to 1200' in length. Mr. Crawford managed all of the construction surveying efforts and design surveying during the construction process.

FRESNO REGIONAL WATER TRANSMISSION MAIN REPLACEMENT PROJECT

Mr. Crawford served as Principal-in-Charge of Surveying for this major water transmission main project in Fresno, CA. The work included providing over 250 survey control points for an aerial photographic survey covering approximately 64 miles of proposed transmission lines. Additional topographic surveys were provided to supplement the aerial photography. In addition, work included researching and mapping existing underground utilities and providing selected potholing controls at approximately 75 locations.

GILROY WATER MAINS

As Principal-in-Charge, Mr. Crawford supervised topographic surveying services, utility research, and mapping for the replacement of a large diameter waterline along Highway 152 in Gilroy, California. Over 130 terrestrial laser scans were collected along the project alignment and were joined into a single unified point cloud for the project. Point features were then extracted from the project point cloud and used to draft traditional 2D topographic survey drawings. A mobile GIS data collection system (built on top of Open Data Kit) was designed and implanted for the utility mapping on the project.

EAST DUNNE AVENUE 16" WATER MAIN PROJECT

As Principal-in-Charge of Surveying, Mr. Crawford supervised design survey and utility research services for the East Dunne Water Main in Morgan Hill, CA. The work included establishing survey controls, performing a topographic survey of approximately 4,500 feet of water main, and utility research for design of improvements of the water main.

FIREBAUGH REPLACEMENT WELL #7

Mr. Crawford served as Principal-in-Charge of Surveying for this replacement well project in Firebaugh, CA. The work included topographic surveying and mapping to support the design of the well.

BASS LAKE WASTEWATER TREATMENT PLANT AND EFFLUENT DISPOSAL SYSTEM

Mr. Crawford served as Principal-in-Charge of Surveying for this wastewater treatment plant and effluent disposal system improvement project at Bass Lake in Madera County. The goal of the project was to replace the deteriorating infrastructure at this County treatment and disposal facility to improve process operability, reduce annual operating and maintenance costs, accommodate peak flows, and maintain permit compliance. The work included topographic surveying and mapping to support the design of the improvements.

Scott Roberts, P.L.S.

Surveyor

CAREER EXPERIENCE
8 years in the Land Surveying Industry

FIRM EXPERIENCE
2 years at O'Dell Engineering

EDUCATION
Bachelor of Science, Geomatics Engineering, California State University, Fresno

PROFESSIONAL REGISTRATIONS
Registered Land Surveyor No. 9235, California

SUMMARY – Mr. Roberts has professional surveying experience in both the public and private sectors with work on an array of design projects such as large scale municipal efforts, private master planned communities, agricultural properties, and commercial developments. He is skilled in AutoCAD Civil 3D, Trimble GNSS & Robotic TS, Trimble Business Center, Trimble RealWorks, and Terrestrial LiDAR. His responsibilities have included project management, topographic surveying and mapping, boundary surveying and mapping, underground utility locating, construction staking, elevation certificates, laser scanning, legal descriptions and GIS.

RELEVANT EXPERIENCE:

BASS LAKE WASTEWATER TREATMENT PLANT AND EFFLUENT DISPOSAL SYSTEM
Mr. Roberts served as Project Surveyor and provided survey support services for this wastewater treatment plant and effluent disposal system improvement project at Bass Lake in Madera County. The goal of the project was to replace the deteriorating infrastructure at this County treatment and disposal facility to improve process operability, reduce annual operating and maintenance costs, accommodate peak flows, and maintain permit compliance. The work included topographic surveying and mapping to support the design of the improvements

TUOLUMNE COUNTY 2017 STORM DAMAGE SURVEYING SERVICES
O'Dell Engineering provided land surveying services for various storm damage projects in Tuolumne County. Mr. Roberts served as Project Surveyor for this effort. Projects included Kewin Mill Road at Five Mile Creek Culvert and Little Fuller Road at Sullivan Creek Culvert. For these projects, O'Dell provided survey control, topographic surveying, construction surveying, optional boundary/right-of-way surveying and optional as-built surveys.

PARROTTS FERRY BRIDGE ELEVATION MONITORING
On an annual basis, O'Dell Engineering provides bridge elevation monitoring services for the Parrotts Ferry Bridge located in Tuolumne County, CA. O'Dell performs a differential level loop across Parrotts Ferry Bridge through designated monitoring points to record raw level readings and temperature, report notable conditions or changes of the monitoring points, and list final adjusted elevation. Mr. Roberts serves as Project Surveyor.

NORTH VALLEY REGIONAL RECYCLED WATER PROJECT
Mr. Roberts served as Project Surveyor for the North Valley Regional Recycled Water Project in Modesto, CA. Tasks included survey control, topographic surveys along the proposed pipeline route, boundary surveys, utility research and mapping, record of survey, and hydrographic surveys of the San Joaquin River. Mr. Roberts coordinated the boundary surveying phase of the project, which spanned over 6 miles, by organizing field crews, reviewing maps and field data, preparing land description packages for easements, and preparing a monument preservation record of survey for the project. He also provided QA/QC for the topographic mapping phase and coordinated with the client and the utility potholing company to incorporate critical information in to the final deliverable.

Ron Skaggs, P.E., G.E., Vice President & Principal Engineer

Education
Master of Engineering in Geotechnical Engineering-University of CA Davis – 1985

Bachelor of Science in Civil Engineering-CA State University Fresno – 1983

Years of Experience
32

Certifications
Civil Engineer
CA No. 44588
NV No. 009854

Geotechnical Engineer CA No. 2295

General Engineering Class A Contractor CA No. 732026

Hazardous Waste Contractor CA No. 732026 HAZ

CA Construction General Permit QSD/QSP Certificate No. 824

Professional Affiliations
American Society of Civil Engineers (ASCE) Central Valley Branch, Past President

San Joaquin Engineers Council, Scholarship Committee Chairman

As a Civil and Geotechnical Engineer, Mr. Skaggs' experience includes a broad range of geotechnical design and construction projects. He specializes in pavement rehabilitation using full depth reclamation (FDR) pavement recycling, cold foam asphalt mix design and pavement design, lime/cement/fly ash base stabilization, construction management, construction quality control, storm water BMP systems, and design and construction of pavement systems. Mr. Skaggs is also the Engineer-of-Record for Condor's Caltrans approved laboratory.

Representative Experience

Water Resources and Water Treatment: Principal Engineer for over 75 water resource projects for planning, geotechnical, and construction phase services.

Pavement Recycling Projects: Principal Engineer for over 50 pavement recycling projects using CFA, CIR, and FDR methodologies; services include design and construction QC.

Pavement Recycling: Completion of over 50 projects throughout California in design and construction.

Geotechnical Engineering Studies: Completion of over 500 geotechnical studies for institutional, commercial, and industrial projects throughout California.

Mountain House New Town: Client Manager for Condor Services, including geotechnical engineering, storm water master planning, environmental services, geohydrology, construction storm water permitting, and construction dewatering.

School Districts: Geotechnical engineering studies for new school sites and rehabilitation projects at over 100 sites.

Ronald Reagan Presidential Library: Geotechnical designer and geotechnical construction quality control engineer.

Port of Los Angeles, Pier 300: Geotechnical investigation and round improvement program for 122-acre hydraulic landfill.

Offshore Geotechnical Projects: Geotechnical engineering for offshore California drilling platforms and jack-up rigs for petroleum exploration and production.

Mine Facilities: Geotechnical engineering for tailings ponds, heap leap pads, and production facilities.

Construction Materials Testing: Completion of construction material QC testing programs on over 1,000 projects throughout California.

Burlington Northern Santa Fe Intermodal Facility: Project Manager – Storm water permitting services, local CEQA permitting assistance.

Narciso Garnica, EIT

MTSI Laboratory Manager/
Senior Special Inspector

STATEMENT OF POSITION

Mr. Garnica is a Senior Construction Inspector and Staff Engineer for public and private sector projects. He also performs field sampling, materials testing, and California Building Code (CBC) special inspections.

AREAS OF EXPERTISE

- Project Management
- Construction Inspection
- Special Inspection

INDUSTRIES SERVED

- Transportation
- Water Resources
- Water/Wastewater
- Residential Development
- Private Development
- Commercial Development
- Education
- Healthcare

REGISTRATIONS & CERTIFICATIONS

- Engineer-In-Training (E.I.T.) No. 143631
- Caltrans Laboratory and Field Test Methods 105, 106, 125 AGG, 125 GEN, 125 PCC, 201, 202, 216, 217, 226, 227, 229, 231, 301, 375, 504, 518, 521, 533, 539, 540, 543, 556, 557
- ICC Structural Masonry; Cert. #ICC8361379
- ICC Reinforced Concrete; Cert. #ICC00237747
- Tech 1 Strength Tester ACI; Cert. #01265308
- ACI Grade I Field Testing Technician; Cert. #01265308
- Nuclear Gauge Operator Training; Cert. #17568
- Radiation Safety Officer, License #5634-07

EDUCATION

- BS – Civil Engineering, CSU Sacramento, 2010

Mr. Garnica serves as a senior inspector and staff engineer on all types of public and private infrastructure projects throughout the Central Valley and Central Sierra Foothills of California. Mr. Garnica is a highly qualified inspector based on his varied experience and multiple inspection and testing certifications. Throughout his 5-year tenure at Condor, he has provided construction inspection and materials testing on major roadways, bridges, water treatment facilities, pump stations, utility installations, pipelines, tunnels, residential and commercial developments, schools and healthcare facilities. Mr. Garnica is an excellent communicator and always takes a proactive approach to his project work and responsibilities. His representative project experience is listed below.

REPRESENTATIVE EXPERIENCE

County of Tuolumne – Mono Way Operational/Safety Improvements, Geotechnical Engineering Studies

Calaveras Unified School District – Calaveras High School Performing Arts Building

Nature Bridge – Yosemite Environmental Education Center, CBC Special Inspections

Sonora Elementary School District – Sonora Elementary School Bldgs. D & E

Sonora Elementary School District – Sonora Elementary School "F" Building Rehabilitation

Sonora Union High School District – Sonora High School Measure J Improvements

Summerville Union High School District – Summerville High School Modernization

Sonora Regional Medical Center – SRMC Emergency Dept. Renovation, MTSI/QA/QC

Sonora Regional Medical Center – SRMC Pavilion, CBC Special Inspections

Bret Harte Union High School District – Bret Harte High School Various Projects, CBC Special Inspections

Calaveras County Water District – Big Trees South Zone Tank Replacement Project

Tuolumne Economic Development Authority, Inc. – Black Oak Casino Expansion, Inspections

George Reed, Inc. – City of Sonora Mono Way Widening Project, Caltrans Field/Lab Testing

Hetch Hetchy – HH-981 Mountain Tunnel Access, CBC Special Inspections

Calaveras County Water District – Vista Del Lago-SR 26 Water Main Relocation, Caltrans Field/Lab Testing

PB Americas, Inc. – Sperry Road Extension Project, Field Quality Assurance

City of Galt Waste Water Treatment Facility Upgrade Project

Bay Cities Paving & Grading – Interstate 5

REPRESENTATIVE EXPERIENCE *(continued)*

San Joaquin Regional Rail Commission – ACE Maintenance and Layover Facility
City of Merced – Childs Avenue New 16" Water Main Installation
Bennett Development - Solari Ranch
Lincoln Unified School District - Mable Barron Elementary School Relocatables
Lincoln Unified School District - Claudia Landeen Elementary School Relocatables
Dr. Vasti - W. Henry Wilhelmina Elementary School Roadway Project
University of California, Merced – North Bowl Parking, Phase 1 Project
Grupe Investment Company – The Vine at Vintners, Phase 1 Project
Allen Engineering – UPRR Port of Stockton Rail Welding Facility
Trinchero Family Estates – Sutter Home Winery Bottling & Warehouse Facility Project
Ripon Unified School District – Weston Elementary School Modernization Project
New Jerusalem Charter School Modernization Project
Lincoln Unified School District – Solar Modules
Byron-Bethany Irrigation Station 3 Rehabilitation Project
Rudd Wines, Inc. – Rudd Wine Cave Elevator, Tunnel and Rehabilitation Design
Ferrari-Carano Winery – Ferrari-Carano PreVail Wine Cave Expansion
Oakdale Irrigation District – Slope Stabilization Design and Construction Engineering
Stockton Unified School District – Cesar Chavez High School Hardcourt Facilities
Mountain House Developers, LLC – Byron-Bethany Irrigation District Canal 70,120, & 155, Storm Water Management
Gallo Glass Company – Gallo Glass Company Sand Tank
Clovis Unified School District – Sierra Outdoor School Modernization
Mozingo Construction, Inc. – CBC Special Inspections
New Jerusalem School District – New Jerusalem Charter School
Bay Cities Paving & Grading Inc. – Hwy 4 & I-5 Biaduct
Liberty Union High School District – Liberty Union High School Solar Project, Special Inspection Services
Lincoln Unified School District – Lincoln High School Phase 4
Lincoln Unified School District – Lincoln Unified School District Maintenance Facility
Truckee Meadows Water Authority – TMWA Fleish Tunnel Phase 3
City of Roseville – Feasibility Study for FDR-Phillips Road, Geotechnical Investigations
Arnaudo Construction – RD2085 Pipe Removal, CBC Special Inspections
Arnaudo Construction – Paradise Ice Water Company Pump Station, CBC Special Inspections
Visionary Home Builders of California – Bradford Apartments, and Community Center, CBC Special Inspections
Doyon Government Group – Marine Forces Reserve Concord & Lathrop, Geotechnical Investigations
Nichols, Melburg & Rossetto – Peter Hansen Elementary School Project, Geotechnical Engineering Studies
Pro Builders – Metal Storage, Special Inspections/CBC Special Inspections
Pennino Design Group – Pennino Design Group Construction QA/QC
Byron-Bethany Irrigation District – BBID Station 3 Rehabilitation Project, Construction QA/QC

Amy Augustine, AICP

DETAILED RELEVANT EXPERIENCE

CEQA and NEPA Environmental – Water/Wastewater

- **State Water Resources Control Board Division of Drinking Water Drought Emergency Grant Projects for the Twain Harte Community Services District**
  Prepared environmental clearances for the: East Avenue/Tuolumne Road North Groundwater Well #3B, Meadow Lane Groundwater Well Permit, Water Treatment Plant well project, Shadybrook Well and the Twain Harte Lake Sewer Stabilization Project for the Twain Harte Community Services District.

- **Jamestown Sanitary District Wastewater Treatment Plant**
  Evaluated multiple project alternatives in two separate locations: one adjacent to a creek and one covering rare plant habitat. APA conducted and prepared a biological resources assessment for the project, conducted early CEQA consultation and NEPA coordination (i.e., notifying all affected agencies and coordinating with those agencies to incorporate appropriate conditions and/or mitigation measures), notified all adjoining landowners, drafted and coordinated publication and submittal of all legal notifications for public hearings and document availability, prepared and submitted the draft initial study to the state clearinghouse, responded to comments, attended all public hearings and filed the resulting notice of determination on behalf of the District. Prepared NEPA Categorical Exclusion. Conducted Cultural Resources technical study and prepared report. Conduct Biological Resources Study and prepared Biological report.

- **Jamestown Sanitary Sewerline Rehabilitation**
  Funded through a Community Development Block Grant, APA conducted all early CEQA consultation, property owner notification, legal noticing, public hearing noticing, prepared both an Environmental Assessment (NEPA) and CEQA Initial Study/Mitigated Negative Declaration with Mitigation Monitoring and Reporting Plan in accordance with Community Development Block Grant requirements for a community-wide sewer rehabilitation project. Technical studies prepared by APA included: Cultural Resources technical study, Biological Resources Study. Prepared Notice of Finding of No Significant Impact and Intent to Request Release of Funds, Notice of Intent to Request Release of Funds, HUD Environmental Finding Form.

- **Gibbs Sewer Collection Program**
  Conducted all early CEQA consultation, property owner notification, legal noticing, public hearing noticing, prepared all documentation and statutory worksheets required pursuant to CDBG funding in support of a Categorical Exemption. Conducted initial biological site assessment, prepared sensitivity map and fatal flaws memo. Prepared all CDBG CEQA/NEPA compliance documents and forms. Oversaw preparation of Cultural Resources technical study and Section 106 consultation. Coordinated with Tuolumne County Administration and Community Resources Agency, Tuolumne Utilities District, and California Department of Housing and Community Development, advisory agencies, adjoining landowners.

- **Tuolumne Utilities District Ditch Maintenance Program/ Tuolumne Utilities District Biological Resources Management Strategy**
  Established an environmental strategy for the Tuolumne Utilities District to allow for system-wide maintenance activities without the need for project-by-project repetitive environmental reviews in response to a lawsuit challenging the adequacy of prior environmental documentation. Completed the cultural resources documentation, biological documentation, and hydrological documentation in support of a Master Mitigated Negative Declaration with Mitigation Monitoring and Reporting Plan for the project. Conducted Hydrological, cultural and biological studies. Prepared Study Session/PowerPoint presentation. Coordinated with Tuolumne Utilities District legal, administrative, technical and field crew.

- **Lower Mokelumne River Watershed Stewardship Plan (LMRWSP)**
  As Special Projects Manager for the San Joaquin County Resource Conservation District, APA oversaw initiation of the Lower Mokelumne River Watershed Stewardship Program (2000-2003). Organized and staffed community-based steering committee guiding plan development including representatives from agriculture, recreation, education, development, business, conservation, cultural resources, private landowners, public agency representatives and other stakeholders. Drafted the LMRWSP identifying goals, policies and implementation programs providing the framework for actions to further the health of the watershed integrating education, agriculture, biological resources, water quality, flood management, cultural resources, economic development, emergency services and fire prevention. Secured funding for and hired a full-time watershed coordinator to implement the plan. Hired production consultant and oversaw community involvement in making the program's award-winning public education and outreach video. The program continues to spawn numerous citizen-initiated watershed programs and public/ private partnerships. The program's success has encouraged ongoing funding for watershed coordinators statewide.

- **Tuolumne County Water Quality Plan**
  In partnership with ESA, APA drafted the Tuolumne County Water Quality Plan (2007)

EDUCATION

B.A., Biological Sciences - California State University, Sacramento (1984)
A.A., Biological Sciences - Columbia Community College, Columbia (1982)

ADDITIONAL EDUCATION

AICP Continuing Education – Planning Ethics AICP Continuing Education – Planning Law Geographic Information Systems and Mapping - California State University, Stanislaus Journalism, UC Berkeley Extension - Economics, Columbia Community College

PROFESSIONAL AFFILIATIONS

American Institute of Certified Planners (AICP), Member, 1996 - Present
American Planning Association, Member
Association of Environmental Planners, Member

Tracie Mueller, Project Manager
10850 Gold Center Drive, Suite 350
Rancho Cordova, CA 95670
Direct: 916.858.2721
Mobile: 916.798.5964
TracieMueller@kennedyjenks.com

Kennedy/Jenks Consultants

Engineers & Scientists

10850 Gold Center Drive, Suite 350
Rancho Cordova, California 95670
916-858-2700
FAX: 916-858-2754

July 11, 2018

Mr. Peter Kampa
General Manager
Lake Don Pedro Community Services District
9751 Merced Falls Road
La Grange, CA 95329

Subject: Fee Schedule for District Engineering Services Statement of Qualifications

Dear Mr. Kampa:

This Statement of Qualifications includes a request for a Schedule of Charges for use in projects for a minimum of 12 months from the contract execution. We have enclosed a Kennedy/Jenks Schedule of Charges dated 11 July 2018 that shows rates to be used through December 31, 2019. We have included a 3% rate escalation clause for new work in the year 2020. We assume that new rates will be negotiated for work after 2020. Our attached Schedule of Charges includes our standard firm 10% markup for subconsultants and other direct charges.

The attached Schedule of Charges will be used for all work with the possible exception of the following tasks:

- Required prevailing wage activities related to field inspection services – these rates will need to be developed at the time of the work assignment based on published rates.
- Engineering work associate with projects funded through grant funding – we would like to reserve the right to negotiate the use our current year standard rate schedule (dated 1 January each year) for engineering work to be funding through grant funding sources, which are the rates the funding agencies typical see for Kennedy/Jenks' work. The rates that we have included on the attached 11 July 2018 Schedule of Charges are reduced rates.

We have also attached detailed rate/fee schedules for our three subconsultants which include their rates to be use through December 31, 2019, as well as their markups and other direct costs:

- Condor Earth for Geotechnical Services
- O'Dell Engineering for Surveying Services
- Augustine Planning Associates for Environmental Services

We understand that the attached schedule of charge and rate/fee schedules will be used to establish not-to-exceed contract limits. We proposed that when developing these not-to-exceed contract limits that we include a 10 percent contingency per our Kennedy/Jenks Operations Manual to allow to help allow for "known unknowns" or anticipated potential changes that are inherent to the project execution and delivery process, and allow for a smoother overall project delivery. These proposed contingencies would not be used without authorization by the District's General Manager.

Thank you for this opportunity to submit our qualifications. We are excited for this opportunity to expand our relationship with the District. Please feel free to contact me at (916) 858-2721 if you have any questions or concerns.

Very truly yours,

KENNEDY/JENKS CONSULTANTS

Tracie R. Mueller, P.E.
Operations Manager/Principal

Enclosures

Kennedy/Jenks Consultants

Client/Address: Lake Don Pedro Community Services District
9751 Merced Falls Rd.
La Grange, CA 95329

Contract/Proposal Date: District Engineering Services/July 11, 2018

Custom Schedule of Charges

Date: July 11, 2018

PERSONNEL COMPENSATION

Classification	Hourly Rate
Engineer-Scientist-Specialist 1	$125
Engineer-Scientist-Specialist 2	$145
Engineer-Scientist-Specialist 3	$170
Engineer-Scientist-Specialist 4	$190
Engineer-Scientist-Specialist 5	$200
Engineer-Scientist-Specialist 6	$225
Engineer-Scientist-Specialist 7	$250
Engineer-Scientist-Specialist 8	$270
Engineer-Scientist-Specialist 9	$295
CAD-Technician	$110
Senior CAD-Technician	$125
CAD-Designer	$145
Senior CAD-Designer	$160
Project Administrator	$125
Administrative Assistant	$95
Aide	$75

Direct Expenses

Reimbursement for direct expenses, as listed below, incurred in connection with the work, will be at cost plus ten percent for items such as:

a. Maps, photographs, 3rd party reproductions, 3rd party printing, equipment rental, and special supplies related to the work.
b. Consultants, soils engineers, surveyors, contractors, and other outside services.
c. Rented vehicles, local public transportation and taxis, travel and subsistence.
d. Project specific telecommunications and delivery charges.
e. Special fees, insurance, permits, and licenses applicable to the work.
f. Outside computer processing, computation, and proprietary programs purchased for the work.

Reimbursement for vehicles used in connection with the work will be at the federally approved mileage rates or at a negotiated monthly rate.

If prevailing wage rates apply, the above billing rates will be adjusted as appropriate.

Overtime for non-exempt employees will be billed at one and a half times the Hourly Rates specified above.

Rates for professional staff for legal proceedings or as expert witnesses will be at rates one and one-half times the Hourly Rates specified above.

Excise and gross receipts taxes, if any, will be added as a direct expense.

The foregoing Schedule of Charges is incorporated into the agreement for the services provided, effective July 11, 2018 through December 31, 2019. After December 31, 2019, invoices will reflect a 3% increase in hourly rates each year through December 31, 2020.

CONDOR EARTH TECHNOLOGIES, INC.
PREVAILING WAGE SCHEDULE OF FEES
JULY 2017 – JUNE 2018

STAFF MEMBER	RATE PER HOUR ($)
PRINCIPALS/PROJECT MANAGEMENT	
Senior Principal	220.00
Principal Engineer/Geologist	195.00
Project Director	185.00
Construction Manager	185.00
Project/Senior Manager	160.00
TECHNICAL	
Senior Tunneling Consultant	200.00
Senior Geotechnical Engineer	185.00
Certified Hydrogeologist/Engineering Geologist	175.00
Senior Geologist/Engineer/Environmental Specialist	165.00
Associate Geologist/Engineer/Environmental Specialist	135.00
Resident Construction Inspector	135.00
Field Environmental Specialist (Group 2)	125.00
Staff Geologist/Engineer/Environmental Specialist	120.00
Engineering Assistant	100.00
Draftsperson	90.00
MATERIALS TESTING	
Material Technician (Group 1)	130.00
Material Technician (Group 2)	125.00
Material Technician (Group 3)	120.00
Material Technician (Group 4)	115.00
Senior Materials Technician (non-PW)	85.00
SUPPORT STAFF	
MTSI Project/Laboratory Manager	105.00
Administrative Specialist	95.00
Project Coordinator	85.00
Technical Editor	70.00
Administrative Assistant	65.00
MISCELLANEOUS	
Overtime (all Saturday work is overtime)	(1.3 times base rate)
Double-time (all Sundays and Holidays)	(1.7 times base rate)
Shift Pay* (Night Shift)	(1.3 – 1.7 times base rate)
Litigation Support	250.00 – 350.00

NON-LABOR CHARGES

Vehicle charge ..... $50 per day plus 50 cents per mile
Laboratory Charges per Condor Laboratory Fee Schedule
Billable Field Equipment per Condor Billable Field Equipment Schedule

OUT-OF-POCKET EXPENSES

Billed at cost plus 15% and includes such items as travel expenses, equipment rental, laboratory fees, subcontractors, postage and freight, subcontracted printing or reproduction fees, supplies, etc.

CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS GROUP CLASSIFICATIONS

Group 1	Group 2	Group 3	Group 4
ASNT Level II-III	AWS-CWI	Geotechnical Driller	ACI
DSA Masonry	ICC Certified Structural Inspector	Soils/Asphalt	Drillers Helper
DSA Shotcrete	NICET Level III	Earthwork Grading	ICC Fireproofing
Lead Inspector	Shear Wall/Floor System Inspector	Excavation and Backfill	Proofload
NICET Level IV	Building/Construction Inspector	NICET Level II	Testing
NDT Level Two			Torque Testing
			NDT Level One

*Shift Pay: A night shift is a shift which commences after 2:00 p.m. or before 4:00 a.m. during any twenty-four (24) hour period commencing at 12:01 a.m.

CONDOR EARTH

TERMS FOR LABORATORY TESTING SERVICES
FEE SCHEDULE AND STANDARDS

January 2018

GENERAL

It is customary to perform sampling, drilling, testing and certification work in accordance with applicable or designated recommendations of the American Society for Testing Materials (ASTM), American Association of State Highway and Transportation Officials (AASHTO), or other pertinent agencies. Test Standards for routine services are shown to define the test method followed for the charge listed; alternate standards or procedures may be followed at the client's request. When this fee schedule is referenced with intent to contract for field services, Condor's "Terms for Geotechnical, Civil Engineering and Special Inspection Services" is considered a part of these General Conditions. When this fee schedule is referenced with intent to contract for laboratory testing services only, Condor's "Terms for Laboratory Testing Services" is considered a part of these general conditions.

ROUTINE SERVICES

Unit charges listed herein are for routine work only and include a report of results without special comment or analysis of data. These charges include labor, associated equipment, maintenance, and consumable material costs. Services for unit-priced items follow routine procedures typical of the method standards cited, utilize available equipment and are performed within normal time restraints. Unit charges do not include the personnel time associated with:

- Finalized Special Inspection Reports, Summarization or Analysis of Program Test Results
- Coordination with Engineers, Architects and other Program Principals
- Unscheduled Deadline Demands (Accelerated Work)
- Pick up or Delivery of Samples
- Quality Assurance Audits
- Test Program Supervision

Routine charges are in addition to hourly rates for field personnel (billed at our senior technician labor rate). Subcontractor services provided by others, such as drilling services, are charged for at the subcontractor's charge to Condor plus fifteen percent. Unless prior arrangements are made for storage, samples will be disposed of 60 days after date of report.

OTHER TESTING AND INSPECTION SERVICES

Costs associated with unusual or time-consuming sample preparation, laboratory consultation, and other work not covered by routine unit prices, will be based on our senior technician labor rate plus expenses. Such sample preparations may include extruding tube samples and processing bulk samples to obtain material for preparing reconstituted specimens. Quotations of probable cost for specific program requirements (including special services, volume discounts, specialized equipment, etc.) will be provided upon request.

LIMITATIONS

Condor's laboratory services are provided in accordance with the listed standard and performed within industry standards. Client agrees, by signature on Work Order Agreement, that Condor is not liable for any claims directly or indirectly related to laboratory services beyond providing the results of the performed tests. Under no circumstances, however, shall CONDOR have any obligation to defend independently or collectively CLIENT or other Indemnified Parties from and against liability for damages that may arise or be attributed to work performed by CONDOR under this Agreement. Nor shall CONDOR have any obligation to pay for or compensate any party for their defense costs or fees.

SOIL AND AGGREGATE

		Unit Price
LT000	VISUAL CLASSIFICATION	
LT002	Visual Classification (ASTM D2487)	12
LT004	Visual classification and moisture (ASTM D2487)	30
LT011	Optimum Lime Content – Grimes (ASTM D6276)	175
LT120	MOISTURE CONTENT	
LT122	Moisture Content (ASTM D2216)	25
LT140	MOISTURE DENSITY	
LT146	Moisture/Density 2.0” – 2.5” tube (D7263b)	30
LT147	Chunk Density/Displacement of Water (D7263b)	80
LT160	GRAIN-SIZE DISTRIBUTION	
LT162	Sieve analysis, coarse and fine including washing (ASTM C136/C117)	145
LT164	Sieve analysis, coarse, retained on No. 4 sieve (ASTM C136)	80
LT168	Sieve analysis, wash, percent finer than No. 200 sieve (ASTM C117)	100
LT172	Hydrometer analysis, -#10 sieve, with sieve analysis (ASTM D422)	225
LT180	SPECIFIC GRAVITY	
LT182	Fine aggregate, minus No. 4 sieve (ASTM C128)	140
LT184	Coarse aggregate, plus No. 4 sieve (ASTM C127)	70
LT200	ATTERBERG LIMITS	
LT202	3-point method (ASTM D4318)	165
LT204	1-point method (ASTM D4318)	105
LT220	pH TESTING	
LT222	ph Measurement (ASTM D4972)	60
LT240	SAND EQUIVALENT	
LT242	Sand Equivalent [Average of 3] (CTM 217/ASTM D2419)	150
LT260	SOIL COMPACTION (MOISTURE/DENSITY)	
LT262	Standard compaction curve using 4-inch mold (ASTM D698/AASHTO T99)	230
LT264	Standard compaction curve using 6-inch mold (ASTM D698/AASHTO T99)	250
LT266	Modified compaction curve using 4-inch mold (ASTM D1557/AASHTO T180)	230
LT268	Modified compaction curve using 6-inch mold (ASTM D1557/AASHTO T180)	250
LT270	One-point compaction, 4-inch mold (ASTM D698 or D1557)	150
LT272	One point compaction, 6-inch mold (ASTM D698 or D1557)	160
LT274	Relative Compaction (CTM 216)	250
LT276	Proctor Rock Correction	50
LT320	SOIL AND AGGREGATE STABILITY - RESISTANCE [R-]VALUE	
LT322	R-Value untreated material or field sample (CTM 301)	325
LT324	R-Value, cement, lime or other additives, laboratory mixed or reproportioned samples (CTM 301)	375
LT340	AGGREGATE QUALITY	
LT352	Durability index, coarse or fine (ASTM 3744 or CTM 229)	160
LT356	Cleanness Value (CTM 227)	190

CONCRETE, MORTAR, GROUT, CMU, AND SHOTCRETE

		Unit Price
LT360	CONCRETE / MORTAR / GROUT / CMC / PRISIM / UBC-24-26	
LT368	Compression Test, Lightweight Insulating Concrete; w/mold (ASTM C495)	33
LT370	Compression test, 2" x 2" x 2" cubes	33
LT372	Unit Weight of Concrete Cylinders (ASTM C567)	100
LT374	Core Grade (ACI 506)	25
LT376	Compression Test only, on shotcrete core break (ASTM C39)	95
LT378	Compression Test on Cored Specimens [includes end preparation] (ASTM C42)	80
LT384	Drying Shrinkage Test, set of 3	450
LT386	Compression Test – masonry prisms, 8" maximum dimension (ASTM C140)	135
LT388	Absorption and Moisture Content, each Concrete Masonry Unit (ASTM C140)	80
LT390	Compressive strength, each Concrete Masonry Unit (ASTM C140)	175
LT392	Linear Shrinkage, Concrete Masonry Unit (ASTM C426)	175
LT394	Concrete Moisture Testing (Taylor Kit)	60
LT398	Compressive Test 3” x 3” x 6” prisms	35
LT400	Compressive Test 2” x 4” cylinders w/mold	35
LT402	Compressive Test 4” x 8” w/mold (ASTM C39)	30
LT404	Compressive Test 6” x 12” w/mold (ASTM C39)	33

MISCELLANEOUS BUILDING MATERIALS

LT420	FIREPROOFING DENSITY TEST	
LT422	Fireproofing Density Test	65
LT440	OTHER ROUTINE SERVICE RATES	
LT445	Torque Wrench	50
LT446	Hydraulic Ram	140

COLD FOAM ASPHALT

LT460	COLD FOAM RECYCLED ASPHALT MIX DESIGN	
LT462	Basic Mix Design with material provided by client (AASHTO)	3,000
LT463	Basic Mix Design with material provided by client (CALTRANS)	4,000
LT464	Indirect Tensile Strength Test (set of 6)	500
LT466	Free Oil Test	80
LT468	Single Check Point CFA	500

REBAR

LT500	REBAR TESTING	
LT502	Bend ASTM A370	45
LT504	Tensile #5 and smaller size ASTM A370	95
LT506	Tensile #6 to #9 size ASTM A370	145
LT507	Tensile #10 & #11 size ASTM A370	165

MISCELLANEOUS LAB FEES

LT700	MISCELLANEOUS LAB FEES	
LT702	Rush Charge (after 3:00 PM for next/same day turnaround per test)	75

Condor is experienced at providing other professional services. Such services are usually charged at our standard Professional Consulting Fee Schedule hourly staff rates, including direct reimbursable charges and out-of-pocket expenses. Quotes for specialized services required for specific projects may be proposed upon request. Note that costs quoted may require specialized equipment.

O'Dell Engineering
FEE SCHEDULE
July 2018

Classification:	Regular Hourly Rate:
Principal	$210
Senior Civil Engineer	$179
Senior Engineer 2	$168
Senior Engineer 1	$158
Engineer 2	$147
Engineer 1	$137
Assistant Engineer 2	$121
Assistant Engineer 1	$100
Senior Landscape Architect	$147
Landscape Architect 2	$131
Landscape Architect 1	$121
Landscape Designer 2	$110
Landscape Designer 1	$100
Planner	$147
Assistant Planner	$121
Utility Engineer	$147
CADD Operator 2	$89
CADD Operator 1	$74
BIM/3D Scanning Project Manager	$160
BIM/3D Scanning Specialist	$150
BIM/3D Scanning Technician	$130
HDS Crew 2-man/1-man	$295/$180
Senior Land Surveyor	$180
Senior Surveyor 2	$160
Senior Surveyor 1	$140
Surveyor 2	$130
Surveyor 1	$120
Assistant Surveyor 2	$110
Assistant Surveyor 1	$100
Survey Crew 2-man/1-man	$260/$160
Survey Crew 2-man/1-man (Prevailing Wage)	$330/$180
Administrative	$80

Outside Services & Reproduction: Actual cost plus 10%

Cost of services and expenses charged to O'Dell Engineering by outside consultants, commercial printers, and professional or technical firms engaged in connection with the project.

Travel: Actual cost plus 10%

Mileage, per diem, and subsistence are not normally charged to the client unless specific Prior authorization is negotiated between client and consultant.

APA Rate Sheet

APA acts as the project prime consultant and subcontracts with the appropriate staff. APA does not mark-up subconsultant costs.

Classification	Hourly Rate/e/
APA Principal Planner	$85
APA General Biologist	$85
Area West Environmental Permitted Biologist (focused species studies)	$105
Area West Environmental Biologist III/Botanist	$95
Area West Planner/Project Manager	$130
Perennial, LLC Principal Biologist	$190
Perennial, LLC Associate Biologist	$170
Monk & Associates Principal Biologist	$190
Monk & Associates Associate Biologist	$170
Monk & Associates Project Botanist	$150
Monk & Associates Project Biologist II	$150
Monk & Associates Project Biologist I	$135
Monk & Associates Staff Biologist, Biological Technician	$101
Monk & Associates Office Manager	$96
Monk & Associates Graphics	$125
Monk & Associates subcontracting biologists	$101-$200
jc brennan principal	$165
jc brennan senior	$150
jc brennan consultant	$130
Francis Heritage Senior archaeologist	$95
Francis Heritage Historian	$115
Principal Engineer - KD Anderson Associates	$190
Transportation Engineer - KD Anderson Associates	$160
Environmental Planner, Air Quality - KD Anderson Associates	$140
Patrick GIS Archaeologist	$96
Patrick GIS Technician (GIS)	$82
Principal Hydrologist HydroFocus	$190
Hydrologist I/II HydroFocus	$137
GIS Technician HydroFocus	$105
Hydrologic Technician	$86
Assistant Hydrologist (IV)	$107
Computer/Design	$65
Mileage (gas)	/a/
Monk & Associates (vehicle – passenger vehicle)	0.65/mile
Noise – interval logging	$75/day/meter
Noise – Frequency analysis	$115/day/meter
Central CA Information Center	$150
GPS sub-meter accuracy (Biological)	$50/day
Surveillance cameras $15/day	$15/day
Monk & Associates Per Diem	$250/day/person/d/

/a/ Established state rate (or, as applicable, federal rate)

/b/ Actual cost for supplies (Client approval required for costs exceeding $1000), actual cost + 5% for equipment rental areas may be adjusted to hotel rate plus $60/day

QUALIFICATIONS

SUBMISSION DATE

JULY 11, 2018

PROJECT

DISTRICT ENGINEERING SERVICES

PREPARED FOR

Lake Don Pedro Community Services District

MARK THOMAS

1. EXECUTIVE SUMMARY

Mark Thomas provides civil and structural engineering, district management, surveying, landscape architecture, and planning & urban design services. Since the company's founding in 1927, we have focused on providing excellent client service with a tailored approach to meet our clients' goals. Our reputation is realized through more than 190 team members that are strategically located in 10 offices throughout California, including Fresno.

DISTRICT ENGINEERING SERVICES

Mark Thomas will provide support for Lake Don Pedro Community Services District (District) projects and facilities, including the evaluation and design of potable water and wastewater facilities, as well as other District needs and services. This will include the preparation of:

- Funding documents
- Reports
- Plans, specifications, estimates (PS&E)
- Regulatory compliance documents
- Financing documents, including preparation of grant or loan applications and proposition 218 special assessment documents
- Board reports and resolutions
- Public presentations

EXPERIENCED PROJECT MANAGEMENT

Our team will be led by James Polfer out of our Fresno office. James is a civil engineer with over 15 years' experience in the development and implementation of special district infrastructure projects and an additional 20 years of experience in general engineering and general building construction. Over that time, James' work has been key in many special district improvement projects; beginning with securing necessary funding all the way through planning, design, bidding, construction, and closeout.

He is experienced in the design of drinking water facilities from groundwater or raw water supply to end user service connections. His experience includes the design and preparation of PS&E for:

- Raw water intake/pumping facilities with source water ranging from the California aqueduct to a lake under federal jurisdiction
- Surface water treatment facilities
- Groundwater supply, disinfection systems for groundwater under direct influence of surface water
- Potable water storage
- Pumping and distribution systems

DISTRICT MANAGEMENT EXPERTISE

Mark Thomas brings more than 60 years of experience managing special districts. We currently manage four special districts in Northern California - some of which we have managed since the 1950s.

Our team is comprised of professional and technical staff experienced in the preparation and management of:

- PS&E for various drinking water, wastewater, and public park improvements
- PS&E for roads and bridges, stormwater, and drainage facilities
- Right-of-way drawings and legal descriptions, and conducting land surveys
- Construction contract and consultant agreements
- Project bid packages and bidding procedures
- Documents required by various local, state, and federal project funding programs
- Documents for state and federal agency permits necessary for CEQA and NEPA compliance

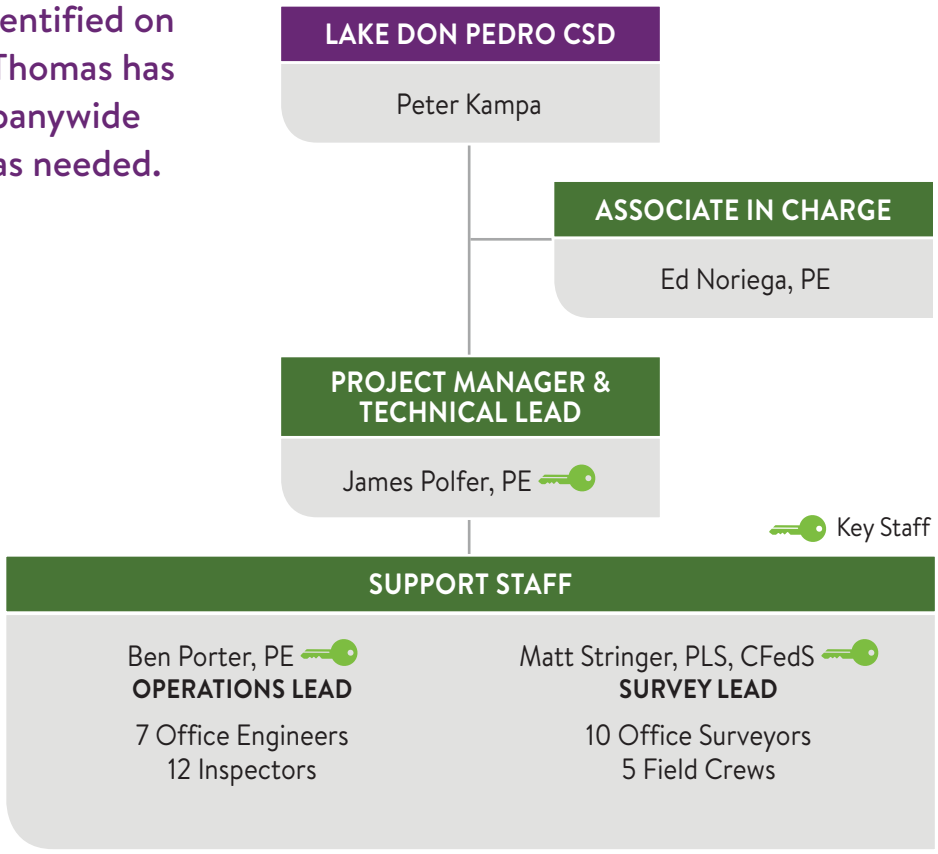
2. PROJECT TEAM

We have assembled a highly experienced team dedicated to successfully delivering the District's projects. Our organization chart depicts the lines of communication and structure we intend to implement for this contract. Resumes for key staff are included in Section 4 of this proposal.

Mark Thomas provides engineering services for many public agencies and understands the requirements set forth in the many federal, state, and local regulations, policies, and programs. Our team's experience in working with districts give us a comprehensive knowledge of the needs and challenges a special district may encounter; understanding that services will include unique and complex assignments. These assignments may include a high level of visibility and public sentiment requiring tact, diplomacy, and extensive technical knowledge of the program or project. Our team will work closely with the District's Board, administration, and staff in addressing the community's needs.

Mark Thomas has the staffing and expertise necessary to meet the District's engineering needs. This includes administrative, management, and operations support as requested.

In addition to the lead staff identified on our organization chart, Mark Thomas has more than 50 engineers companywide that can support the District as needed.



MEET OUR PROJECT MANAGER - JAMES POLFER, PE

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- Groundwater supply, disinfection systems for groundwater under direct influence of surface water
- Potable water storage
- Pumping and distribution systems

James' special district projects experience includes:

- Chlorination systems and hydropneumatic tank replacement for community with groundwater supply under the influence of surface water. Installed necessary chlorination system, contact chambers, and replace existing hydro-tanks at two locations in the community.
- Groundwater supply for community out of compliance for gross alpha particle and arsenic. Project was to identify and develop an alternative potable water source. Project included a geophysical survey of the underlying geology of the area for the evaluation of a new groundwater or conjunctive use supply.
- Hydrogeologic and hydrologic analysis for the preparation of a 148-acre wastewater disposal field expansion master plan. Disposal field is located at about 5000 feet above msl and is subject to winter snows and freezing.
- Consolidation of 4 permitted small community water systems using surface water and groundwater supply into one centralized facility.
- Power supply and MCC for 4 – 100 hp pumps located in Millerton Lake to provide raw water supply to a community surface water treatment facility.
- 3 miles of 12-inch diameter pipeline with approximately 1200 feet of the pipeline to be constructed underwater in Millerton Lake at depths up to 120 feet.
- Replace approximately 2.5 miles of asbestos cement pipe of various sizes. The AC pipe experienced calcium leaching on the inside of the pipe from a low pH water source (groundwater). pH of the supply was corrected.
- SCADA and communications at 46 locations. Locations include storage tanks, lift stations, and well sites located throughout mountain terrain. Sites are subject to winter conditions including power outages and several feet of snow.

3. TECHNICAL ABILITY

The Mark Thomas team is experienced in the use of MS Office Suite and MS Project, AutoCAD and Civil 3D, ArcGIS, and USACE HEC software. Most importantly, we are experienced in the use of specialty software that would be of benefit to the District, including EPANET and pipeline inspection CCTV and analysis software.

EPANET SOFTWARE

EPANET software is available from the US EPA for Modeling Drinking Water Distribution Systems. As the EPA is the regulatory authority on water quality, the development of this software aids many communities in meeting compliance standards. Used for distribution system analysis, it was developed as a tool to understand the movement and fate of drinking water constituents within the distribution systems. It is used to design and size new water infrastructure, retrofit existing infrastructure, optimize operations, reduce energy usage, and investigate water quality problems.

EPANET's modeling is effective at water quality modeling, containing a state-of-the-art hydraulic analysis engine that includes the following hydraulic and water quality modeling capabilities:

- Operations based on both tank levels, timer controls or complex rule-based controls
- Computes friction headloss including minor headloss
- Models constant or variable speed pumps
- Models most types of valves, including shutoff, check, pressure regulating, and flow control
- Considers multiple demand categories at junctions, each with its own pattern of time variation
- Storage tanks with or without baffling - as either complete mix, plug flow, or multi-compartment reactors
- Movement of non-reactive and reactive tracer (including decay) material through the network over time
- Age of water throughout
- Reactions in the bulk flow and at the pipe wall
- Accounts for mass transfer limitations when modeling pipe wall reactions
- Allows growth or decay reactions to proceed up to a limiting concentration
- Employs modifiable global reaction rate coefficients
- Allows wall reaction rate coefficients to be correlated to pipe roughness
- Allows for time-varying concentration or mass inputs at any location in the network
- Sampling programs
- Disinfectant loss and byproduct formations

In addition to EPANET and CCTV, lessons learned through our years of district management experience have moved us to add the following technical abilities:

Complete Stormwater, Sewer and Floodplain Modeling Software: In-house capability to allow modeling to be easily updated and provide up to date information and services. This in-house capability provides flexibility and cost-effective solutions for modeling with no need to rely on outside services. Similar to ARC-GIS, Lucity, and CUPMAN for ITT, GIS and computerized maintenance.

Rate Studies: We have developed analysis processes and procedures that provides decision makers with the tools to evaluate options and be in compliance with Proposition 218 requirements.

New Technology in Rehabilitation: Because many agencies and districts have aging infrastructure and a need to rehabilitate, Mark Thomas is up to date in the latest technologies, including utilization of pipe bursting, lining and trenchless – micro tunneling.

PIPELINE INSPECTION CCTV

Mark Thomas provides in-house CCTV inspection and maintains a CCTV-mounted truck. The acquisition of an in-house system allows flexibility to meet the needs of the District at rates lower than the market rates for CCTV. Using this latest CCTV equipment and reporting methods, we can provide quality, flexibility, and reliability in pipeline inspection. We currently utilize Granite XP and POSM software for data collection and reporting.

All data needed for pipe inspection and rehabilitation plans can be quickly and easily integrated into any GIS program. Project information, pipe section observation, photos, and videos can be analyzed on screen or provided to the client through an external drive or DVD.

Mark Thomas uses the OZ III Built-In Sonde Camera with a self-leveling head that pans, tilts, and rotates for easy identification of defects along junctions and around manholes. The unit can accurately pinpoint the location of any defect, root intrusions, or FOG build up precisely from above, through dirt and pavement. CCTV footage of the underground pipe with on-screen distance counters can also help pinpoint defects from any given point. The WTR Transporter used to propel the camera can fit pipes ranging from 6 to 36 inches in diameter and the 1,500-foot cable reel allows for multiple pipe segment inspections from minimal setups.

4. INDIVIDUAL QUALIFICATIONS AND EXPERIENCE

We are proud of our track record of successfully serving and exceeding the expectations of our clients. Following are brief descriptions of relevant experience with client references. We are confident that you will find a demonstrated ability to deliver district engineering services.

DISTRICT MANAGEMENT SERVICES

Various Special Districts

As detailed in the previous sections, Mark Thomas has extensive experience working with special districts. We are currently serving as the District Manager-Engineer for three sewer districts in Santa Clara County. Mark Thomas provides the entire staffing required to provide district administration, management, engineering and operation services. Key features and relevant experiences are shown in matrix below:

	CUPERTINO SANITARY DISTRICT	COUNTY SANITATION DISTRICT 2-3	BURBANK SANITARY DISTRICT
Number of Years Services Provided	62 years	64 years	14 years
Reporting Public Officials	Five Elected Board Members	Santa Clara County Board of Supervisors	Five Elected Board Members
Reference	William Bosworth, Director (408) 253-7071	Javier Serrano, County Counsel (408) 299-5922	Michelle Kaelker-Boor, Director (408) 288-8886
Service Size	• 22,290 services • 200 miles of sewer main • 17 pump stations	• 4,822 services • 46 miles of sewer mains • 1 pump station	• 1,623 services • 6 miles of sewer mains
Annual Budget	$17.3 million	$7.4 million	$1.4 million
CIP Budget	$2.2 million	$1.8 million	$250,000

A recent addition to Mark Thomas, James Polfer brings a wealth of experience in engineering and management of special district projects.

James served many years in Fresno County's Department of Public Works and Planning's (DPW&P), Design Division. During his tenure at Fresno County's DPW&P's Design Division, he served as the engineer in charge of water system engineering and successfully led the projects described on the following pages.

CSA 49 WESTSIDE/O'NEILL'S SURFACE WATER TREATMENT FACILITY CONSOLIDATION AND DISTRIBUTION SYSTEM IMPROVEMENTS

Fresno County

CLIENT REFERENCE
Joe Prado, Community Health, Division Manager *(Formerly Special Districts Administrator for Fresno PW&P)*
1221 Fulton Street
Fresno, CA 93721
(559) 600-3007

COMPLETION DATE
June 2013

CONTRACT AMOUNT
$308,361

The work, in general, consisted of securing the funding for the planning, engineering and preparation of PS&E, construction, and maintenance of a new surface water treatment facility.

This project included installing two multi-media absorption/clarifier – filter systems for the treatment of surface water; installation of an 80,000-gallon bolted steel potable storage tank, tank and treatment equipment foundations; potable water distribution pumping system including the installation of pumps, variable frequency drives and pump controls, control panels, pressure/surge tanks, potable water distribution mains, blow-offs, and fire hydrants. Service connections, water meters, meter boxes, valves, valve boxes, and appurtenances necessary to deliver drinking water to the users were also installed.

The project also included the bore and jack of casings supporting carrier pipes at two location across SR 145, construction of site improvements, installation of an auxiliary pump and pump control fire flows, installation of electrical service cabinets, construction of treatment plant backwash basin, installation of turbidity and disinfectant residual monitoring and recording equipment, all piping required to connect facility components, and all controls necessary for the operation and control of the surface water treatment facility.

Community outreach was very important to secure the funding and community support necessary to accomplishing this project. The funding for the project came from multiple sources including:

- $1,884, 431 from the Drinking Water State Revolving (DWSRF) Fund of which $1,804,431 was in the form of a grant and the balance was an $80,000 loan with a 20 year at 0% term.
- $400,000 Community Development Block Grant (CDBG).
- $200,000 DWR Safe Drinking Water Bond Law Grant funds identified in the state's adopted budget.
- $40,000 from project proponents in the community.

This gave a total project cost of $2,524,431. To secure the revenues necessary to repay the DWSRF loan, an assessment engineer's report was prepared and a successful Proposition 218 was completed. In addition, to ensure sufficient revenues were available to maintain the facility a rate study was prepared and a Proposition 218 was completed wherein the calculated rates were adopted. All project financing documents and PS&E were prepared by James and the project team at Fresno PW&P.

CSA 34 LAKE PUMPS REPAIR

Fresno County

The work performed consisted, in general, of removing 14-inch diameter ductile iron tees, connected tilted disk check valves, and gaskets from an existing raw water pump discharge manifold and pre-place the gaskets and reinstall the tees. The pumps are secured to a platform submerged in Millerton Lake. The work associated with these repairs required underwater removal and installation of manifold components. This required trained and experienced diving personnel using approved commercial diving practices, procedures, and equipment.

Raw water for a surface water treatment facility is supplied by four 100-horsepower pumps secured to a platform submerged in Millerton Lake. The flows provided by these pumps fell off dramatically prompting an investigation of the system performed by divers. During that dive it was discovered that the flange gaskets used in the construction of the manifold had failed. It was also discovered that the platform had moved and was hanging over a sharp drop-off and was being supported by a 14-inch diameter flex-tend coupling connected to the discharge manifold.

As part of the preparation of the PS&E for the repairs, a surge analysis was prepared. It was discovered that prior engineering did not take into account surge pressures from pump shut-off. It was determined that these surge pressures blew out the gaskets accounting for the decrease in flows. To withstand these pressure surges, James requested that the manufacturer of a gasket meeting the system pressure requirements per AWWA standards, that expanded when in contact with water, be tested for these service conditions. After extensive testing, the new gaskets were shown to be suitable in these service conditions and were specified for the installation.

The work performed by divers included removing the flex-tend coupling and pump manifold, repositioning the pump platform, securing the platform to the lakebed, and reinstalling the removed components. Prior to re-installation, the flex-tend coupling was removed from the lake and pressure tested to ensure that the movement and stresses it encountered did not damage it.

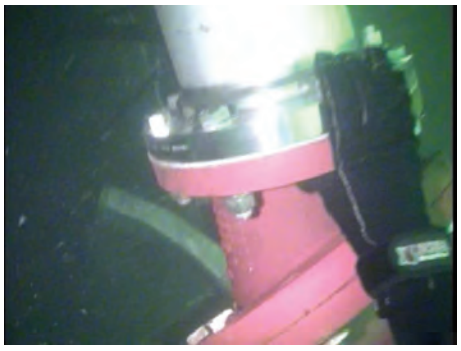
At the time of re-installation, the pump platform was approximately 60-feet below the water surface. All appropriate safety practices were observed during construction. It is also noted that the pump system supplied raw water to the plants providing treated water for the community's residents and raw water to a golf course for irrigation. Time was of the essence. Staging in removal and re-installation was specified and performed such that drinking water supplied to the community and raw water supply was not interrupted.

CLIENT REFERENCE
John Thompson, Deputy Director, Fresno PW&P
2220 Tulare Street
Fresno, CA 93721
(559) 600-4313

COMPLETION DATE
June 2014

CONTRACT AMOUNT
$188,322

Replaced 14-inch Flange Gasket



Replaced 8-inch Flange Gasket

TEAM RESUMES

Brief resumes for our key team members follow.

JAMES POLFER, PE

James Polfer has more than 15 years of experience in engineering design of public works infrastructure projects, and over 20 years of experience in general engineering and general building construction. The combination of his practical experience in construction and the design, administration, and preparation of plans, specifications, and estimates for local agency improvement projects which include roads and bridges, water and wastewater facilities, public park improvements, and various landfill projects has given him a comprehensive understanding of what is necessary for the successful delivery of a local agency infrastructure project.

PROJECT ROLE
Project Manager & Technical Lead

EDUCATION
Coursework in Civil Engineering

REGISTRATION
CA C74529

REPRESENTATIVE PROJECTS

DISTRICT MANAGEMENT & ENGINEERING, FRESNO COUNTY
A partial list of special district projects where James served as project manager/ engineer include:

- CSA 30 El Porvenir & CSA 32 Cantua Creek - Surface Water Treatment Facility Consolidation ($725,000 DWSRF planning grant)
- CSA 38A Dos Palos - Watermain Replacement (CDBG grant)
- CSA 32 Bolted Steel Water Tank and Appurtenances (240,000-gallon tank) (CDBG grant)
- CSA 32 Potable Water Pressure/VFD Pumping System (CDBG grant)
- CSA 30 Wastewater Treatment Facilities (CDBG grant)
- CSA 44D Wastewater Treatment Facility Improvements (CWSRF loan $1,773,937 – 20 years at 1.0% and grant of $732,081))
- CSA 49 Disinfection System Modifications (DWSRF $455,000 grant)
- Jenson-Drummond Sanitary Sewer Collection System (IRWMP grant)
- Skaggs Bridge and Laton Park Improvements and Water Supply (State Parks Grant)
- Waterworks District (WWD) 38 Wastewater Facilities Improvements (CWSRF planning loan)
- WWD 40 Drinking Water Supply (DWSRF $425,000 planning loan 20-years at 1.7875%)
- CSA 34 Millerton New Town Wastewater disposal analysis (Developer)
- CSA 31 Shaver Lake SCADA System (Community)
- Underground Utility District and Community Facilities District (CFD, Mello-Roos) formations

BENJAMIN PORTER, PE

Benjamin Porter has more than 19 years of experience in engineering with a major focus on wastewater engineering and planning. Ben is committed to delivering exceptionally high quality.

PROJECT ROLE
Operations Lead

EDUCATION
BS in Civil and Environmental Engineering
MS in Civil and Environmental Engineering

REGISTRATION
CA C69302

REPRESENTATIVE PROJECTS

CUPERTINO SANITARY DISTRICT, SANTA CLARA COUNTY

Deputy district manager-engineer for the Cupertino Sanitary District. The District operates over 180 miles of sewers, 17 pump stations, 4000 manholes that serve the cities of Cupertino, Saratoga and portions of San Jose. Role requires reporting directly to the elected Board of Directors. Mark Thomas provides district management, engineering and operation services including maintenance and repairs of all district facilities.

COUNTY SANITATION DISTRICT 2-3, SANTA CLARA COUNTY

Deputy district manager for County of Santa Clara Sanitary Districts 2 and 3. Role requires reporting directly to the Santa Clara County Board of Supervisors. Mark Thomas provides district management, engineering and operation services including maintenance and repairs of all district facilities.

BURBANK SANITARY DISTRICT, SANTA CLARA COUNTY

Deputy district manager for Burbank Sanitary District. Role requires reporting directly to the Board of Directors. Mark Thomas provides district management, engineering and operation services including maintenance and repairs of all district facilities.

RECYCLED WATER SALT MANAGEMENT PLAN, IRVINE RANCH WATER DISTRICT

Project manager responsible for preparing a Salt Management Plan for the District's potable and recycled water service area. District's system consists of a complex network of potable and non-potable water supply sources. In addition, District has various methods to provide treatment to its potable water and wastewater, and has the ability to produce recycled water at two reclamation facilities. The project team prepared a mass balance that incorporates data on total dissolved solids for District's entire system and predicts salt content in its recycled water effluent. The team conducted an alternatives evaluation to investigate means of reducing and minimizing TDS in its recycled water.

BIOSOLIDS ALTERNATIVES AND FINANCIAL ANALYSIS, IRVINE RANCH WATER DISTRICT

Deputy project manager responsible for developing a financial model to determine the cost for biosolids disposal to a local sanitation district. The model incorporated projected wastewater influent flows and solids production for a 15-year period based on recycled water demand and plant treatment capacity and considered two different methods of calculating solids handling charges. The solids handling charges were compared to four different alternative methods of on-site solids handling that varied from thickening through drying.

MATT STRINGER, PLS

Matt Stringer has more than 20 years of experience as a survey manager, project surveyor, survey technician, and a survey crew member. He manages all phases of survey in support of bridge, transportation, and pipeline design. His work includes providing survey support for water pipe replacements, bridge widening and replacement, interchanges, and streetscape improvements. Matt's experience includes control, topographic, right of way, and boundary surveys. He has coordinated and completed topographic base mapping, GPS and conventional control surveys in support of aerial topographic mapping, boundary and construction work. Many of the survey reports produced on these projects undergo State review for accuracy and procedures. Matt is highly proficient in AutoCAD, LDD, TGO, StarNet, and LGO software.

PROJECT ROLE
Survey Lead

EDUCATION
BS in Land Surveying

REGISTRATION
CA PLS 8151
CFedS 1571

REPRESENTATIVE PROJECTS

SAN JOSE WATER COMPANY ON-CALL SURVEY SERVICES, SAN JOSE

Survey project manager responsible for as-needed surveying services in support of capital projects for San Jose Water Company. Project included detailed topographic surveys including information about water meter numbers, valve nut depths, rights of way, easements and other features necessary for design and construction. Multiple task orders have been completed within schedule and budget.

CALIFORNIA AMERICAN WATER SMALL MAIN/BACKYARD MAIN REPLACEMENT PROGRAM, SACRAMENTO

Project manager for construction staking, as-builts, and easement acquisition support for the project. Project included areas where fire hydrants were moved during construction, needing a quick turn-around for acquisition documents and support. This project is ongoing and as-built surveys for Cal Am water are scheduled to begin.

E. DUNNE HILLSIDE WATER RESERVOIR, MORGAN HILL

Survey manager responsible for coordination, oversight of topographic surveys, property line delineation, and project control. Design included 0.85 MG Water tank, access road, retaining wall and area for future 20' x 30' water booster. Coordinated closely with City and designer to provide information to meet schedule.

SHERIDAN WATER SYSTEMS IMPROVEMENTS, SHERIDAN

Project surveyor responsible for the project control network, topographic surveys base mapping, right of way retracement and the preparation of plats and legals. Survey supported the design of a new pressurized water pipe line extending from 10th Street to Camp Far West Road in the community of Sheridan, near Marysville, CA.

EAST SACRAMENTO WATER MAIN REPLACEMENT, SACRAMENTO

Project survey manager responsible for oversight of control survey of 16 aerial targets and topographic survey. Survey supported design of this phase of a pressurized water system and new water meter installation for the City of Sacramento.

5. UNDERSTANDING AND SCOPE OF WORK

UNDERSTANDING

The District is located in the rural Sierra Nevada foothills between Lake Don Pedro and Lake McClure, in the counties of Mariposa and Tuolumne. The terrain is comprised of rolling hills with grassland, scattered oak trees, and occasional rock outcroppings typical of the Sierra Nevada foothills. The underlying geologic strata is comprised of a near ground surface granite batholith in various states of decomposition. Groundwater, when located, will typically be found in fractured aquifers. Occasional perched aquifers may be located within the District; however, these types aquifers often prove unreliable or unsuitable for direct supply of drinking water.

The District provides drinking water service to approximately 3,250 residents through approximately 1,450 services connections. The drinking water supply is provided from a surface water treatment facility and a number of wells. Raw water supply delivered to the surface water treatment facility is drawn from Lake McClure.

Development of the drinking water system began in the late 1960s, with an activity date of 1976 per the State Water Resources Control Board's Division of Drinking Water. Many components of the water system have or are nearing the end of their useful life. Failure and leaking of the water mains and distribution system components create reliability issues for system operators and users.

The reliability of the raw water supply from Lake McClure was tried and tested during the recent drought, requiring extra measures to supply water to the community. Lake levels fell below the permanent pumping system making the District rely upon an emergency floating pump system.

To meet waterworks standards, the District is seeking an professional engineering firm to serve as District engineer. The district engineer must effectively communicate with District staff and work to identify system infrastructure priorities and maintain regulatory compliance. The District seeks a long-term relationship with the engineer to maintain continuity in service and understanding of District needs.

The District engineer needs to be qualified and capable of providing design, surveying, and a full range of professional services as identified in the RFP. **The Mark Thomas team can perform the duties stated in the RFP. Additionally, we can provide planning services such as development of a capital improvement and maintenance plan, identify funding sources, and prepare all necessary documents and report for Proposition 218 proceedings.**

SCOPE OF WORK & APPROACH

Mark Thomas provides engineering services for many public agencies and understands the requirements set forth in the many federal, state, and local regulations, policies, and programs. Our team's experience in working with districts give us a comprehensive knowledge of the needs and challenges the District may encounter; understanding that services will include unique and complex assignments. These assignments may include a high level of visibility and public sentiment requiring tact, diplomacy, and extensive technical knowledge of the program or project. Our team will work closely with the District's Board of Directors, administration, and staff to address the community's needs.

Our team leader, James Polfer, and those that support this effort, engineering expertise aside, have worked with many special districts. The experience and knowledge of the Mark Thomas team makes us uniquely qualified to serve as District Engineer.

More importantly, our team understands the challenges that face special districts and have proven experience developing cost-effective solutions. Our team will work closely with the District's Board of Directors, administration, and staff to address the community's needs.

Services

Mark Thomas will provide the staffing required to provide the District comprehensive services:

- Preparation of reports, agenda, minutes, and follow-up for Board Meetings
- Preparation of ordinances and resolutions in consultation with District Counsel
- Accounting and clerical services, including coordination with external auditors and preparation of management discussion report
- Preparation of revenue analysis, tax roll, and budgets
- Asset Management Services, including mapping and GIS database
- Engineering Services
  - Plan review of development projects
  - Construction administration (inspection, submittals, RFI, close-out) of development projects
  - Manage, monitor and provide assistance to planning and building departments of various agencies
  - District permits issuance and project close-out
  - Vendor contracts management
  - Procurement documents and RFP to retain consultants and contractors
  - Securing required permits for maintenance and construction projects
  - Condition assessment and development of CIP program
  - Engineering inquires
  - Design of District capital improvement projects
  - Bidding and Contract Administration, including managing progress payments and budgets
  - Construction administration of District's CIP
  - Coordination with outside agencies
  - Prevention maintenance program
  - Coordination with permitting and regulatory agencies
- Field Operations
  - Work Orders and coordination with contractors
  - Support for routine maintenance of mains, laterals and pump stations
  - Field review for condition assessment of pipelines

Project Management

Project management is a continuous task that requires ongoing attention to the activities of the internal staff and the needs of the District. James Polfer is an experienced project manager on diverse projects that include the planning and implementation/operation of drinking water and wastewater systems. He will be the primary point of contact for the District and will be responsible for providing a level of service that meets or exceeds District expectations. He will assign resources to provide the services required by the District. Specific project management activities are detailed below.

Effective communication between the District and the Mark Thomas team will be an important aspect of our service. James will be reachable by cell phone during and after business hours. He will provide updates to the District either formally or informally as the situation dictates. In addition, James will provide updates to the Board and District administration as requested. James will facilitate effective communication with regular team meetings and status updates.

Regular meetings will be scheduled at the discretion of the District. To keep charges to the District to a minimum, only staff substantially necessary will attend, which will at a minimum include the project manager/ technical lead.

Regular meetings should include discussion of tasks completed or scheduled. The team will be available to discuss any issues or challenges that have been encountered or that are foreseen. The means for resolving past issues will be discussed, and we will provide suggested solutions for possible foreseen challenges.

Move Forward

MARK THOMAS

FRESNO

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(559) 447-1938

San José • Carmel • Cupertino
Fresno • Irvine • Los Angeles
Oakland • Sacramento
San Carlos • Walnut Creek

markthomas.com

EXHIBIT A

Mark Thomas & Company, Inc. Rate Schedule

Expires June 30, 2019

HOURLY CHARGE RATES
OTHER DIRECT COSTS

Engineering Services	
Sr. Principal	$428
Principal	$325
Sr. Engineering Manager	$300
Engineering Manager	$287
Practice Area Leader	$287
Sr. Project Manager	$242
Sr. Technical Lead	$242
Project Manager	$200
Technical Lead	$200
Sr. Project Engineer	$168
Sr. Technical Engineer	$168
Project Engineer	$146
Design Engineer II	$129
Design Engineer I	$105
Sr. Technician	$124
Technician	$89
Intern	$61
Urban Planning/Landscape Architecture	
Sr. LAUD Division Manager	$253
LAUD Division Manager	$214
Sr. LAUD Project Manager	$188
LAUD Project Manager	$172
Sr. Project Landscape Architect	$129
Project Landscape Architect	$112
Landscape Designer	$87
Intern	$61
Special Services	
Sr. Inspector	$126
Inspector	$90
Expert Witness	$406
Strategic Consulting	$406

Survey Services	
Sr. Survey Manager	$224
Survey Manager	$208
Sr. Project Surveyor	$187
Project Surveyor	$156
Sr. Surveyor	$140
Surveyor	$125
Lead Survey Technician	$151
Sr. Survey Technician	$125
Survey Technician	$104
Survey Intern	$73
Single Chief	$135
Single Chainman	$120
Apprentice	$78
1 Person Field Crew	$177
2 Person Field Crew	$281
3 Person Field Crew	$364
Project Support/Coordination Services	
Sr. Project Accountant	$129
Project Accountant	$105
Sr. Project Coordinator	$126
Project Coordinator	$101
Sr. Project Assistant	$94
Project Assistant	$68
Sr. Technical Writer	$109
Technical Writer	$68
Sr. Graphic Designer	$118
Graphic Designer	$84
Grant Writing Services	
Sr. Funding Specialist	$156
Funding Specialist	$125

Reimbursables including, but not limited to:	
Reproductions, Filing Fees and Field Expenses	Cost Plus 5%
Mileage	Per IRS Rate
Outside Consultant Fees	Cost Plus 5%