



January 5, 2023

TO: LOCSD Board of Directors
FROM: Ron Munds, General Manager
SUBJECT: **Agenda Item 9F – 01/05/2023 Board Meeting**
Award contract to MNS Engineers for Design Services for the Program C Well Equipping Project

President
Matthew D. Fourcroy

Vice President
Charles L. Cesena

Directors
Troy C. Gatchell
Marshall E. Ochylski
Christine M. Womack

General Manager
Ron Munds

District Accountant
Robert Stilts, CPA

Unit Chief
Eddy Moore

Battalion Chief
Paul Provence

Mailing Address:
P.O. Box 6064
Los Osos, CA 93412

Offices:
2122 9th Street, Suite 110
Los Osos, CA 93402

Phone: 805/528-9370
FAX: 805/528-9377

www.losososcsd.org

DESCRIPTION

At the November 3, 2022 Board meeting, the Board approved the release of a Request for Proposal (RFP) for the design services for the well equipping phase of the Program C Well Project (Project). This report is recommending the award of the contract to perform these services to the most responsive proposer, MNS Engineers.

SUMMARY OF STAFF RECOMMENDATION

This item will be approved along with the Consent Calendar unless it is pulled by a Director for separate consideration. If so, staff recommends that the Board adopt the following motion:

Motion:

- 1. I move that the Board award a contract to MNS Engineers in the amount not to exceed the sum of \$172,069 to perform the scope of work as provided in Exhibit A; and***
- 2. Authorize the General Manager to execute the professional services agreement with MNS Engineers upon finalization of the provisions of the agreement.***

DISCUSSION

The District Engineer prepared a RFP for design services needed to prepare for construction and implementation of the well equipping phase of this Project. The Board approved the release of the RFP at their November 3, 2022 meeting. The District received proposals from the following engineering firms:

- MNS Engineers, Inc.
- Water Systems Consulting, Inc.

The proposal review team included:

- Ron Munds, General Manager
- Steve Tanaka, Assistant District Engineer-Wallace Group

The team reviewed the two proposals based on the responsiveness to the scope of work in RFP, price and qualifications of the consultant and support staff. The review team unanimously chose MNS Engineers as the most responsive proposers and is recommending to the Board the award of the contract to MNS Engineers.

FINANCIAL IMPACT

The Program C Well Equipping Project is included in the 2022-23 capital improvement budget, line item 500-9006. The total budget for the estimated project is \$2.5 million. The contract amount of \$172,069 being considered in this

report is \$47,069 over the estimated engineering budget of \$125,000. As is the case with other project costs estimates, increases due to many factors have been the norm. The District did receive a \$1.5 million dollar grant to help offset the project's overall costs. With the grant funding and Fund 500 operating cash and reserves, there are sufficient funds to offset the increase for design services.

Attachment

MNS Engineers Proposal



LOS OSOS COMMUNITY SERVICES DISTRICT

DECEMBER 7, 2022

PROPOSAL TO PROVIDE

Engineering Services for
Program C Well Equipping

DISOS.220510.00



December 7, 2022

Los Osos Community Services District
Attention: Steve Tanaka c/o Wallace Group
2122 9th Street
Los Osos, CA 93402

RE: Proposal to Provide Engineering Services for Los Osos Community Services District Program C Well Equipping

MNS Engineers, Inc., (MNS) appreciates the opportunity to submit this proposal to the Los Osos Community Services District (LOCSD or District) for the Program C Well Equipping Project (Project). Established in 1962, MNS provides quality infrastructure consulting services to the water resources, transportation, and government service markets throughout California. Specializing in the core services of civil engineering, construction management, land surveying, and government services, MNS understands the technical, environmental, and regulatory aspects required to implement any potable water infrastructure project.

Our Team's Core Benefits

Professional and Qualified Team

Our Project Manager, Nick Panofsky, PE, QSD, has over 16 years of experience, specializes in water infrastructure, and leads the water resources engineering department for MNS. Nick has overseen numerous projects involving stormwater, water, and wastewater infrastructure improvements including water wells, reservoirs, tanks, treatment plants, pipelines, and pump stations. He has provided program management and engineering services for multiple water agencies and cities throughout California, including the Los Osos Community Services District, County of Ventura, City of Buellton, City of Burbank, City of Santa Barbara, Calleguas Municipal Water District, Casitas Municipal Water District, Montecito Water District, Santa Clara Valley Water District, Water Replenishment District of Southern California, and West Basin Municipal Water District.

To supplement our in-house expertise, we have augmented our team with the addition of specialty subconsultants, Yeh & Associates (geotechnical), SSG (structural), and IRJ (electrical/mechanical).

Comprehensive Engineering Services

MNS will provide comprehensive engineering services to meet project and LOCSD needs from start to finish. Our goal is to facilitate the construction of this important project to provide LOCSD and the community a reliable new source of potable water.

Clear Communication

Nick understands the responsiveness, thoroughness, and quality expected, while maintaining the project budget and schedule milestones. He communicates regularly with the project team to allocate resources to accomplish the work to ensure appropriate quality assurance/quality control (QA/QC) reviews are performed on every deliverable. Nick will keep LOCSD up to date with project progress, concerns, and coordination issues.

Legal Name

MNS Engineers, Inc.

Firm Ownership Type

C-Corporation

Year Firm Established

1962

California Department of Industrial Relations (DIR)

No. 1000003564

Corporate Office

201 N. Calle Cesar Chavez,
Suite 300

Santa Barbara, CA 93103

805.692.6921 Office

805.692.6931 Fax

www.mnsengineers.com

Local Office

811 El Capitan Way, Suite 130
San Luis Obispo, CA 93401

805.787.0326 Office/Fax

Project Contact

Nick Panofsky, PE, QSD

Lead Engineer/
Project Manager

805.722.2734 Mobile

805.592.2074 Office

[npanofsky@](mailto:npanofsky@mnsengineers.com)

mnsengineers.com

Authorized Signature

Miranda Patton, PE
Chief Business Development
Officer

805.719.9805 Office

[mpatton@](mailto:mpatton@mnsengineers.com)

mnsengineers.com

Acknowledgments

Addenda No. 1 dated
November 9, 2022; and No. 2
dated November 15, 2022

Proposed Costs

Proposed fees and rate
schedules are detailed in
a separately submitted
cost package, per the RFP
instructions.



In summary, MNS is confident our uniquely experienced and qualified team will provide quality services to promote a successful project delivery to meet the LOCSD's expectations and goals. We look forward to continuing to work with the LOCSD. Please contact me or Nick Panofsky, PE, QSD, at 805.592.2074 or npanofsky@mnsengineers.com with any questions you may have about our submittal. Thank you for your consideration.

Sincerely,
MNS Engineers, Inc.

A handwritten signature in black ink that reads "Miranda Patton".

Miranda Patton, PE
Chief Business Development Officer

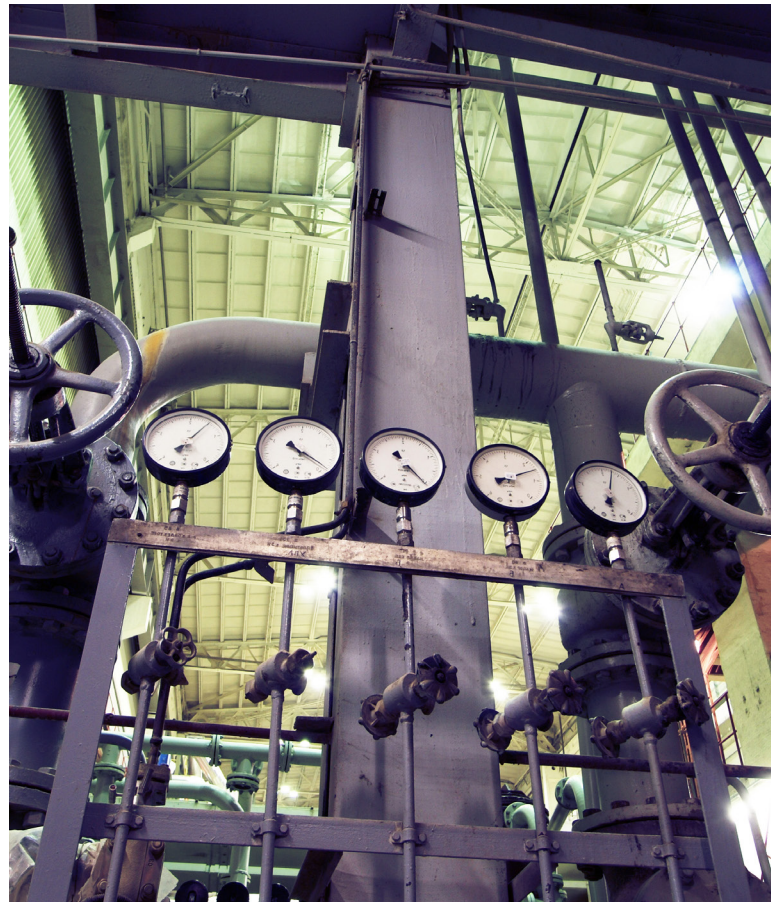
A handwritten signature in black ink that reads "Nick Panofsky".

Nick Panofsky, PE, QSD
Lead Engineer/Project Manager

1

SECTION

Technical Proposal



Contents



Section 1. Project Understanding and Approach	1
Section 2. Project Team/Qualifications	3
Section 3. Project Experience	5
Section 4. Scope of Services/Contract Exceptions	7
Section 5. Project Schedule	12
Appendix A. Resumes	A-1
Appendix B. Addendums	B-1



Section 1: Project Understanding

The Los Osos Community Services District is a public agency providing a range of services to the communities of Los Osos and Baywood Park including water, drainage, street lighting, parks/recreation, fire, and emergency response. The District provides water service to about half of the community.

In a coordinated effort to maximize the productivity and longevity of local groundwater resources, and provide supply reliability to the customers, the District recently installed a new potable water supply well. The “Program C Well” will draw water from a deep aquifer, with improved water quality characteristics compared to shallower aquifers.

The new well is located at the corner of South Bay Boulevard and Bay Oaks Drive. Initial testing has shown the water is of good quality, requiring only chlorine disinfection and phosphate dosing to meet water quality standards. The water produced from this well will be conveyed to the District’s main pressure zone, at a tie-in point at Nipomo Avenue and Mountain View Drive. The District retained the services of a separate consultant for design of the water transmission main. The new well is anticipated to have a design pumping rate of around 200 gpm. This Project includes work to equip the recently installed Program C Well, as well as other work to fully develop the site as a municipal water production facility. A conceptual site layout has been prepared by the District Engineer. The work in this Project includes development of a preliminary design memorandum, a complete set of project plans, project manual, technical specifications, and an Engineer’s Estimate of Probable Cost of Construction (PS&E). In addition to a planning

document and PS&E, the selected consultant will assist the District in updating the Department of Drinking Water (DDW) Domestic Water Supply Permit, and bidding and construction phase services at the District’s option. The Project is being partially funded via a Small Community Drought Relief (SCDR) grant. Costs in excess of the grant will be funded from District reserves. The Project scope of work includes:

- A new submersible well pump equipped with a variable frequency drive, as well as necessary piping, valves, and accessories to treat and convey water through the Program C pipeline. A security cage will be provided over the wellhead piping.
- A pump-to-waste discharge, including an appropriate air gap, will discharge to the on-site infiltration pond.
- A new prefabricated or concrete block two-room building will house electrical and communications equipment on one side, and chemical dosing equipment on the other, each with dedicated access. The architecture of the building will be considered in the context of other buildings in the surrounding area, and an appropriate exterior selected in coordination with the District.
- Existing controls and electrical infrastructure associated with the on-site stormwater pump will be relocated into the building and reconnected at the existing junction box.
- Site improvements will include paving, decorative fencing along edges of the property adjacent to roads, drainage, driveway access improvements within the County right-of-way, and electrical equipment serving the existing stormwater pump station will be relocated into the new building. Existing abandoned septic tanks will remain. The site will be laid out to accommodate future equipment placement for well maintenance.

- A new PG&E electrical service may be required to serve the additional demands. A portable generator connection will be provided for back-up power. New communications equipment will use an on-site cellular connection to transmit and receive signals from the existing SCADA system.

Landscape design is not included in the project scope. If requested, MNS can provide assistance selecting and locating trees with support from MNS landscape architect, Ron Milligan, PLA. It is our understanding the District has the following critical success factors in implementing this Project:

- Grant compliance with respect to project schedule and reporting
- Minimizing project costs while maintaining project integrity
- Streamlined coordination
- Maintaining quality during construction

Project Approach

The MNS approach for this Project will focus on addressing our understanding of the District's factors for project success. We will leverage our recent experience on the 8th and El Moro Well Equipping Project, as well as other recent similar experience, to expedite the work and minimize issues during construction to achieve a project in-line with District expectations. Our detailed approach to this Project is documented in the Scope of Work presented in Section 4. Our Project kick-off meeting will establish a foundation for streamlined Project execution. As part of the meeting, we propose to include a "lessons learned" session to discuss what worked well, and what could have been improved on the 8th and El Moro Well Equipping Project. The outcomes of this discussion will be incorporated into the contract documents, and approach to project implementation.

Grant Compliance

Compliance with grant requirements is paramount to receiving full and expeditious reimbursement from the granting agency. While compliance with a SCDR grant is relatively straightforward, the MNS grant writing and administration team is available to support on an as-needed basis. We will provide input supporting the preparation of quarterly reports, if required. To address the grant schedule constraints, we offer the following potential strategies to accelerate design and construction of the Project:

- PG&E Coordination: If required, obtaining a new electrical service from PG&E will be a constraint on the Project implementation schedule. Preliminary review of the existing service indicates it has sufficient capacity to serve the new and existing loads at the site. However, if a new service is required, we will leverage existing

relationships with PG&E planners prior to submitting a formal application for service. Using PG&E's on-line portal, we will submit an application on the District's behalf, timed to complete construction within the targeted construction window .

- Pump and Electrical Equipment Procurement: Lead times associated with mechanical and electrical equipment are impacting projects across the industry. To minimize these impacts, we will coordinate with the District to procure long-lead time items ahead of bidding the Project. MNS will support the District in preparing appropriate documents for purchasing equipment which will be per grant and District procurement policy requirements. We will also incorporate appropriate provisions in the contract documents to balance ownership and responsibility for the pre-purchased equipment between the District and the contractor. Alternatively, if the new service is less than 200 amps, design components with shorter lead times may be available for traditional procurement.
- Expedited Engineering Schedule: To quickly advance the detailed design, MNS will maximize the use of our internal resources. Utilizing our internal survey staff, we can expedite field work and processing of survey data to rapidly develop a base map to begin detailed design. We further propose to concurrently prepare the preliminary design memorandum and 50% design package. Due to the straightforward nature of the design and our understanding of District expectations, changes to the design as a result of comments on the preliminary design memorandum are anticipated to be minor. MNS will further expedite the design by leveraging concepts, resources, and understanding developed during our work on the 8th and El Moro Well Equipping Project.

Minimizing project costs while maintaining Project integrity

To address concerns associated with Project implementation costs, we offer the following strategies:

- Developing good quality documents, combined with extensive project advertising during the bid, are critical strategies to receiving competitive bids. MNS maintains an extensive network of contacts with local contractors, and will assist in advertising the bid to our contacts.
- We have incorporated measures in these documents to minimize engineering costs by using in-house resources for survey, leveraging existing resources, and utilizing in-house construction management and inspection resources.
- By pre-purchasing equipment, the District will reduce contractor mark-ups and contingency costs associated with long-lead times.
- We will work with the District to specify equipment anticipated to provide a long and reliable operating

life, but we will not provide unnecessary “bells and whistles” in order to keep costs down. We will develop a Project which meets the District’s goals, without unnecessary additional improvements.

Streamlined Coordination

MNS will take a proactive approach to coordinating with the various parties and agencies involved.

- Project Manager Nick Panofsky, PE, will serve as the primary point-of-contact for the MNS team through all phases of design and construction. Nick is highly responsive and is available on short notice to join meetings and calls to maintain continual forward progress. MNS will provide support for the District’s coordination with DDW, the Project Hydrogeologist, and other agencies.
- The MNS team will lead this Project from our San Luis Obispo office, which is the home office for the MNS water resource engineering division. We will be supported by our subconsultants SSG Structural Engineers, based in San Luis Obispo, IRJ Engineers, and Yeh and Associates. Our proximity provides rapid access to the project site, allowing quick resolution of design questions and our ability to meet with District staff on short notice to exchange information.
- With our close proximity and connected staff, we will be quick to respond to the District’s needs. We are available by e-mail, phone, and in-person meetings to discuss the Project if required. We also maintain several additional tools if needed to assist in the smooth internal and external transfer of information including video conferences and cloud-based file transfer.
- The internal MNS team, including our subconsultants, have worked together on many projects over the past decade and have developed strong working relationships. We will work as a single and cohesive team throughout all stages of design and construction.
- MNS will coordinate with the Program C Well Pipeline designer to establish clear requirements for the interconnection between the two projects. We will coordinate at Project initiation to confirm base maps share common coordinate systems to avoid construction delays. The transition point between the construction contracts will be clearly delineated, with connection and testing responsibilities clearly specified.
- MNS will prepare encroachment permit documentation and coordinate directly with the County for construction of driveway improvements and other improvements within the County right-of-way, as required.

Maintaining Quality During Construction

MNS has extensive experience with construction phase services and construction management. Our local construction management teams are highly

respected, working on water infrastructure projects with construction costs of over \$100M. For the relatively small nature of this Project, a careful approach needs to be implemented to maintain construction quality without overspending on support services.

As with all our design projects, MNS conducts a constructability review of our designs prior to project completion. By involving staff from our construction management group, we gain an alternate perspective on the project. Our staff has extensive experience with construction and startup of similar facilities; this experience provides invaluable expertise to identify and remedy potential issues in design documents prior to bidding the project. Due to industry-wide material and equipment delays, pre-procuring long-lead time items has the potential to substantially reduce the enforceability of construction timelines, and result in substantial change orders on many projects. Pre-procurement of equipment should be considered for long-lead time items to reduce this construction risk.

Based on our experience on the 8th and El Moro Well Equipping Project, we recommend budgeting for civil, mechanical, and electrical construction inspection by qualified inspectors. Inspections should occur while work is in progress to avoid rework delays. We further recommend a focused and proactive approach by the District’s Project Manager, or third-party construction manager to effectively manage the construction through all phases.

Section 2: Project Team/Qualification

MNS Details	
Legal Firm Name	MNS Engineers, Inc.
Project Address	811 El Capitan Way, Suite 130 San Luis Obispo, CA 93401
Primary Point of Contact	Nick Panofsky, PE, QSD/QSP Lead Engineer/Project Manager Ph 805.592.2074 npanofsky@mnsengineers.com

About MNS Engineers, Inc.

MNS provides quality infrastructure consulting services to the water resources, transportation, and government service markets throughout California. Specializing in the core services of **civil engineering, construction management, and land surveying**, MNS’ reputation has been built on clear and direct communication and quality services. We understand the technical, environmental, and regulatory aspects required for any project. We are highly experienced with utility and multiagency coordination.

Nick Panofsky, PE, QSD **Yrs Exp** 16

Role	Lead Engineer/Project Manager
License	Professional Civil Engineer, CA No. 75006 Qualified SWPPP Developer, CA No. 75006 MBA, Shidler College of Business, University of Hawaii BS, Environmental Engineering, California Polytechnic State University, San Luis Obispo

Certification Qualified SWPPP Developer, CA No. 75006



Mr. Panofsky has over 16 years of professional consulting experience in the water resources industry. Nick has advanced his expertise through a variety of municipal infrastructure

design projects, including potable water, recycled water, wastewater, and stormwater. He has been involved in every stage of the design process, including planning, analysis, design, construction management, and operational assistance. He actively manages projects to meet both technical and financial goals.

Subconsultant Utilization

MNS has supplemented our in-house civil engineering, surveying, and construction management capabilities with the addition of expert subconsultants, including:



LOS OSOS COMMUNITY SERVICES DISTRICT

MNS ENGINEERS, INC.
Lead Engineer/Project Manager
Nick Panofsky, PE, QSD ●

**Quality Assurance/
Quality Control Manager**
Tyler Hunt, PE, QSD/QSP ●

- FIRM LEGEND**
- MNS
 - IRJ
 - SSG
 - Yeh

PROJECT SUPPORT TEAM

Senior Project Engineer
Nick Boswell, PE, QSD ●

Project Engineer
Jordyn Doyle, PE ●

Senior Electrical Inspector
Jeff Mitchum ●

Principal Surveyor
Shane Sobecki, PLS, EIT ●

Instrumentation and Controls Engineer
Albert Wong, PE ●

Constructability Reviewer
Megan Panofsky, PE ●

Electrical/Mechanical Engineer
Jill Johnson, PE ●
Steve Romofsky, PE ●

Structural Engineer
Michael Parolini, SE ●

Geotechnical Engineer
Jonathan Blanchard, PE, GE ●
Jamie Cravens, PE ●

Team Organization Chart

IRJ Engineers

Legal Firm Name	IRJ Engineers, Inc.
Role	Electrical and Mechanical Engineering
Project Address	4517 Market Street, Suite 1B Ventura, CA 93003
Primary Point of Contact	Jill Johnson, Electrical Engineer Ph 805.642.2355 x16 jjohnson@irjengineers.com

Founded in 1959, IRJ specializes in electrical and mechanical engineering services for projects involving water and or wastewater facilities.

IRJ Project Experience

Miramar Lift Station, Montecito Sanitary District.

This project involved the installation of a new 10-inch gravity inlet main, wet well, and dry well with triplex 23 horsepower pumps. The design included dry well ventilation, new electrical utility service, and standby generator with associated fuel system. Construction completed 2019.

WTP Temporary Generator, City of San Luis Obispo.

This project included the installation of a temporary generator and transfer switch to power the water treatment plant during possible public safety power shutoffs. The project required providing a means to integrate a second power source into the existing distribution system for the plant as an emergency project, while facilitating the installation of a permanent standby generator and transfer switch. Design was completed in 2022, and is currently in construction.

See MNS experience for additional IRJ experience.

SSG Structural Engineers

Legal Firm Name	SSG Structural Engineers, LLP
Role	Structural Engineering
Project Address	811 El Capitan Way, Suite 240 San Luis Obispo, CA 93401
Primary Point of Contact	Michael Parolini, PE, SE Principal Structural Engineer Ph 805.439.2110 x103 michael.parolini@ssgse.com

SSG was founded in 1984 offering full-service professional structural engineering. Over the years, SSG has continued to grow and expand in engineering experience and project scope, handling all different project types, sizes, and delivery methods. The firm's public work focuses on civil, education, military, and municipal projects. The civil work is largely comprised of water resources projects—affording SSG the ability to work on many interesting structural engineering challenges presented by water and wastewater projects.

SSG Project Experience

See MNS experience for additional SSG experience.

Yeh and Associates

Legal Firm Name	Yeh and Associates, Inc.
Role	Geotechnical Engineering
Project Address	391 Front Street, Suite D Grover Beach, CA 93433
Primary Point of Contact	Gresh Eckrich, PE, CEG Senior Project Manager Ph 805.481.9590 geckrich@yeh-eng.com

Established in 1999, Yeh is a full-service geotechnical firm with specialized expertise in engineering geology and geotechnical services for infrastructure and public works projects. Yeh employs a total of 160 professionals with vast experience in the fields of geotechnical engineering, geology, engineering geology, and construction management. A core element of Yeh’s practice is specialized expertise in providing geotechnical services for water storage projects. The Yeh team is familiar with the variable geologic conditions throughout the region serviced by the District.

YEH Project Experience

Morro Bay Water Reclamation Facility, Lift Station, and Conveyance Pipelines, Morro Bay, CA. Yeh provided preliminary geotechnical services for the development, permitting, and design-build process for a new water reclamation facility (WRF) for the City of Morro Bay. Yeh prepared Preliminary Geotechnical Reports, Geotechnical Reports, and a Geotechnical Baseline Report for the WRF.

Section 3: Project Experience

MNS Experience

MNS has successfully managed over \$1B of water and wastewater treatment, and distribution improvement projects—from standard pipeline replacement to complex water and wastewater infrastructure systems.

8th and El Moro Well Equipping, Los Osos

Client	Los Osos Community Services District
Firms	MNS, IRJ, and SSG
MNS Team	Nick Panofsky, Tyler Hunt, and Nick Boswell
Dates	2017 – current



This project includes development of complete contract documents to equip an upper aquifer well with a new submersible well pump and the necessary piping, valves, accessories, and electrical equipment and controls to integrate the new well with the existing system. A new variable frequency drive will regulate the discharge flow rate. Water produced from the new well will be chlorinated and discharged to piping downstream of the existing iron and manganese treatment system. These two water streams will be blended with a static mixer. A new propeller flow meter on the well discharge will record the quantity of water produced. This project is currently nearing completion of construction.

Marshall Well, Aromas

Client	Aromas Water District
Firms	MNS, SSG
MNS Team	Nick Panofsky, Shane Sobacki
Dates	2021 – current



MNS is actively supporting the District to develop a new potable water source for the unincorporated community of Aromas. The District currently owns an approximately one-acre parcel at the east end of Marshall Lane in Aromas, within San Benito County. The District is interested in developing the parcel into a fully functional municipal site, with a new test well, a production well with a targeted capacity of 1,000 gallons per minute (gpm), an iron and manganese treatment system, a new three-bay workshop, permanent back-up generator, pipelines to the distribution system, and miscellaneous site improvements. MNS is currently preparing a Preliminary Engineering Report, and is providing survey, geotechnical engineering, and environmental permitting services for the project.

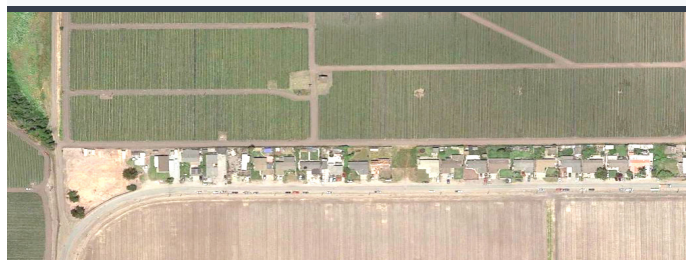
Springfield Water System Improvement, Los Osos

Client Los Osos Community Services District

Firms MNS, IRJ, and SSG

MNS Team Nick Panofsky, Tyler Hunt, Nick Boswell, and Shane Sobecki

Dates 2015 – current



The District acquired the Springfield Mutual Water Company in 2005. Since the acquisition, the District has been working with the residents of the Springfield/Struve Roads area to improve the potable water system. The Springfield Water System Improvements project will consolidate the existing system with the Moss Landing Mobile Home Park, which includes 105 mobile home sites and additional rural residents in the area.

The existing Springfield Water System is fed by a single shallow well with documented water quality problems for several contaminants including nitrates, salinity, and sulfate. The plan and design upgrades to the Springfield Water System provides a high-quality water source and long-term water supply reliability for the community.

The system includes a drilled well as part of the project, water treatment, two new potable water storage tanks, booster pump station, backup generator, and water distribution and transmission mains. MNS provided land surveying and civil engineering, including an engineering

planning study and development of complete engineered construction plans.

Robbins Water System, Robbins

Client Golden State Water Company

Firms MNS, SSG

MNS Team Nick Panofsky, Tyler Hunt, Nick Boswell, Shane Sobecki, Albert Wong, and Megan Panofsky

Dates 2022 – current

Golden State Water Company (GSWC) recently acquired the Robbins Water System, which serves the community of Robbins, California. The existing Robbins Water System contains one active groundwater well with iron and manganese treatment and one backup groundwater well. Currently, water quality exceeds the arsenic Maximum Contaminant Level (MCL). Two sites included in the project are the James Site and Acacia Site. The James Site development includes demolition of the existing well and improvements with equipping the newly drilled 250 gpm well, well treatment via an ATEC system, emergency backup power, a new electric service, a detention pond, sludge drying beds, associated site piping and appurtenances, electrical and instrumentation, SCADA control, perimeter fencing and gates, all weather surface improvements, a new operations building, and a new chemical building. The improvements at the Acacia Site will include demolition of the existing infrastructure, a new 0.2 MG welded steel reservoir, a 2,250 gpm housed booster pump station, associated site piping and appurtenances, electrical and instrumentation, SCADA control, backup generator, all weather site improvements, fencing and gates, and a new electrical service.

Team References

FIRM	Reference 1	Reference 2	Reference 3
MNS	<p>Casitas Municipal Water District Julia Aranda, Engineering Manager Ph 805.649.2251 jaranda@casitaswater.com Re: Various Water Improvement Projects (Mutual and Wellfield Water Main Replacements and Pump-to-Waste Connections, Emily Street and Cañada Street, 12-Inch Cast Iron Transmission Main, Upper Rincon Main Pipeline Replacement, Grand Avenue Optimization, and Sunset Place Pipeline Replacement). This reference is also for Project Manger, Nick Panofsky.</p>	<p>Pajaro/Sunny Mesa Community Services District Don Rosa, General Manager Ph 831.722.1389 donrosa@pajarosunnymesa.com Re: Springfield Water System Improvement and Critical Water Supply Improvements. This reference is also for Project Manger, Nick Panofsky.</p>	<p>Golden State Water District Thomas Whalen Capital Program Engineer Ph 916.853.3620 thomas.whelen@gswater.com See Robbins Water System (above) for project description.</p>

FIRM	Reference 1	Reference 2	Reference 3
IRJ	Calleguas Municipal Water District Fernando Baez, Sr. Project Manager Ph 805.579.7156 fbaez@calleguas.com Re: North Pleasant Valley Desalter SMP Discharge Station	City of San Luis Obispo Miguel Barcenas, Interim Deputy Director of Engineering and Planning Ph 805.781.7505 mbarcenas@slocity.org Re: WTP Temporary Generator	Montecito Sanitary District Bradley Rahrer, General Manager Ph 805.969.4200 brahrer@montsan.org Re: Miramar Lift Station
SSG	County of San Luis Obispo Cindy Trichler, Capital Planning/ Facilities Manager Ph 805.781.5207 CTreichler@co.slo.ca.us Re: County Inventory Assessment	City of Tehachapi John (Jay) Schlosser, PE, Development Services Director and City Engineer Ph 661.822.2200 x115 jshlosser@tehachapicityhall.com Re: As Needed Services	City of Atascadero Ryan Hayes, Deputy Director of Public Works Ph 805.461.5000 rhayes@atascadero.org Re: Colony Park Lift Station Rehabilitation, Eastside Force Main Improvements
Yeh	City of Morro Bay Eric Riddiough, PE, City Engineer Ph 805.772.6569 eriddiough@morrobay.gov Re: Morro Bay Water Reclamation Facility Conveyance Pipelines and Lift Station	City of Grover Beach Gabriel Munoz-Morris, PE Senior Engineer Ph 805.473.4536 gmunoz@groverbeach.org Re: Grover Beach 2017 CDBG and 2020 CDBG Waterline Replacements	Santa Barbara County Public Works Department / Laguna County Sanitation District Martin Wilder, PE Ph 805.739.8750 mwilder@co.santa-barbara.ca.us Re: Waller Park Recycled Water Project

Section 4: Scope of Services/ Contract Exceptions

Scope of Work

MNS tailored the scope of work to provide engineering services for the Project. This section provides a description of tasks and responsibilities.

TASK 1 Project Management

SUBTASK 1.1 Project Management

Our Project Manager, Nick Panofsky, PE, will continuously monitor the Project schedule and budget to ensure milestones are met, sufficient time is allotted for quality control and constructability reviews, the project budget is maintained, and the final products meet the expectations of the District. He will also be responsible for the coordination of the internal project team, including subconsultants and overall administration of the contract for MNS.

Nick will coordinate with the District Project Manager to ensure open lines of communication are maintained and District staff is up-to-date on the status and progress of the Project. Regular phone calls and e-mail updates will be sent from Nick to the District Project Manager. Other forms of communication such as video conferences will also take place, as needed, to discuss key issues. Nick will prepare a monthly invoice with all supporting documentation in a format acceptable to

the District. Invoice amounts will be broken down by the tasks described herein.

SUBTASK 1.2 Meetings

MNS will facilitate and lead meetings and conference calls, as required, to move the Project forward and ensure the District is informed and in concurrence with the progress of the Project. For each meeting, MNS will develop a meeting agenda, and will submit meeting minutes. We anticipate three meetings: Project Kick-off, Draft Preliminary Design Memorandum, and a 50% Design Review, 90% Design Review.

SUBTASK 1.3 Quality Assurance/Quality Control (QA/QC)

MNS considers quality control as the backbone of the services it provides. MNS has developed an internal QA/QC system we implement on all projects. For each project, MNS designates a QA/QC Manager responsible for performing independent reviews of the project deliverables to ensure end products meet or exceed industry standards and the needs of the client. For this project, deliverables will be reviewed by Tyler Hunt, PE, prior to submittal.

TASK 2 Topographic and Boundary Survey

MNS will perform field surveying and mapping services in support of the C Well site improvements identified in the RFP. MNS will utilize and establish additional control in coordination with the survey completed for the Program C Well Pipeline Project. The survey limits include a portion

of parcel APN 074-491-033 at the corner of South Bay Boulevard and Bay Oaks Drive (Approx. 16,800 SF). Visible features will be located for base map integration. Base map will be prepared in AutoCAD at a scale of 1"=10' with 1' contour intervals. This scope of work also includes title report acquisition and boundary/easement retracement based on found monuments of record.

TASK 3 Geotechnical Investigations

MNS subconsultant, Yeh, will perform a geotechnical investigation of the project site. The investigation will include one boring to a depth of 25 feet to confirm existing conditions. Draft and final reports will be submitted.

TASK 4 Preliminary Design Memorandum

MNS will prepare a brief technical memorandum describing key features of the Project and provide a basis of design. The document will include:

- Description of facility operation and control methodology
- Preliminary pump/motor recommendations including a summary of hydraulic calculations
- Pipe and appurtenance sizing
- Chemical dosing rates and storage volumes
- Equipment recommendations
- Electric service sizing and associated requirements

To expedite the Project and minimize engineering costs, the preliminary design memorandum will be initiated at notice to proceed and will rely on the 50% design plans to provide schematics of site features, preliminary site layouts, and other relevant design features. The memorandum will be submitted in draft format for District review and comment. Following receipt of all comments, the memorandum will be revised to Final. The Final document will be stamped and signed by a professional civil engineer, registered in California.

Task 4 Deliverables:

- Draft and Final Preliminary Design Memorandum in PDF format.

TASK 5 Detailed Design

MNS will develop a complete set of contract documents suitable for public bidding, including PS&Es for the Project. Design documents will be submitted at the 50%, 90% and final design stages. We will incorporate appropriate measures from the District's Project environmental document and mitigation, monitoring, and reporting plan. We will conduct utility research, as needed, to facilitate the design. We assume the District will provide all utility information received by the Program C Well Pipeline designer for areas adjacent to the site. Plan sheets will be developed on MNS standard title block. MNS will prepare detailed drawings for the Project clearly defining the work to be completed. Drawings will be prepared in the latest version of AutoCAD Civil 3D.

Anticipated Sheet List

Sheet No.	Designation	Description
1	G-01	Title Sheet, Sheet Index, Location Map
2	G-02	General Notes, Civil Notes, Basis of Bearings
3	C-01	Site Plan and Piping Plan
4	C-02	Wellhead Mechanical Plan and Section
5	C-03	Wellhead Enclosure
6	C-04	Chemical and Electrical Building Layout, Chemical Dosing, and Miscellaneous Details
7	C-05	Driveway Access and Civil Details
8	C-06	Civil Details
9	S-01	Structural Notes and Special Inspection
10	S-02	Structural Plan and Foundation Details
11	S-03	Chemical and Electrical Building Plan and Sections
12	S-04	Miscellaneous Structural Details
13	E-01	General Notes, Legend, Single Line Diagram
14	E-02	Electrical Site Plan
15	E-03	Enlarged Plans
16	E-04	Details and Diagrams 1
17	E-05	Details and Diagrams 2
18	M-01	Chemical and Electrical Building HVAC
19	I-01	Process and Instrumentation Diagram

It is our understanding the District Engineer will prepare front-end documents based on a current Engineers Joint Contract Documents Committee template; MNS will provide information for bid item descriptions and other technical information to support preparation of the front-end documents. Technical specifications will be in conformance to jurisdictional entities, including the County and other entities as required. Technical specifications will be developed in CSI format in accordance with standard engineering practice; engineering standards will be referenced, including Caltrans, Greenbook, ASTM, and other standards as appropriate. MNS will prepare an Engineer's Estimate of Probable Construction Cost for each design submittal. We will base the estimate on recent projects of similar size and scope upon which we have worked, as well as readily available cost estimating references.

SUBTASK 5.1 50% Design

MNS will prepare and submit 50% PS&Es for the Project. The contract documents will include a table of contents of technical specifications and drawings covering the proposed construction.

Following the submittal of the 50% design, MNS will lead a design review meeting with District staff to discuss comments and gain a consensus on design decisions to advance the design to 90%.

SUBTASK 5.2 Constructability Review

As part of the design process, MNS will conduct a constructability review of the complete design package prior to the 90% design submittal. The goal of this review is to highlight any special areas of concern from a constructability standpoint. Design-level constructability review items typically include:

- Examination of the proposed piping configuration, anticipated equipment placement, and constraints
- Conflicts with undocumented infrastructure, including vegetation, concrete thrust blocks, material procurement challenges, etc.
- Issues associated with startup, testing, bypassing, disinfection, and disposal of testing water

This review process will minimize issues potentially arising during construction, including change orders, construction delays, and cost overruns. The constructability review will be completed by an experienced member of the MNS water infrastructure construction management team. For this Project, the constructability review will be conducted by Megan Panofsky, PE.

SUBTASK 5.3 90% Design

MNS will revise the 50% PS&Es submittal to be substantially complete for the 90% design submittal. Following the submittal of the 90% design, MNS will lead a design review meeting with District staff to discuss comments and gain a consensus on decisions to complete the design. We will also submit a comment-response matrix documenting comments received on the 50% design, and how those comments were addressed in the 90% design deliverable.

SUBTASK 5.3 Final Design

Following the 90% design review meeting, MNS will revise the PS&Es to final, incorporating the District's comments. Final design documents will be stamped by a Professional Engineer registered in California for their respective discipline. We will also submit a comment-response matrix documenting comments received on the 90% design, and how those comments were addressed in the Final design deliverable.

Task 5 Deliverables:

- 50% Design Deliverable including two full-size plan sets, two half-size plans, and one Adobe PDF of the PS&Es
- 90% Design Deliverable including two full-size plan sets, two half-size plans, and one Adobe PDF of the PS&Es and Comment-Response Form
- Final Design Deliverable including one full-size plan set, one complete Project Manual, and one Adobe PDF of the PS&Es and Comment-Response Form

TASK 6 Pre-Procurement Support

MNS will support the District to pre-procure long-lead time items, including the well pump and electrical and controls equipment. We will prepare technical specifications and appropriate supporting information for District procurement. We will review up to four submittals and four resubmittals for District-procured equipment.

TASK 7 DDW Permitting Support

MNS will support the District's effort in updating their DDW Domestic Water Supply Permit. This is anticipated to include coordination with DDW staff to provide review and comment on 90% design plans, develop recommended operating permit language, and prepare a permit modification application.

TASK 8 Engineering Support Services During Bidding

During the advertisement period, the MNS Project Manager will attend the pre-bid meeting. MNS will prepare formal responses to questions received during the pre-bid meeting and questions forwarded to MNS by the District. We have assumed we will respond to up to eight questions, providing input in support of preparation of up to two addenda. We will prepare and submit conformed contract documents, if necessary, following the end of the bid period. We have assumed the District will advertise the Project, and review submitted contractor qualifications for conformance with contract requirements.

Task 8 Deliverables:

- Responses to Requests for Information, Addenda Preparation Support, Conformed Contract Documents

TASK 9 Engineering Support Services During Construction

Our staff will support the District through the construction process as described in the following subtasks.

9.1 Construction Meetings. MNS' Project Manager will attend the virtual pre-construction meeting. We have budgeted for the MNS Project Manager to attend up to five additional virtual meetings and three site visits during construction. We have also budgeted for our electrical engineer to conduct two site visits during construction.

9.2 Submittal Review. MNS will review the contractor's shop drawings and submittals for conformance with the project drawings and specifications. For the purpose of budgeting, we have assumed 24 submittals with 12 requiring re-submittal. We will prepare a Shop Drawing Review Letter (SDRL) for each submittal and maintain a Submittal Log. We have assumed all submittals and SDRLs will be transmitted electronically.

9.3 Respond to RFIs/RFCs. MNS will prepare responses to requests for information/clarification (RFI/RFCs) forwarded by the District from the contractor, or develop recommendations based on changed field conditions.

We have assumed responses will be prepared for a total of six RFIs/RFCs.

9.4 Prepare Contract Change Order Documents. Based on required design changes or changed field conditions, MNS will prepare design modifications documents in support of change order requests from the contractor. We have assumed two change order requests will be required.

9.5 Project Closeout. MNS will support the District to close out the Project. We will attend a final site walk and assist in preparing of a Project punch list. We will file the Notice of Completion for the Project.

9.6 Record Drawings. MNS will prepare record drawings based on a single consolidated set of District and contractor red-line drawings provided by the District. Record drawings will be prepared using the latest version of AutoCAD and will be transmitted to the District within three weeks of receipt of red-line drawings. We

will provide electronic versions of the record drawings in both AutoCAD and Adobe PDF format.

Task 9 Deliverables: SDRLs, responses to RFIs/RFCs, PCO Memoranda, Punch List, Notice of Completion, Record drawings.

TASK 10 Construction Electrical Observation

MNS electrical inspector, Jeff Mitchum, will provide on-site electrical observation of installation of electrical components. We have budgeted 32 hours of inspection time, which can be adjusted as needed to accommodate the District's needs.

Contract Exceptions

MNS reviewed the District's current Standard Contract Agreement (included in the RFP materials). We request our suggestions be considered by the District in an effort to reduce the amount of liability. Please contact us with any questions or concerns in regard to these changes. We are certain we can come to an acceptable agreement with the District. Only sections with comments are provided below:

10. **INDEMNIFICATION**

pg 3

(a) Consultant ^{agrees to} shall hold harmless and indemnify, including the cost to defend ~~(with legal counsel acceptable to the District)~~, the District, and its respective principals,

directors, officers, ^{agents}, and employees from and against all claims, loss, liability, suits and damages, including attorney's fees, that arise out of, pertain to, or relate to Consultant's negligence, recklessness or willful misconduct in connection with the performance of Consultant's obligations under this Agreement, or that of Consultant's sub-consultants, agents or employees (or any entity or individual for which Consultant bears legal liability). ^{reasonable} ^{to the extent}

~~(c) Without affecting any of the rights of District under any provision of this Agreement, Consultant shall not be required to indemnify and hold harmless District for liability attributable to the active negligence of District, provided such active negligence is determined by agreement between the parties or by the findings of a court of competent jurisdiction. In instances where District is shown to have been actively negligent and where District active negligence accounts for only a percentage of the liability involved, the obligation of Consultant will be for that entire portion or percentage of liability not attributable to the active negligence of District.~~

17. **NOTICES**

pg 6

Any notice which either party may desire to give to the other party under this Agreement must be in writing and may be given either by (i) personal service, (ii) delivery by a reputable document delivery service, such as but not limited to, Federal Express, which provides a receipt showing date and time of delivery, or (iii) mailing in the United States Mail, certified mail, postage prepaid, ^{return receipt requested}, addressed to the address of the party as set forth below or at any other address as that party may later designate by notice:

Commercial General Liability Insurance using Insurance Services Office “Commercial General Liability” policy from CG 00 01 or ~~the exact~~ equivalent. Defense costs must be paid in addition to limits. There shall be no cross liability exclusion for claims or suits by one insured against another. Limits are subject to review but in no event less than \$1,000,000 per occurrence.

pg 10

Business Auto Coverage on ISO Business Auto Coverage from CA 00 01 including symbol 1 (Any Auto) or ~~the exact~~ equivalent. Limits are subject to review, but in no event to be less than \$1,000,000 per accident. If Consultant owns no vehicles, this requirement may be satisfied by a non-owned auto endorsement to the general liability policy described above. If Consultant or Consultant’s employees will use personal autos in any way on this project, Consultant shall provide evidence of personal auto liability coverage for each such person.

Professional Liability or Errors and Omissions Insurance as appropriate shall be written on a policy form coverage specifically designated to protect against ~~acts, errors or omissions~~ of the Consultant and “Covered Professional Services” as designated in the policy must ~~specifically~~ include work performed under this agreement. The policy limit shall be no less than \$1,000,000 per claim and in the aggregate. The policy must “pay on behalf of” the ~~insured~~ and must include a provision establishing the insurer’s duty to defend. ~~The policy retroactive date shall be on or before the effective date of this agreement.~~ ~~the named insured.~~

pg 11

named

negligent

licensed

Insurance procured pursuant to these requirements shall be written by insurer that are ~~admitted~~ carriers in the state California and with an A.M. Bests rating of A- or better and a minimum financial size VII.

General conditions pertaining to provision of insurance coverage by Consultant. Consultant and District agree to the following with respect to insurance provided by Consultant:

1. Consultant agrees to have its insurer endorse the third party general liability coverage required herein to include as additional insureds District, its officials, employees ~~and agents~~, using standard ISO endorsement No. CG 2010. Consultant also agrees to require all Consultants, and subcontractors to do likewise.

~~4. None of the coverages required herein will be in compliance with these requirements if they include any limiting endorsement of any kind that has not been first submitted to District and approved of in writing.~~

pg 11

any reductions in scope of coverage ~~(e.g. elimination of contractual liability or reduction of discovery period)~~ that may affect District’s protection without District’s prior written consent.

pg 12

8. Certificate(s) are to reflect that ~~the insurer will provide~~ 30 days notice to District of any cancellation of coverage. Consultant agrees to require its insurer to modify such certificates to delete any exculpatory wording stating that failure of the insurer to

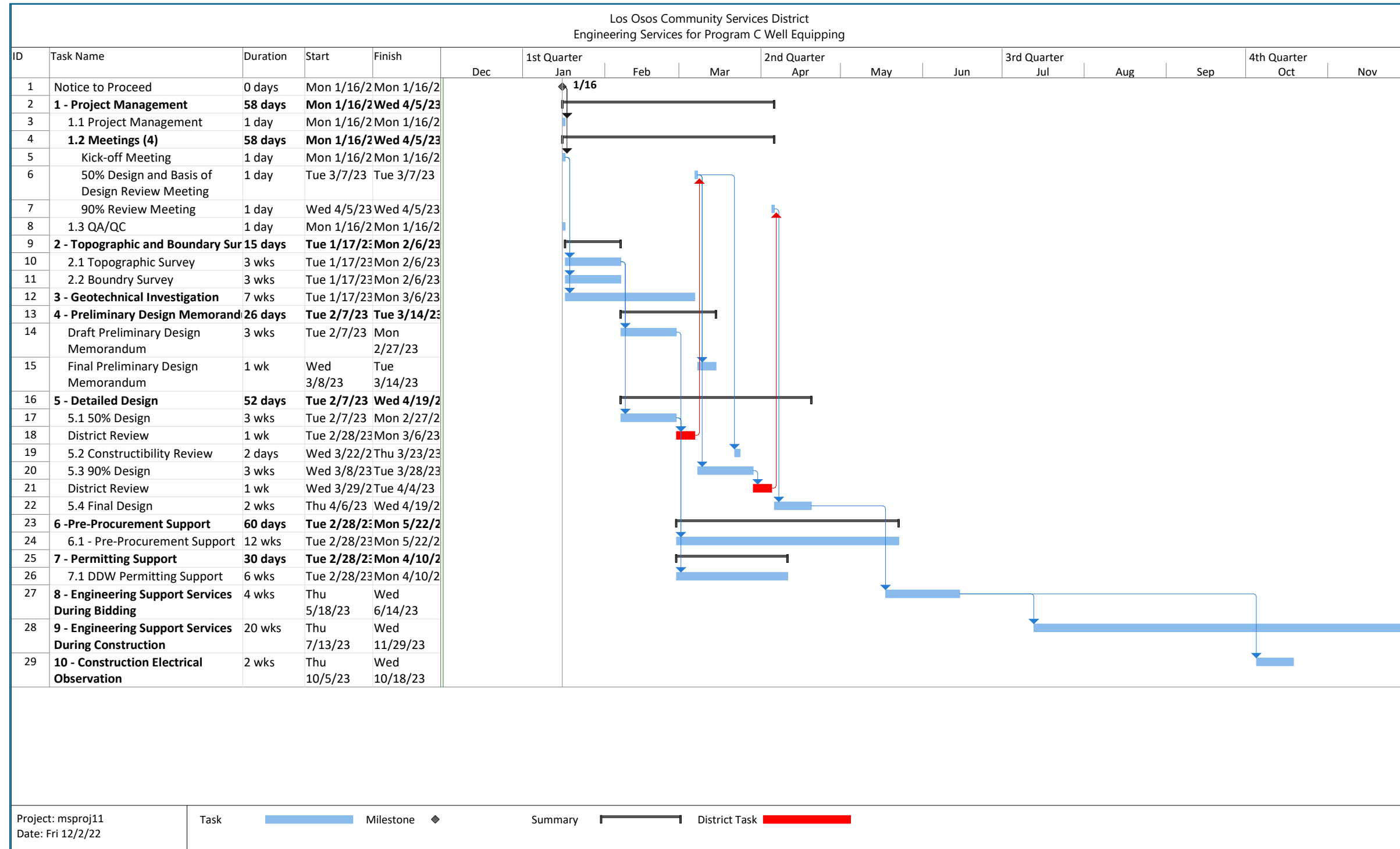
pg 12

~~except for notice of cancellation for non-payment of premium where a 10-day notice shall apply.~~

~~14. Consultant acknowledges and agrees that any actual or alleged failure on the part of District to inform Consultant of non-compliance with any insurance requirements in no way imposes any additional obligations on District nor does it waive any rights hereunder in this or any other regard.~~

pg 13

Section 5. Project Schedule



A

APPENDIX

Resumes





Appendix A. Resumes

Name	Firm	Role	PG
Nick Panofsky, PE, QSD	MNS	Lead Engineer/Project Manager	A-2
Tyler Hunt, PE, QSD/QSP	MNS	QA/QC Engineer	A-4
Nick Boswell, PE, QSD	MNS	Senior Project Engineer	A-6
Jordyn Doyle, PE	MNS	Project Engineer	A-8
Jeff Mitchum	MNS	Senior Electrical Inspector	A-9
Shane Sobecki, PLS, EIT	MNS	Principal Surveyor	A-11
Megan Panofsky, PE	MNS	Constructability Reviewer	A-13
Albert Wong, PE	MNS	Instrumentation and Controls Engineer	A-15
Jill Johnson, PE	IRJ	Electrical Engineer	A-17
Steven Romofsky, PE	IRJ	Mechanical Engineer	A-19
Michael Parolini, PE, SE, LEED AP	SSG	Structural Engineer	A-21
Jonathan D. Blanchard, PE, GE	YEH	Principal Geotechnical Engineer	A-22
Jamie L. Cravens, PE	YEH	Geotechnical Engineer	A-24

Nick Panofsky, PE, QSD Project Manager



Firm

- MNS Engineers, Inc.

Areas of Expertise

- Water/wastewater infrastructure rehabilitation and improvements
- Stormwater Management Plans
- Water resources planning
- Project management

Years of Experience

- 16

Licensing

- Professional Civil Engineer, CA No. 75006

Certification

- Qualified SWPPP Developer, CA No. 75006

Education

- MBA, Shidler College of Business, University of Hawaii, HI
- BS, Environmental Engineering, California Polytechnic State University, San Luis Obispo, CA

Affiliations

- American Public Works Association
- American Society of Civil Engineers
- American Water Works Association
- Water Environment Federation

Mr. Panofsky has over 16 years of professional consulting experience in the water resources industry. Nick has advanced his expertise through a variety of municipal infrastructure design projects including potable water, recycled water, wastewater, and stormwater. He has been involved in every stage of the design process, including planning, analysis, design, construction management, and operational assistance. He actively manages projects to meet both technical and financial goals. His experience includes:

8th and El Moro Well Equipping, Los Osos Community Services District, CA. *Senior Project Engineer.* This project develops the design criteria to equip an upper aquifer well with a new submersible well pump and the necessary piping, valves, accessories, and electrical equipment and controls to integrate the new well with the existing system. A new variable frequency drive will regulate the discharge flow rate, and a simple enclosure will cover the new well. Water produced from the new well will be chlorinated and discharged to piping downstream of the existing iron and manganese treatment system. These two water streams will be blended with a static mixer. A new propeller flow meter on the well discharge will record the quantity of water produced. MNS completed the preliminary design and is preparing detailed design. Responsibilities include providing technical direction for the preliminary design, including development of design criteria and equipment layout.

Marshall Well Project, Aromas Water District, CA. *Project Manager.* MNS is actively supporting the District to develop a new potable water source for the unincorporated community of Aromas. The District currently owns an approximately 1-acre parcel at the east end of Marshall Lane in Aromas, within San Benito County. Improvements on the existing parcel include an out of service well, an abandoned tank, a workshop in poor condition, and miscellaneous other storage containers, gravel roads, etc. The District is interested in developing the parcel into a fully functional municipal site, with a new test well, a production well with a targeted capacity of 1,000 gallons per minute (gpm), an iron and manganese treatment system, a new three-bay workshop, permanent back-up generator, pipelines to the distribution system, and miscellaneous site improvements.

Springfield Water System Improvements, Pajaro/Sunny Mesa Community Services District, CA.

Senior Project Engineer. This project involves planning and designing upgrades to the Springfield Water System to deliver a high-quality water source and long-term water supply reliability for the community. The existing Springfield Water System, fed by a single shallow well, has documented water quality problems for a number of contaminants such as nitrates, salinity, and sulfate. The proposed system includes a new water supply from a well or adjacent system, water treatment, water storage tank, booster pump station, back-up generator, and water transmission mains. In addition, this project replaces water service laterals from the existing distribution mains to each residence currently receiving water from the system. Individual water meters will be installed for each service connection as individual service connections are currently unmetered.

Well No. 16 Rehabilitation, City of Compton, Water Replenishment District of Southern California, CA.

Technical Advisor. In an effort to increase groundwater production, this project evaluated alternative treatment strategies and technologies for an existing mothballed groundwater well to provide a reliable high quality potable water source. The well was contaminated with VOCs. Responsibilities included development of VOC treatment alternatives using advanced oxidation techniques.

Emergency Well #6 Deep Aquifer Supply and Storage Tank Project, Castroville Community Services District, CA.

Technical Lead. The purpose of the project is to provide an additional safe and reliable water supply for the District. The project includes the planning, design and construction of three components: (1) deep aquifer well (1,400 feet), (2) arsenic treatment system, and (3) a welded steel storage tank (640,000 gallons), as well as additional improvements needed to develop a complete and functional system on a municipal site. The District will construct a potable water storage tank at the Well No. 4 site to provide approximately 640,000 gallons of additional storage, operational redundancy, regulate water temperature, and increase water availability for fire protection. The Project will provide approximately 300 acre-feet per year (AFY) of clean drinking water to the community of Castroville and increase water supply reliability. The Project is being funded through agreement 4600013799 for the award of \$3,462,861 of Round 1 Proposition 1 IRWM funds to the Greater Monterey County IRWM Program. Of this amount, the District's share of the award is \$395,000 for the Project. The project scope includes advancement of the design to the 30% level, and preparation of bridging documents for project procurement by design-build construction.

Thousand Oaks Boulevard Waterline Improvements, City of Thousand Oaks, CA.

Project Manager. As part of the Thousand Oaks Boulevard Streetscape Improvement project, this project will replace the aging water infrastructure along Thousand Oaks Boulevard and Los Feliz Drive. This project will remove and replace 160 linear feet of an existing 4-inch water main with a new 10-inch pipe; abandon and replace 240 linear feet of existing 6-inch water main with a new 10-inch pipe; remove and replace 60 linear feet of existing 10-inch water main with a new 10-inch pipe; and remove and replace 10 service laterals and corresponding water meters, 11 main valves, and three fire hydrants.

Vieja Well Feasibility Study, La Cumbre Mutual Water Company, CA.

Project Manager. La Cumbre holds rights to water supplies located within the Hope Ranch ground water basin through an agreement with the Vieja Mutual Water Company (VMWC), which is a small mutual water company adjacent to La Cumbre's service area. La Cumbre does not currently have any infrastructure to facilitate access to these supplies. Recent water sampling of the single active VMWC well identified elevated levels of iron, manganese, sulfate, and total dissolved solids. MNS prepared a feasibility study to plan for improvements to gain access to water supplies in the Hope Ranch ground water basin through a newly constructed well within an existing easement, provide treatment at the well site to bring the water to potable standards, and convey the treated water to the La Cumbre distribution system. The goal of the completed improvements would be to provide 50-acre-feet of potable water to the La Cumbre System from a fully developed municipal site integrated into the existing La Cumbre SCADA system. The proposed site would be fully independent of the existing VMWC well and system. Additionally, MNS prepared a grant application for the project for funding through the Department of Water Resources Small Community Drought Relief Program.

Water System Hydraulic Model, City of Solvang, CA.

Project Manager. This project developed a complete, calibrated water system hydraulic model for the City's potable water system. Additionally, the project evaluated alternative improvements in enhance water system reliability and to enhance water supplies available for fire protection.

Engineering for Mutual Well Field Gorham Well No. 1 VFD Retrofit, Casitas Municipal Water District, CA.

Project Manager. This Project included design for the installation of a new variable frequency drive (VFD) for the existing 75-horsepower well pump motor at the District's Gorham Well #1. A new wood shade structure and concrete pad was included in the design.

Tyler Hunt, PE, QSD/QSP Quality Assurance/Quality Control Engineer



Firm

- MNS Engineers, Inc.

Areas of Expertise

- Project management
- Municipal infrastructure
- Wastewater treatment
- Wastewater reclamation
- Site improvements
- Irrigation and water delivery design
- Low-impact development
- Stormwater pollution prevention plans
- Water system consolidation

Years of Experience

- 22

Licensing

- Professional Civil Engineer, CA No. 74580

Certification

- Qualified SWPPP Developer, CA No. 00822

Education

- BS, Agricultural Systems Management, California Polytechnic State University, San Luis Obispo, CA

Affiliations

- American Public Works Association, Executive Committee
- American Society of Civil Engineers

Mr. Hunt has over 22 years of experience in the water resources/wastewater industry. Tyler's expertise includes project management, water/wastewater conveyance, site improvements, wastewater treatment, wastewater reclamation, irrigation and water delivery, stormwater pollution prevention, low-impact development (LID), water system consolidation, and municipal infrastructure projects. In addition to engineering design, he is experienced with providing construction management and inspection services such as public utility coordination, inspection, estimating, and client support. His experience includes:

Springfield Water System Improvements, Pajaro/Sunny Mesa Community Services District, Moss Landing, CA. QA/QC Engineer. This project involves planning and designing upgrades to the Springfield Water System to provide a high-quality water source and long-term water supply reliability for the disadvantaged community. The report considers several alternative methods of supplying water to the area. The proposed system includes a new water supply from a well or adjacent system, water treatment, water storage tank, booster pump station, backup generator, and water transmission mains. The project will also replace water service laterals from the existing distribution mains; individual water meters will be provided for each service connection.

Mesa Tanks Replacement Project, City of Santa Paula, CA. Project Manager. This project encompasses planning and design to replace two 300,000-gallon steel tanks. The site is located on a steep hillside with limited construction access and nearby residences. Project elements include site improvements, retaining wall, two 300,000-gallon welded steel tanks, piping improvements, a new generator, and electrical/I&C improvements.

Wells 37 and 39 Wellhead Treatment System, City of Ontario, CA. Civil Design Lead. As a subconsultant, MNS performed site civil surveying and design for the construction of a wellhead treatment system to meet Division of Drinking Water (DDW) requirements for two existing wells. Responsibilities included topographic survey, site grading and paving, water and wastewater utilities, stormwater treatment, and water quality management plan.

Washington Union High School Water Improvements, Washington Unified School District, Easton, CA. Project Manager. This project entailed the planning and

design of water system improvements to supply a rural school with safe drinking water utilizing Proposition 84 grant funds. The project consisted of a new well, upgrading the school's facilities, a pipeline to convey the water to the school, and site improvements to store and distribute the water at the school. Responsibilities included preparing plans, specifications, and cost estimate and providing grant management services.

Maywood No. 3 Water System Improvements, Water Replenishment District of Southern California, CA.

Project Manager. This project involves planning and design to replace multiple water mains, fire hydrants, and valves as well as the repair and recoating of a welded steel storage reservoir for the Maywood Mutual Water Company No. 3. Project elements include the design and permitting of a pipeline crossing beneath the UPRR.

Water System Improvements, El Adobe Property Owners Association, Lamont, CA.

Project Engineer. This project involved the design of water system improvements to supply a rural housing development with safe drinking water. The project consisted of a new well, storage tank, booster station, distribution system, and transmission main. Responsibilities included preparing the plans, specifications, cost estimate.

Reservoir Seismic Evaluation, Atascadero Mutual Water Company, CA.

Project Manager. This project prepared a seismic evaluation of four concrete drinking water storage reservoirs, which evaluated and recommended improvements to comply with current regulations.

Solids Dewatering Facility Upgrades and Site Improvements, Camrosa Water District, CA.

Design Lead. MNS performed design services for a new fan press biosolid dewatering facility to transition the plant's drying process from drying beds to an enclosed controlled process. Additional improvements included a new steel building, site improvements, site piping, building mechanical, site lighting, electrical, instrumentation, and controls.

Joshua Road Pump Station Reservoir, Nipomo Community Services District, CA.

Project Manager. This project provided design and construction document preparation and construction phase services of a partially buried 0.5-million-gallon (MG) pre-stressed concrete water storage tank. This tank was part of the Supplemental Water Project which provided a connection between the City of Santa Maria water system and the Nipomo Community Services District water system.

Water Tank Replacement and Chloramine Modifications, Villa Del Monte Mutual Water Company, CA.

Project Manager. This project replaces the existing bolted steel reservoir and converts disinfection to chloramines. The scope of work includes preliminary and detailed design phases. A technical memorandum was prepared to evaluate tank replacement and disinfection system alternatives, which included four tank construction materials, three chemicals for ammonia addition, chemical delivery and storage requirements, control system modifications, and preliminary site layout. In accordance with the recommendations of the technical memorandum, MNS prepared detailed design plans, specifications, and engineer's estimate of probable cost of construction (PS&E) suitable for public bid. MNS also applied for and obtained necessary permits from involved agencies.

Title 22 Filter Booster Pump Station, West Basin Municipal Water District, CA.

Project Manager. Planning and design for the construction of a new 10-million-gallons-per-day (MGD) booster pump station at the Edward C. Little Water Recycling Facility. The original design for Title 22 Filter Train No. 2 was to receive effluent from the plants high-rate clarifiers; however, the high-rate clarifiers have not been able to deliver the design flows to Title 22 Filter Train No. 2 due to hydraulic deficiencies. Project elements include evaluation of the hydraulic deficiencies and improvement alternatives to correct the deficiency. The selected alternative is a 10 MGD pump station currently in the design phase.

Microfiltration Break Tank Repair/Replacement, West Basin Municipal Water District, CA.

Project Manager. The Juanita Millender-McDonald Carson Regional Water Recycling Plant produces high quality recycled water through microfiltration and reverse osmosis treatment processes. The microfiltration filtrate is temporarily stored in an existing above-ground steel welded tank built in 1999. The existing tank had significant corrosion and required rehabilitation or replacement. Following the submittal of the preliminary design report, the District opted to replace the tank in the existing footprint. MNS designed the 45-foot-diameter, 194,000-gallon welded steel tank, which included an engineered aggregate pier foundation.

Nick Boswell, PE, QSD

Senior Project Engineer



Firm

- MNS Engineers, Inc.

Areas of Expertise

- Pipeline design and rehabilitation
- Water and wastewater treatment plant design and rehabilitation
- Pump station design and rehabilitation
- CEQA and permit compliance
- Characterization and treatment of municipal wastewater
- Field investigations, pilot testing, and sampling programs
- Utility research

Years of Experience

- 15

Licensing

- Professional Civil Engineer, CA No. 72138

Certification

- Qualified SWPPP Developer, CA No. 72138

Education

- BS, Civil Engineering, California Polytechnic State University, San Luis Obispo, CA

Affiliations

- Water Reuse California, Central Coast Chapter, 2020 Chapter Southern Area VP
- American Society of Civil Engineers Pipeline
- American Public Works Association

Award(s)

- 2020 Hatton Canyon Road Rehabilitation APWA Monterey Bay Chapter Emergency/Disaster Preparedness Project < \$5M (Project Engineer)

Mr. Boswell has 15 years of experience with design and construction of public infrastructure projects and four years of residential design-build construction experience. Nick is committed to providing high-quality service to every project. His utility infrastructure design experience encompasses all aspects of water, wastewater, and recycled water collection, distribution, and treatment. He has supported the planning, design, construction, startup, and operation of a variety of municipal infrastructure projects including water and wastewater pump stations; water and wastewater treatment plants; and water, wastewater, and recycled water pipeline networks. Nick has also been responsible for acting as project engineer for construction phase work; coordinating with state and local agencies to acquire necessary environmental, right-of-way, and construction permits; developing and conducting field sampling and pilot testing programs; and providing project utility research. His experience includes:

Springfield Water System Improvements, Pajaro/Sunny Mesa Community Services District, CA. Senior Project Engineer. This project involves planning and designing upgrades to the Springfield Water System to deliver a high-quality water source and long-term water supply reliability for the community. The existing Springfield Water System, fed by a single shallow well, has documented water quality problems for a number of contaminants such as nitrates, salinity, and sulfate. The proposed system includes a new water supply from a well or adjacent system, water treatment, water storage tank, booster pump station, back-up generator, and water transmission mains. In addition, this project replaces water service laterals from the existing distribution mains to each residence currently receiving water from the system. Individual water meters will be installed for each service connection as individual service connections are currently unmetered.

Title 22 Filter Booster Pump Station, West Basin Municipal Water District, CA. Project Engineer. This \$220K planning and design project involved the construction of a new 10 MGD booster pump station at the Edward C. Little Water Recycling Facility. The original design for Title 22 Filter Train No. 2 was to receive effluent from the plants high-rate clarifiers, however, the high-rate clarifiers have not been able to deliver the design flows to Title 22 Filter Train No. 2 due to hydraulic deficiencies. Project includes evaluation of the hydraulic deficiencies and improvement alternatives to correct the deficiency.

Microfiltration Filtrate (Break) Steel Tank Project at JMMCRWRP, West Basin Municipal Water District, Carson, CA. *Project Engineer.* The Juanita Millender-McDonald Carson Regional Water Recycling Plant (JMMCRWRP) produces high quality recycled water through microfiltration and reverse osmosis treatment processes. The microfiltration filtrate is temporarily stored in an existing above-ground steel welded tank built in 1999. The existing tank has significant corrosion and is in need of rehabilitation or replacement. MNS prepared a preliminary design report to develop recommendations for the repair or replacement of the tank. Following the submittal of the preliminary design report, the District opted to replace the tank in the existing footprint. MNS designed the 45-foot-diameter, 194,000-gallon welded steel tank, which included an engineered aggregate pier foundation.

Rancho Penasquitos Pump Station Design-Build, City of San Diego, Water Department, CA. *Project Engineer.* Under a design-build procurement, this project designed a new 32-million-gallons-per-day (MGD) domestic water pump station (expandable to ultimately 50 MGD) and replacement of the existing Del Mar Heights pressure reducing station (PRS), associated site piping, and connection work. Design features included a 3,300-square-foot architecturally treated pump building on the one-acre site, with dedicated pump, motor control center, and generator rooms; installation of six 250-horsepower (hp) vertical turbine pumps; Del Mar Heights PRS (located in a below-ground concrete vault); pump station surge relief, flow measuring, and emergency back feed system (located in below ground concrete vault); yard piping associated with pumping, pressure reducing, and emergency backflow elements; 8-foot-tall concrete masonry retaining wall; all electrical facilities; and instrumentation and control systems.

Eucalyptus Water Pump Station, Eastern Municipal Water District, Moreno Valley, CA. *Project Engineer.* Nick assisted with task synchronization, scheduling, and coordination between the District and members of the firm's technical support team. He also assisted with pre-design, design, and construction management of the new 4,500 gallons-per-minute (gpm) booster station. The new station improved the District's ability to meet demand and pressure needs for customers in the eastern segment of the Kalmia pressure zone of the Moreno Valley service area.

Letterman Booster Station, Eastern Municipal Water District, Moreno Valley, CA. *Project Engineer.* This project designed a new water booster station and 2,600 feet of 24-inch-diameter transmission pipeline. The new station housed four vertical turbine, constant speed

pumps—with each pump having a design point of 1,700 gallons per minute (gpm). Additional design features included electrical instrumentation and controls and a full-capacity emergency power generator. Nick led the design effort for the booster station and pipeline, the site layout, and permitting efforts.

Scripps Ranch Pump Station Design-Build, City of San Diego, CA. *Project Engineer.* As part of a design-build team, Nick assisted with the preparation and management of key project tasks and subconsultants for the design and construction of a new 17.2-million-gallons-per-day (MGD) water booster station. It included six pumps, five duty pumps (three 2.7 MGD pumps, two 4.55 MGD pumps) and one standby unit (4.55 MGD). Suction to the pump station will be done with a new 36-inch manifold to connect existing 66- and 84-inch pipelines.

Sunnyhills Court Water Main Assessment and Rehabilitation, City of Milpitas, CA. *Project Manager.* This project developed a condition assessment of the existing 500-foot watermain and associated appurtenances within Sunnyhills Court to identify repair and replacement needs. The condition assessment considered the need for adding cathodic protection to existing facilities. An initial technical memorandum documenting the condition assessment determined the scope and scale of improvements to enhance long-term reliability of the potable water distribution system in the study area.

Drop 2 Reservoir Inlet Canal/Pipeline Alignment Study, US Bureau of Reclamation, Lower Colorado River Region, CA. *Project Engineer.* This project involved optimizing the design and operation of a new 8,000-acre-foot storage reservoir, which was proposed for improving operational flexibility on the Lower Colorado River. Study objectives involved evaluating alternative alignments and recommended a preferred alignment.

Mid-City Pipeline Phase II, 2008-2013 As-Needed Engineering Consulting Services, City of San Diego, Metropolitan Wastewater Department, CA. *Project Engineer.* This project involved preliminary engineering investigations and developing 10 percent design documents for a 66-inch water transmission pipeline. The new pipeline design began at the Alvarado Water Treatment Plant clear well effluent piping and extended approximately 7,500 linear feet crossing trenchlessly underneath an interstate freeway and rail lines.

Jordyn Doyle, PE

Project Engineer



Firm

- MNS Engineers, Inc.

Areas of Expertise

- Water and wastewater engineering design
- AutoCAD
- Civil 3D
- ArcMap GIS
- AES
- Interpreting plan sets
- Hand calculations
- Public works design

Years of Experience

- 4

Certification

- Professional Civil Engineer, CA

Education

- MS, Engineering Science, University of the Pacific, CA
- BS, Civil Engineering, University of the Pacific, CA

Ms. Doyle is an experienced Civil Design Engineer with over four years of demonstrated project success. Jordyn is recognized for being a driven producer with a myriad of technical skills focused on the development of various design projects in public works construction. She also has a strong educational background with a master's degree in water and wastewater engineering design and treatment. Her experience includes:

Street, Water, and Sewer Improvements, City of Fullerton, CA. *Design Engineer.* The project developed street designs to City standard and best practices. The design work included portions of the sewer to be replaced.

Modjeska Park Underground Stormwater Detention System, City of Anaheim, CA. *Design Engineer.* This project designed the diversion system and grading for the installation of the detention system.

Curb Ramp Program, City of Long Beach, CA. *Design Engineer.* This project designed curb return and mid-block curb ramps.

Anaheim Sewer Capital Improvement Program (CIP), Cannon, CA. *Design Engineer.* This project upgraded deficient sewer lines with diversion pipes and upsizing existing pipes.

Newport Beach Concrete Streets, City of Newport, CA. *Design Engineer.* Designed street, curb, gutter, sidewalk, and storm drain facilities.

Water Master Plan, City of Modesto, CA. *Assistant Engineer.* This project designed the diversion system and grading for the installation of the detention system. Responsibilities included consolidating data from water system into figures in Microsoft Excel for water master plans and utilized GIS to model and gather data about the system for metering projects and modeling practice.

Public Works GIS Database, City of Modesto, CA. *Engineering Intern.* This project supported City Engineers with various projects. Tasks included data collection, correspondence with consultants, invoicing, and meeting preparation. Responsibilities included preparing a GIS database for consolidating as-built and record drawings; creating maps in GIS to provide visuals for projects; and developing and cataloging all the City's scanned as-built and record drawings into a GIS database based on location of the plans.

Jeff Mitchum

Senior Electrical Inspector



Firm

- MNS Engineers, Inc.

Areas of Expertise

- NEC knowledge
- Standard industrial installation practices
- Underground duct banks
- Schematics, wiring diagrams, standard details, one-line diagrams, and P&ID
- Lightning protection
- Low-medium voltage power distribution
- Overcurrent protection
- Material takeoffs
- Estimating
- Electrical testing and trouble shooting

Years of Experience

- 36

Education

- MA, Biblical Studies, Dallas Theology Seminary, Dallas, TX
- BA, Psychology, California State University, East Bay

Mr. Mitchum, a highly skilled Certified Electrician and Senior Lead Electrical Inspector, has over 36 years of experience in high profile water and wastewater treatment construction projects throughout California. Jeff brings extensive knowledge and interpretation of electrical codes, standard industrial installation practices, material takeoffs, estimating, testing, and trouble shooting. He is experienced in all aspects of a project from design, interpretation of plans and specifications, resolving conflicts between the two and implementing them to ensure everything is per National Electrical Code (NEC). Jeff provides inspections utilizing the following standards: NEC NFPA-70, IEEE, NEMA, IEC, NEMA, NFPA-70E, NFPA 101, TITLE 24 – (Parts 3 and 6), and OSHA. A few vendors he has worked with include Crouse-Hinds, Appleton/Pentair, Unistrut, B-Line, Eaton/Cutler Hammer, Basler, Schweitzer, Siemens, Rockwell/Allen-Bradley, Square-D, GE, ABB, and Burndy. His expertise includes underground duct banks, schematics, wiring diagrams, standard details, one-line diagrams, Piping and Instrumentation Diagrams (P&IDs), lightning protection, low-medium voltage power distribution, overcurrent protection and area classifications per Article 500 Class I Divisions 1 and 2 hazardous vapor environments. His experience includes:

Primary Sedimentation Tank Rehabilitation and Electrical Upgrade, City of Palo Alto, CA. Senior Electrical Inspector. As part of The City of San Jose's \$13M upgrade program, MNS was selected to provide construction management services for the primary sedimentation tank rehabilitation and equipment room electrical upgrade project for the Palo Alto Regional Water Quality Control Plant. Built in 1972, the plant is aged and requires rehabilitation of four concrete primary sedimentation tanks and their ancillary systems. The project includes but is not limited to concrete repairs to tank floors, walls, and covers; protective coating to tank walls, ceilings, and covers; electrical upgrades; flow diversion gate replacement; and motor control center replacement and relocation. Various construction elements include demolition, fire protective systems, scum line rehabilitations, civil site work, shutdown coordination, bypass operations, and coordination with other ongoing projects.

Wastewater Treatment Plant (WWTP) Redundancy Project, South San Luis Obispo County Sanitation District (SSLOCS), CA. Senior Electrical Inspector. MNS is providing complete third-party construction management services from the pre-construction phase

through post-construction activities over a 30-month project duration. The SSLOCSD owns and operates a WWTP for processing wastewater from 9 miles of sewer lines. The WWTP has a peak dry weather flow of 5 million gallons per day (MGD) capacity, with current flows ranging from 2 to 3 MGD, and is National Pollutant Discharge Elimination System (NPDES) permitted. The existing treatment plant cannot meet effluent limits at the permitted design flow if the fixed film reactors (FFR) or the secondary clarifier is out of service and there are no redundant units for either process. The existing plant uses mechanical screens, primary clarifiers, FFR, one secondary clarifier, and chlorination to provide secondary treatment with disinfection to treat wastewater. The goal of project is to allow major process units to be removed from service for maintenance or repairs without risking violation of effluent permit limits. Major components of the construction will include the following:

- Two activated sludge (AS) aeration basins
- One new secondary clarifier
- FFR effluent and primary effluent pump station
- Waste activated sludge (WAS) thickener with modifications to existing dewatering platform
- Blower, electrical, and motor control center (MCC) building
- Yard piping
- Site improvements
- Instrumentation and controls
- Electrical systems
- Flood proofing critical plant systems
- Rehabilitation of existing secondary clarifier
- New generator to provide backup power for new facilities

On-Call Construction Management Services, City of Fremont, CA. *Senior Electrical Inspector.* MNS is providing as-needed construction inspection services for multiple long-term encroachment permit and tract projects. Tasks include complete inspection to ensure work is performed in accordance with approved plans, City Standard Details, and Specifications, and any other contract documents; serving as a liaison between the contractor and the City; maintaining daily reports for each project, documenting site conditions, summary of work performed, major incidents, and subsequent corrections submission of daily diaries to the City on a weekly basis; providing assistance with coordination of any required utility work; ensuring the contractor's traffic control is performed in accordance to the project's approved traffic control plan and the CA MUTCD; collecting material certifications prior to allowing materials to be incorporated into the project; coordinating material testing during construction to confirm materials used and workmanship meets project requirements; providing

inspection to ensure Stormwater Pollution Prevention Plan (SWPPP) and Best Management Practices (BMPs) are implemented correctly; assisting with Requests for Information (RFIs) in obtaining relevant details and information to aid in the resolution of any plan or specification discrepancies; delivering Notices of Non-Compliance whenever work is deemed unsatisfactory, faulty, or defective, or does not conform to the plans and specifications, and documenting corrective action of non-compliant work; inspecting the project site daily for potential safety issues and notifying the contractor and City in writing if any are identified; taking pre-, post-, and during construction photos and maintaining such photos to document construction history; and assisting in project closeout and developing a deficiency list (punch list), notifying the contractor, and re-inspection.

Dublin San Ramon Services District Project Experience. *Electrical Superintendent.* Mr. Mitchum served as electrical superintendent on a multitude of projects for the District. A sampling of these projects include:

- **DERWA Project.** Included new bar screens, hypochlorite tank, polymer building, basin pumps and instruments, FO cable, PLC interface, MCC Structure and modifications to existing switchgear.
- **Recycled Water Project.** Included new UV Disinfection System, switchgear, bus duct, VFD's, PLC, SCADA, instruments, and control.
- **Generated Upgrade Project.** Upgraded three generators in the generator building. Included modifications to existing PLC and MCC.

WSB Electric, Inc. and HGH Electric, Inc., Emeryville, CA. *Roles Included Lead Electrician, Senior Inspector, and Project Manager.*

Shane Sobecki, PLS, EIT Principal Surveyor



Firm

- MNS Engineers, Inc.

Areas of Expertise

- Land surveying
- Construction surveying
- Topographic survey and mapping
- Boundary surveys
- ALTA/NSPS surveys
- Right-of-way engineering
- Legal descriptions
- Easements

Years of Experience

- 20

Licensing

- Professional Land Surveyor, CA No. 9041
- Engineer-in-Training, CA No. 141294

Education

- BS, Civil Engineering, California State University, Chico, CA

Awards

- 2015 ACEC Engineering Excellence Award of Merit, Ranchero Road Interchange at Interstate 15
- 2014 APWA Project of the Year, Los Angeles Chapter, Newhall Avenue Roundabout at Main Street
- 2014 APWA Best Improvements for Traffic Safety, Newhall Avenue Roundabout at Main Street

Mr. Sobecki has over 20 years of significant experience in land surveying. As Principal Surveyor, Shane plays a substantial role in managing and completing the firm's survey projects. He has over two decades of experience in private and public sector projects in the central and southern California area. His land surveying background includes tentative subdivision mapping, final maps, site plans, easements, legal descriptions, annexation exhibits, topographic mapping, 3D scanning, aerial surveys, construction staking, monitoring, records of survey, boundary surveys and right-of-way (R/W) retracements. Shane has proficient knowledge in the use of AutoCAD and other surveying software. His experience includes:

Marshall Well Project, Aromas Water District, CA.

Principal Surveyor. MNS is actively supporting the District to develop a new potable water source for the unincorporated community of Aromas. The District currently owns an approximately 1-acre parcel at the east end of Marshall Lane in Aromas, within San Benito County. Improvements on the existing parcel include an out of service well, an abandoned tank, a workshop in poor condition, and miscellaneous other storage containers, gravel roads, etc. The District is interested in developing the parcel into a fully functional municipal site, with a new test well, a production well with a targeted capacity of 1,000 gallons per minute (gpm), an iron and manganese treatment system, a new three-bay workshop, permanent back-up generator, pipelines to the distribution system, and miscellaneous site improvements.

Springfield Water System Improvements, Pajaro/Sunny Mesa Community Services District, CA.

Principal Surveyor. This project involves planning and designing upgrades to the Springfield Water System to deliver a high-quality water source and long-term water supply reliability for the community. The existing Springfield Water System, fed by a single shallow well, has documented water quality problems for a number of contaminants such as nitrates, salinity, and sulfate. The proposed system includes a new water supply from a well or adjacent system, water treatment, water storage tank, booster pump station, back-up generator, and water transmission mains. In addition, this project replaces water service laterals from the existing distribution mains to each residence currently receiving water from the system. Individual water meters will be installed for each service connection as individual service connections are currently unmetered.

Thousand Oaks Boulevard Waterline Improvements, City of Thousand Oaks, CA. Supervising Project Surveyor. As part of the Thousand Oaks Boulevard Streetscape Improvement project, this project will replace the aging water infrastructure along Thousand Oaks Boulevard and Los Feliz Drive. This project will remove and replace 160 linear feet of an existing 4-inch water main with a new 10-inch pipe; abandon and replace 240 linear feet of existing 6-inch water main with a new 10-inch pipe; remove and replace 60 linear feet of existing 10-inch water main with a new 10-inch pipe; and remove and replace 10 service laterals and corresponding water meters, 11 main valves, and three fire hydrants. MNS is providing engineering design and support services.

Upper Country Club Drive Pipeline Replacement Project, City of Burbank Water and Power, CA. Supervising Project Surveyor. This conceptual and detailed design project will replace approximately 1,400 feet of existing six-inch water main with a new six-inch pipeline, including replacement of the water storage tank connections. The preliminary design evaluated alternative alignments for replacing the existing water main with an upgraded six-inch ductile iron pipeline in a narrow canyon roadway impacted with several utility lines. No alignments could meet California Waterworks Standards criteria for separation from utility lines carrying non-potable fluids, so coordination with the Division of Drinking Water (DDW) to determine the preferred alignment was required.

Groundwater Reliability Improvement Program (GRIP), Water Replenishment District of Southern California, Lakewood, CA. Lead Surveyor. As part of GRIP, a \$117M Advanced Water Treatment Facility (AWTF) was designed and constructed to treat 10,000 acre-feet per year of tertiary recycled water. The GRIP AWTF involved construction of a new turn-out structure, large diameter piping and valves, and a 11,700-square-foot LEED certified treatment facility with approximately 40,000 square feet of additional surface landscape and bioretention. The project included the following treatment processes: automatic strainer to protect downstream membrane treatment systems; microfiltration (MF) or ultrafiltration (UF) to reduce turbidity and silt density index (SDI) of reverse osmosis (RO) feed water; cartridge filtration; decarbonation; RO to remove salts, minerals, and microorganisms; advanced oxidation with ultraviolet light (UV) treatment; and pH adjustment/corrosivity stabilization. MNS provided construction management and inspection services for all project phases of construction. MNS also provided engineering design and surveying services on portions of the project.

Microfiltration Filtrate (Break) Steel Tank Project at JMMCRWRP, West Basin Municipal Water District, Carson, CA. Lead Surveyor. The Juanita Millender-McDonald Carson Regional Water Recycling Plant (JMMCRWRP) produces high quality recycled water through microfiltration and reverse osmosis treatment processes. The microfiltration filtrate is temporarily stored in an existing above-ground steel welded tank built in 1999. The existing tank has significant corrosion and is in need of rehabilitation or replacement. MNS prepared a preliminary design report to develop recommendations for the repair or replacement of the tank. The 45-foot-diameter welded steel replacement tanks holds 194,000-gallons.

Storage Tank Replacement and Capital Improvements Plan, Summit West Mutual Water Company, Santa Cruz, CA. Lead Surveyor. This project involves the replacement of the existing 15,000-gallons Mountain Charlie storage tank, generator to provide power reliability for new treatment and existing pumping facilities, and the addition of a new chloramination treatment and generator facilities. The existing storage tank is below required capacity and has exceeded its life expectancy.

Vista del Mar Drive Water Main Replacement, City of Santa Barbara, Santa Barbara, CA. Lead Surveyor. This project was created to replace approximately 1,800 linear feet of existing 6- and 8-inch asbestos concrete (AC) water main in Vista Del Mar Drive and Alan Road. A recent failure of the water main in this area resulted in damage to the road surface. The roadway repair is on hold until the water main is replaced. This is a high priority project and the City desires to have the water line replaced by fall of 2019. The existing AC pipeline, constructed in the 1950s, may be located in private property outside of the public right-of-way. The existing pipeline will be abandoned in place and new 8-inch polyvinyl chloride (PVC) C900 DR14 pipe will be installed within the public right-of-way. The project includes preparation of complete design documents suitable for soliciting public bids for construction. The design documents will include 60 percent, 90 percent, and final design plans, specifications, and cost opinions. Plans will be prepared in AutoCAD utilizing a horizontal scale of 1 inch = 20 feet and an exaggerated vertical scale on pipeline profiles. The plans and specifications will be prepared using the City's standard templates and front-end contract documents. MNS will perform the topographic field surveying, preparation of the base map, and the complete design documents, including 60%, 90%, and final plans, specifications, and cost opinions.

Megan Panofsky, PE

Constructability Reviewer



Firm

- MNS Engineers, Inc.

Areas of Expertise

- Construction of water and wastewater facilities
- Risk analysis
- Construction management
- Program management
- Contract management

Years of Experience

- 15

Licensing

- Professional Civil Engineer, CA No. 77399
- State Water Resource Control Board, Division of Drinking Water (DDW), Water Distribution Operator Grade II, CA No. 40780

Certification(s)

- Cal/OSHA 10-Hour Safety Training
- First Aid, CPR, and AED Certification
- TWIC Card/P-85 Security Clearance

Education

- BS, Environmental Engineering, California Polytechnic State University, San Luis Obispo, CA

Professional Development

- Construction Management Association of America (CMAA) Professional Construction Management Training Course
- Asbestos Cement Pipe Worker Training

Ms. Panofsky is a seasoned construction industry professional with 15 years of experience in the development and construction of municipal infrastructure, concentrating in water and wastewater facilities. Megan has served as a Design Engineer consultant for contractors and owners, so she brings a unique ability to see projects from multiple perspectives and identify risks to successful project completion early in the process. She specializes in complete project delivery, construction management, program management, and contract management. Her experience includes:

Nipomo Palms Lift Station Replacement, Nipomo Community Services District, CA.

Construction Manager. The project replaces the existing sewage lift station with a new lift station with all necessary hardware and connections to the existing force main. The work includes the demolition of the existing septic tank and lift station, construction of new inlet structure, placement of submersible pumps, miscellaneous piping, sitework, electrical and instrumentation. MNS is providing construction management services, including pre-construction, construction, and post-construction services and includes project controls, quality assurance, and project closeout.

Various Projects, Golden State Water Company (GSWC), CA.

Capital Program Engineer (CPE). Megan was responsible for overall execution of the capital program for GSWC's Region 1, which is comprised of 14 water systems throughout California from Simi Valley to Rancho Cordova. In her four-year tenure as CPE, Megan and her team of five direct reports implemented over \$45M in capital improvements on a wide variety of water projects including treatment systems, reservoirs, booster pump stations, well drilling/equipping, pipelines, site improvements, and more. Key projects include new nitrate treatment, 1-2-3 TCP treatment, disinfection improvements, and electrical improvements at the Alta Mesa Water Treatment Plant (WTP) and a new nitrate treatment system for the Rosina WTP. In addition to her capital program duties, Megan also oversaw the construction of private developments as it relates to GSWC infrastructure. As an experienced civil engineer specializing in the design, construction, and operation of water system infrastructure, she possesses an advanced and varied skillset.

Various Projects, Golden State Water Company (GSWC), CA. *Project Engineer II.* Megan oversaw 10 water systems in GSWC's Coastal District, spanning from Simi Valley to Los Osos. Upon promotion to CPE, Megan assumed a supervisory role as well as responsibility for GSWC's Northern District.

Wastewater Treatment Plant Facility Redundancy Project, South San Luis Obispo County Sanitation District, CA. Construction Manager. The SSLOCSD owns and operates a WWTP for processing wastewater from nine miles of sewer lines from the City of Arroyo Grande, City of Grover Beach, and Oceano Community Services District. The WWTP has a peak dry weather flow of 5 million gallons per day (MGD) capacity, with current flows ranging from 2 to 3 MGD, and is National Pollutant Discharge Elimination System (NPDES) permitted. The existing treatment plant cannot meet effluent limits at the permitted design flow if the fixed film reactors (FFR) or the secondary clarifier is out of service and there are no redundant units for either process. The existing plant uses mechanical screens, primary clarifiers, FFR, one secondary clarifier, and chlorination to provide secondary treatment with disinfection to treat wastewater. The goal of the project is to allow major process units to be removed from service for maintenance or repairs without risking violation of effluent permit limits.

Major components of the construction include the following:

- Two activated sludge (AS) aeration basins
- One new secondary clarifier
- FFR effluent and primary effluent pump station
- Waste activated sludge (WAS) thickener with modifications to existing dewatering platform
- Blower, electrical, and motor control center (MCC) building
- Yard piping
- Site improvements
- Instrumentation and controls
- Electrical systems
- Floodproofing critical plant systems
- Rehabilitation of existing secondary clarifier
- New generator to provide backup power for new facilities

MNS provides complete third-party construction management services from the pre-construction phase through post-construction activities over a 30-month project duration.

Various Projects, HDR Engineering, Inc., HI. *Civil Engineer IV.* Megan provided construction management services on the Gravity Sewer Main Rehabilitation project as staff augmentation to the City and County of Honolulu. Her responsibilities included management of an indefinite delivery/indefinite quantity (IDIQ) contract for rehabilitation of gravity sewer mains. Construction management services including work order development and modification, constructability analysis, rehabilitation method review, construction inspector oversight, coordination of five participating contractors, and encumbrance of funds. She successfully coordinated over \$13M of sanitary sewer rehabilitation work in 2012, completing the rehabilitation of more than eight miles of gravity sewer mains.

Various Projects, Engineering Remediation Resources Group (ERRG), HI. *Project Engineer/Site Superintendent.* Megan gained experience providing construction management services working for a construction contractor. She served as a Project Engineer, Site Superintendent, and Quality Control Manager on projects such as gas station emission retrofits, a 40-unit vertical construction reinforced concrete housing facility, and pipeline demolition within a high security naval fuels facility. Key project responsibilities included overseeing cost control and construction schedule management to keep projects on time and on budget, supervising a team of laborers, subcontractors, subconsultants, and other staff to achieve overall project completion, and providing client coordination.

Various Projects, Black and Veatch, CA. *Civil Engineer III.* Megan participated in a variety of water resources projects, producing planning level reports, preliminary and final PS&E documents, and providing construction phase services for municipal wastewater/water treatment projects and large diameter conveyance pipelines. Her work included preliminary/detailed design, coordination with drafting staff, technical writing, proposal preparation, submittal review, Request for Information (RFI) tracking and construction record drawings. Key projects included construction management support for the addition of aeration basins and secondary clarifiers at the 120 million-gallon-per-day (MGD) Orange County Sanitation District (OCSD) Plant No. 1, and planning support for expansion of the OCSD Groundwater Replenishment System (GWRS) facility to 30 MGD including microfiltration/reverse osmosis (MF/RO) and ultraviolet (UV) disinfection of wastewater for groundwater injection.

Albert Wong, PE Instrumentation and Controls Engineer



Firm

- MNS Engineers, Inc.

Areas of Expertise

- Water/wastewater infrastructure
- Mechanical engineering
- Operation and Maintenance manuals
- SCADA and instrumentation
- Mechanical equipment
- Electrical controls equipment

Years of Experience

- 22

Licensing

- Professional Mechanical Engineer, CA No. 35798
- Professional Control System Engineering, CA No. 7368

Education

- MS, Mechanical Engineering, University of Illinois, Urbana-Champaign, IL
- BS, Mechanical Engineering, California State Polytechnic University, Pomona, CA

Mr. Wong has over 22 years of experience specializing in the design of complex electrical, mechanical, and instrumentation systems for both large and small water and wastewater treatment plants. Albert's expertise includes Distributed Control System (DCS) and Supervisory Control and Data Acquisition (SCADA) systems for 24/7 critical mission and real-time operating systems. His expertise also encompasses the following:

- Operation and Maintenance (O&M) manuals and as-built documentation for all control system related equipment, including SCADA documentation and instrumentation.
- Control system, low-voltage electrical, and mechanical design for water/wastewater treatment.
- Site assessment and survey of existing facilities to determine current condition and recommended improvements.
- SCADA and DCS programming for various treatment plant and electrified fence projects.
- Low voltage electrical, control system, and mechanical equipment selection, evaluation, testing, and condition monitoring.
- Field startup and documentation for instrumentation and electrical control panel testing, including loop drawings and point-to-point electrical connection diagram.
- In-house training seminars to help new and experienced engineers stay well-informed of current control system engineering.
- Detailed design of DCS/SCADA architecture layout, piping and instrumentation diagram (P&ID), process mechanical drawings, electrical control panels, Master Control Center (MCC), and Remote Terminal Units (RTU).
- Programmable Logic Controller (PLC) and Human Machine Interface (HMI) languages, including ladder logic programming and function block programming.
- Project Delivery Model for systematic project delivery methods with decision logs and stage gates.
- Equipment specifications, calibration, startup, and testing methods of electrical, mechanical, and instrumentation equipment.
- Instrumentation Symbols and Identification (ISA), National Electrical Code (NEC), California Department of Occupational Safety and Health Administration (Cal/OSHA), and National Fire Protection Association (NFPA) code compliance; hardware and software interlocks for machines; and industrial networks and high-speed communications

including Ethernet, Modbus, Profibus, and HART protocol.

His experience includes:

Digester Rehabilitation and Thickening Facilities Upgrade, San José-Santa Clara Regional Wastewater Facility, San Jose, CA. *Lead Instrumentation and Controls Engineer.* This \$60M upgrade project developed and reviewed control system standards and piping and instrumentation diagram (P&ID) design review developed by the consultant.

Advanced Control and Meter Replacement, San José-Santa Clara Regional Wastewater Facility, San Jose, CA. *Project Manager/Project Engineer.* This project replaced outdated equipment and was not covered by future capital improvement program projects.

Automation Master Plan, San José-Santa Clara Regional Wastewater Facility, San Jose, CA. *Project Manager/Lead Reviewer.* This project drafted an initial table of contents before the consultant's development. This project provided control-system related guidelines.

Distributed Control System (DCS) Fiber Optics Expansion, San Jose-Santa Clara Regional Wastewater Facility, San Jose, CA. *Project Manager/Project Engineer.* This project expanded fiber optics cables network and associated equipment for future new DCS equipment. Responsibilities included preparing specifications and drawings for fiber optic equipment, location, and panel modification.

Electrical Motor Control Center/Switchgear (MCC/SW) and P&ID As-Built, San José-Santa Clara Regional Wastewater Facility, San Jose, CA. *Project Manager.* This \$2M project documented missing information for MCC and SW, process flow diagrams, and piping and instrumentation diagram (P&ID). Responsibilities included managing up to five engineers/technicians to develop as-built MCC, SW, P&ID, and process flow diagrams.

Digester Gas Compressor Upgrade Design-Build, San José-Santa Clara Regional Wastewater Facility, San Jose, CA. *Project Instrumentation and Control Engineer.* Responsibilities included reviewing control system standards, mechanical process flow diagram, and piping and instrumentation diagram (P&ID) developed by the contractor and consultant.

Alternative Disinfection Project, San José-Santa Clara Regional Wastewater Facility, San Jose, CA. *Project Instrumentation and Controls Engineer.*

Responsibilities included designing preliminary electrical control panel and reviewing the final design. Albert reviewed distributed control system (DCS) logics developed by in-house process system specialist. He also provided field inspection and instrumentation and control review for all control system related components including startup procedures.

Dissolved Air Flotation (DAF) Pressure Retention Tank Replacement, San José-Santa Clara Regional Wastewater Facility, San Jose, CA. *Mechanical/Instrumentation and Controls Project Engineer.*

This project replaced the DAF pressure retention tanks and associated instrumentation including flowmeters, pressure transmitters, stainless steel tanks, and level measurement instruments.

Water Pumping Plant and Water Imports Installation, City of Garden Grove, CA. *Project Engineer.*

This project designed water pumping plants and water imports with associated instrumentation including flowmeters, pressure transmitters, and level measurement instruments. Responsibilities included Supervisory Control and Data Acquisition (SCADA) programming.

Wastewater Treatment Plant Installation, City of Tulare, CA. *Project Engineer.*

This project designed a wastewater treatment plant with associated instrumentation including aeration blowers, flowmeters, pressure transmitters, and level measurement instruments. Responsibilities included PLC programming, electrical control panel design, and instruments start-up.

California State Prisons Electrified Fence, CA. *Project Engineer.*

This project installed and maintained electrified fences and associated electrical components, including control panels and instruments for the State of California Prisons. Responsibilities included electrical control panel design and Supervisory Control and Data Acquisition (SCADA) programming.

Jill E. Johnson, PE

Principal/Electrical Engineer



Firm

- IRJ Engineers, Inc.

Areas of Expertise

- Electrical design
- Electrical load capacity studies
- Industrial power distribution/controls

Years of Experience

- 33

Licensing

- Professional Electrical Engineer, CA No. E 15149

Education

- BS, Electrical Engineering, Montana State University, Bozeman, MT

Affiliations

- ACEC-American Council of Engineering Companies
- IAEI-International Association of Electrical Inspectors
- IES-Illuminating Engineering Society
- NFPA-National Fire Protection Association

Ms. Johnson specializes in electrical design for water and wastewater, industrial, institutional, and government facilities. Jill manages and performs electrical design work for building power, lighting, communication systems, and fire alarm systems. Her project experience has involved electrical load capacity studies and industrial power distribution/controls, remodels of many types of areas and functions, parking lot lighting, booster pump stations and lift stations, well site pumps, and portable and permanent generator installations. Her experience includes:

Las Virgenes - Calleguas Interconnection, Calleguas Municipal Water District, CA. *Electrical Engineer.*

This project provided a pipeline interconnection between the two water companies to allow sharing water via an underground pump station with two 400hp pumps. The electrical design included new electrical utility service, power, lighting, and instrumentation connections.

Well 21 TCP Treatment, East Niles Community Service District, CA. *Electrical Engineer.*

The project includes implementation of a TCP removal system at an existing well pump site. The electrical design includes connections to the skid mounted TCP removal equipment, relocation of an existing hydro-pneumatic tank control panel, site lighting, convenience receptacles at the equipment pad, and connections to new magnetic flow meters.

Wellfield VFD Equipping, Casitas Municipal Water District, CA. *Electrical Engineer.*

The project includes replacement of an existing reduced-voltage solid-state starting method at four existing well pumps. The well pumps were a combination of submersible motor and vertical turbine motors. The project included replacement of existing controls to incorporate existing and future instruments and valving to improve the operation of the wellfield.

Gorham Well VFD Equipping, Casitas Municipal Water District, CA. *Electrical Engineer.*

The project includes replacement of an existing reduced-voltage solid-state starting method with a new variable frequency drive for a 75hp submersible well pump.

North Pleasant Valley Desalter SMP Discharge Station, Calleguas Municipal Water District, CA. *Electrical Engineer.*

The project includes installation of a new underground vault with lighting, convenience

receptacles, connections to an exhaust fan and an ultrasonic flow meter, and provisions for connection to owner furnished SCADA equipment.

Rosewood Booster Pump Station, East Niles Community Service District, CA. *Electrical Engineer.*

This project includes a replacing an existing booster pump station at a new location. The electrical design included a new 100-horsepower pump motor, flow meter, pressure switches, motor control switchboard, and provisions for future site lighting and security cameras. Coordination was provided for a new utility company service at the site.

8th and El Moro Well Equipping, Los Osos Community Service District, CA. *Project Manager/Electrical Engineer.*

This project includes the addition of a new well to allow water mixing with an existing well to improve water quality. The new 15-horsepower submersible well pump motor is controlled by a variable frequency drive. Electrical connections are provided for a chlorine analyzer, well pump control valve, hypochlorite pump, and turbidity meter.

Gorham Well VFD Equipping, Casitas Municipal Water District, CA. *Electrical Engineer.*

The project includes replacement of an existing reduced-voltage solid-state starting method with a new variable frequency drive for a 75hp submersible well pump.

Van Horne Pump Station, Goleta, CA. *Electrical Engineer.* This project includes the addition of a well pump to an existing pump station. The electrical design included VFD control for the new pump motor, integration with the existing motor control center, connections to new flow meters, pressure transmitters, and pressure switches, and interface with an existing SCADA system.

Crestview Intertie, Calleguas Municipal Water District, CA. *Electrical Engineer.* The project includes installation of a new underground vault for the interconnection between separate water companies. The electrical design includes lighting, convenience receptacles, intrusion alarms, connections to a pressure reducing valve and magnetic flow meter, and connections to owner furnished SCADA equipment.

Well E-17 Equipping, Valencia Water District, CA. *Electrical Engineer.* The project includes installation of a new 150-horsepower well pump, new motor control switchboard with reduced-voltage soft starter for the motor, integral generator connection box and manual transfer switch, connections to flow meter, deep well

control valve, pressure transmitter, level transmitter, chlorinator, and chlorine analyzer, site lighting, and assisting the District in obtaining a new utility electrical service.

Pajaro Water Supply Improvements, Pajaro-Sunny Mesa Community Service District, CA. *Electrical Engineer.*

This project involves the installation of a new 0.6MG water tank, modifications of the existing well pump controls to incorporate the new tank with the existing tank, connection of an ultra-sonic level sensor, and site lighting.

Mesa Tank Replacement, City of Santa Paula, CA. *Electrical Engineer.*

This project included replacement of two existing water storage tanks with new tanks at the same location. Electrical design included new 15kW standby diesel generator and automatic transfer switch integration with the existing utility service distribution, power and instrumentation connections related to the tanks, power and conduit connections for tank mounted communication equipment, and lighting around the tank site.

Stormwater Lift Station, City of Burbank, CA. *Electrical Engineer.*

This project includes installation of a new retention basin with a package pump station to transfer water to an existing storage tank. The electrical design includes power connection to the pump station control panel, connection of remote instruments and conduit and conductors for the interface between the new equipment and the existing plant wide SCADA system.

Reservoir 2 Emergency Generator Replacement, City of Arroyo Grande, CA. *Electrical Engineer.*

This project replaced an existing failed generator with a new generator including an automatic transfer switch and panelboard, reconnection of the existing circuits to the new distribution, and field verification of all of the existing circuiting due to a lack of record documentation.

Hanson Well Equipping, Santa Paula, CA. *Electrical Engineer.*

This project included installation of a new 50-horsepower submersible pump motor to provide irrigation water. The electrical design included coordination with the Owner and the serving utility to obtain a new electrical service.

Steven Romofsky, PE Principal Mechanical Engineer



Firm

- IRJ Engineers, Inc.

Areas of Expertise

- Mechanical design
- Mechanical feasibility studies

Years of Experience

- 41

Licensing

- Professional Mechanical Engineer, CA No. M23191

Education

- BS, Mechanical Engineering, California State University, Northridge, CA

Affiliations

- ACEC-American Council of Engineering Companies
- ASHRAE-American Society of Heating, Refrigerating and Air Conditioning Engineers
- IAPMO-International Association of Plumbing and Mechanical Officials

Mr. Romofsky specializes in mechanical design for water and wastewater, institutional, industrial, and government facilities. Steve performs mechanical design work for industrial ventilation systems, compressed gas systems including bulk sources, fuel gas distribution systems, fuel oil storage and distribution systems, central heating and cooling plants, and building HVAC and plumbing systems. His engineering experience includes feasibility studies and evaluations of existing mechanical installations. His project experience includes supply and exhaust ventilation for pumping facilities, cooling and ventilation for electrical equipment rooms, and natural gas, propane, and diesel fuel systems for emergency generators serving water and wastewater facilities. Example projects include:

WWTP Influent Pump Station Rehabilitation Project, Goleta Sanitary District, Goleta, CA. Mechanical Engineer. The project includes the replacement of the ventilation equipment and modifications to the supply and exhaust duct systems to provide NFPA 820 conforming ventilation and alarms for the dry well and the wet well. The ventilation equipment includes air handling units that deliver filtered supply air to the building, dedicated exhaust fans, and VFDs to control system air quantities. The project also includes modifications to the existing cooling equipment for the electrical room in the building.

WTP Generator Improvement Project, City of San Luis Obispo, CA. Mechanical Engineer. This project involves providing a diesel fuel source for a 1250kW standby generator. The diesel fuel source includes a 2,500-gallon, aboveground, protected, steel tank with grade level fill, overfill prevention valve, overfill and leak detection alarms, and aboveground fuel piping. The project also includes fuel maintenance equipment for the aboveground fuel tank.

Las Virgenes - Calleguas Interconnection, Calleguas Municipal Water District, Thousand Oaks, CA. Mechanical Engineer. The project involves an HVAC system for an underground pump station that includes a water-cooled water chiller, chilled water and condenser water pumps, hydronic system appurtenances, and fan coil units. A supply fan provides filtered air to ventilate the pump station. Heat rejected by the cooling equipment is transferred to the potable water pumped between the districts.

Replacement of Lift Station No. 2, City of Atascadero, CA. Mechanical Engineer. The project included providing natural gas and propane fuel sources for a 150kW standby generator. The natural gas source includes a new gas meter and required coordination with the Southern California Gas Co. The propane source includes a 1,000-gallon ASME tank that is equipped to provide liquid propane for the generator.

WWTP Chemical Feed Infrastructure Replacement, Ojai Valley Sanitary District, Ojai, CA. Mechanical Engineer. This project includes the replacement of the ventilation system for the Chemical Feeder Room. The work includes supply and exhaust fans to deliver filtered supply air to the room and capture vapors and fumes released by the process equipment. VFDs are employed to control the system air quantities.

WRF Advanced Water Treatment Facility, City of Santa Paula, CA. Mechanical Engineer. The project includes the installation of an HVAC system for the building that houses the process equipment. The HVAC system consists of supply fans that deliver filtered supply air to the building and split system heat pumps that control the temperature. Louvers in the walls provide for relief air from the building.

Obispo Street Water Storage Tank No. 2 and DJ Farms Well, City of Guadalupe, CA. Mechanical Engineer. This project included mechanical design related to a 100kW, natural gas fueled, standby generator with 500-gallon propane tank as the backup fuel supply. The project also included a filtered ventilation system for the well pump building.

Repair/Replace Wells 4 and 7 and San Antonio Plant Booster, Vandenberg Air Force Base. Mechanical Engineer. The project involved the construction of a new pump station building and modifications to existing wells. The work included a 10-ton, self-contained, air conditioning unit for controlling the temperature in the electrical room and controlling the humidity in the pump room. The project included a 600kW diesel fueled emergency generator with a 500-gallon aboveground, vaulted, storage tank and a 75-gallon double-wall day tank.

Miramar Lift Station Project, Montecito Sanitary District, Santa Barbara, CA. Mechanical Engineer. This project involved a 10-inch gravity main inlet, wet well, and dry well with triplex 23 hp pumps. The work included supply and exhaust fans for dry well ventilation, 1-ton split system heat pump to maintain the temperature in the facility electrical room, a gravity ventilator for

generator radiator fan discharge, and normal and emergency vent piping for the generator integral fuel tank.

Repair/Replace Two 4 MG Water Tanks at Main Reservoir, Vandenberg Air Force Base, CA.

Mechanical Engineer. The project included the phased replacement of two 4 MG water tanks and the construction of a pump station facility. The pump station facility included a 3-ton, self-contained, indoor, heat pump, which provided temperature and humidity control for the pump station.

ICU and ER Department Chiller Replacement, Santa Paula Hospital, Santa Paula, CA. Mechanical Engineer.

This project included the phased replacement of two water-cooled chillers with two air-cooled chillers. The project also included circulating pumps, above ground and underground distribution piping, and direct digital controls.

Fainer Wing Cooling Tower Replacement, Ventura County Medical Center, Ventura, CA. Mechanical Engineer.

This project involved the replacement of an existing fiberglass cooling tower with a stainless steel cooling tower for an existing 120-ton chiller. The project included circulating pumps, chemical water treatment equipment, and distribution piping from the cooling tower enclosure to the building.

WWTP Fuel Tank Improvement Project, Ojai Valley Sanitary District, Ojai, CA. Mechanical Engineer. This project involved the installation of a new above-ground, protected, fuel storage tank. The tank has compartments for the storage of 6,000-gallons of diesel fuel and 2,000-gallons of gasoline. The tank includes dispensers for vehicle refueling. The project also includes fuel maintenance equipment, for the diesel compartment, and an alarm system for leak detection, overfill, and low fuel level. Underground and above ground piping systems were also part of the project to permit interconnection with the existing diesel fuel system that serves the facility's standby generator.

Michael Parolini, SE, LEED AP Structural Engineer



Firm

- SSG Structural Engineers, LLP

Areas of Expertise

- Water and wastewater structural engineering
- Public works and municipal projects
- Interpreting plan sets

Years of Experience

- 19

Licensing

- Structural Engineer
California No. S5405
Arizona No. 53141
Hawaii No. 14832-S
Oregon No. 85894
Texas No. 109653
- Professional Engineer, Civil
California No. C69340
Maryland No. 51569
Mississippi No. 20837
Wyoming No. 14323

Certification

- LEED Accredited Professional
- NCEES Model Law Structural Engineer 46863

Education

- BS, Architectural Engineering, Cal Poly,
San Luis Obispo, CA

Affiliations

- Structural Engineers Association of Southern California
- American Institute of Steel Construction
- American Wood Council
- Cal Poly ARCE Industry Advisory Board

Michael is a California licensed Structural and Civil Engineer. In addition to all types of structures and inspection assignments, he specializes in municipal projects. Michael has completed projects utilizing structural systems of all the major building materials such as timber, steel, cold-formed steel, masonry, and concrete. He has also designed projects of varying scale with non-conventional materials including aluminum, fiber-reinforced polymers (FRP), rammed earth, structural glass, and strawbale.

Michael is also an outside Structural Plan Review Engineer for the Division of State Architect (DSA) with all four regional offices (Sacramento, Oakland, Los Angeles, and San Diego). His experience includes:

Derrik Tank, City of Coalinga, CA. Structural Engineer. Existing 7.5MG tank rehabilitation and retrofit.

Mesa Tank, City of Santa Paula, CA. Structural Engineer. Replacement of two 0.2MG tanks to promote redundancy after existing tanks were deemed beyond service life.

Hames Tank and Amnesti Tank, City of Watsonville, CA. Structural Engineer. Rehabilitation of 0.5MG and 1MG tanks including failing dollar plate, tank floors and various shell repairs.

Villa Del Monte, Villa Del Monte Water District, Lome Preta, CA. Structural Engineer. New 0.2MG tank with foundation design for loss of support due to ridge top shattering risk.

DJ Farms Tank, City of Guadalupe, CA. Structural Engineer. New 0.7MG tank supported on custom mat foundation to mitigate liquefaction risk.

Tank Access Project, Santa Clarita Valley Water District, CA. Structural Engineer. Tank access modifications and retrofits for tanks ranging from 0.7MG - 3MG including new external attached stairs and catwalks.

Jonathan D. Blanchard, PE, GE Principal Geotechnical Engineer



Firm

- Yeh and Associates, Inc.

Areas of Expertise

- Water/wastewater infrastructure rehabilitation and improvements
- Public works and infrastructure
- Geologic hazards
- Project management

Years of Experience

- 37

Licensing

- Professional Civil Engineer, CA No. 47071, OR No. 95344
- Geotechnical Engineer, CA No. 2312

Education

- MS, Civil Engineering, University of Massachusetts, MA
- BS, Civil and Environmental Engineering, Clarkson University, NY

Affiliations

- American Public Works Association
- American Society of Civil Engineers
- American Council of Engineering Companies

Award(s)

- American Society of Civil Engineers, San Luis Obispo Branch – Outstanding Civil Engineer in the Private Sector, 2022
- American Society of Civil Engineers, San Luis Obispo Branch & Los Angeles Section – Lifetime Achievement Award, 2022

Jon is a Vice President, regional manager and lead geotechnical engineer for Yeh. He has been a geotechnical engineer and managed professional services for the planning, design and construction of public works and infrastructure projects his entire career. He has specialized expertise in shallow and deep foundation design, earthwork, earth retention systems, slope stabilization, landslide mitigation, seismic hazards, storm damage repairs, expansive and collapsible soil, coastal erosion, trenchless technologies, and the overall engineering behavior of soil and rock. Jon has led geotechnical services for projects involving roads, bridges, treatment plants, pipeline and flood control for federal, state and local county and city agencies. He has served as a lecturer at Cal Poly in San Luis Obispo where he taught courses in geotechnical engineering and foundation design. His experience includes:

Los Osos Wastewater Project, San Luis Obispo County, CA. *Project Manager and Geotechnical Engineer.*

Jon was the geotechnical engineer for the project for more 20 years that included performing various geotechnical studies for the design and construction of the new treatment plant, over 40-miles of collection system, an eight-mile force main to deliver sewage and treated effluent to and from the community to the treatment plant, seven primary pump stations and 18 pocket pump stations. The project included trenchless installation in sandy soils below groundwater to reduce impacts to wetland areas, and miles of pipe installation in areas of shallow groundwater.

Morro Bay Water Reclamation Facility, Morro Bay, CA. *Project Manager and Geotechnical Engineer.*

The project included the siting and design of the new Morro Bay Water Reclamation plant. The project services involved evaluating geologic hazards, geotechnical considerations for grading on slopes, deep excavations, and settlement.

Tank Farm Road Sewer and Lift Station Improvements, San Luis Obispo, CA. *Project Manager and Geotechnical Engineer.* Design and construction of three miles of new force and gravity sewer to a new lift station that extended to 30 feet below the ground surface. Gravity segments to the pump station has trench depths up to 20 feet and extended below water. The pipe was constructed using trenchless installation below two crossings of Acacia Creek, San Luis Obispo Creek (east), and Orcutt Creek.

San Luis Obispo Water Reuse Project, San Luis Obispo, CA. *Project Manager and Geotechnical Engineer.* Jon was the geotechnical engineer for the design and construction of approximately seven miles of new reclaimed water pipeline, trenchless crossings of various creeks and roadways including US 101, and treatment plant modifications including a below ground reclaimed water storage reservoir and chlorine contact basins. The pipe consisted of 12- to 20-inch ductile iron pipe with trench depths up to 10 feet deep that encountered rock, soft subgrade and groundwater.

California Men's Colony (CMC) Water Distribution System Improvements, San Luis Obispo, CA. *Project Manager and Geotechnical Engineer.* Design of 27.5 miles of water distribution pipelines that serve the CMC, Camp San Luis Obispo, Cuesta College, and the CMC Wastewater Treatment Plant. The pipeline consists of 6" to 18" diameter pressure distribution and transmission main pipelines. The scope included trenchless crossings of Chorro Creek at eight locations, crossing State Route 1 and two crossings with jack and bore construction.

State Water Pipeline, Coastal Aqueduct Extension, San Luis Obispo and Santa Barbara County, CA. *Geotechnical Engineer.* The project included the construction of 72 miles of pipeline through San Luis Obispo and Santa Barbara Counties. Pipe was a 42-inch wrapped steel pipe. Provided field engineering and geotechnical services for the design and reroute of pipe when landsliding damaged heaved the pipe out of the ground in Reservoir Canyon, provided design recommendations for restoring streambanks with reinforced steepened slopes at stream crossing, and responded to various callouts to address poor subgrade, compaction issues and trench stability.

South San Luis Obispo County Sanitation District Redundancy Project, Oceano, CA. *Project Manager and Geotechnical Engineer.* The project included the siting and design of the improvements to the South San Luis Obispo County Sanitation District's Wastewater Treatment Facility in Oceano. Geotechnical considerations that Yeh evaluated have been associated with partially buried aeration basins and clarifiers in loose estuarine deposits prone to settlement and liquefaction, and foundation support and ground improvement to mitigate those potential hazards. Yeh also provided engineering support during construction.

River Road Sewer and Lift Station 1 Replacement, Paso Robles, CA. *Project Manager and Geotechnical Engineer.* The project included the design and construction to replace about two miles of gravity sewer

and a lift station, and to install about 1,800 feet of new pipe for reclaimed water. The sewer was 27-inch pipe that extended along River Road and Navajo Drive. Alternatives to replace the pipe using pipe bursting and conventional cut and cover were evaluated for design. Cut and cover was used to construct the pipe.

Southland Wastewater Treatment Plant – Phase 1, Nipomo, CA. *Project Manager and Geotechnical Engineer.* Geotechnical evaluation to transition an existing aeration pond facility to a tertiary treatment facility with clarifiers, headworks, disinfection and expanded percolation ponds. The scope also involved new office and maintenance yard buildings, new percolation ponds, head works, septage receiving, aeration and clarifier tanks, and associated piping.

Waller Park Recycled Water Project, Santa Maria, CA. *Project Manager and Geotechnical Engineer.* The project included the design of over two miles of pipeline to bring recycled water to Waller Park in Santa Maria. The project involved coordination with County Parks, the Airport District and the City. The recycled water line will be a 12-inch pressurized PVC pipe leading to a new one-million-gallon tank at the park. The project also involved the trenchless installation of the pipe below Skyway Drive and evaluating an alternative to install about 1,000 feet below the airport using jack and bore construction.

Santa Maria Wastewater Treatment Plant Expansion, Santa Maria, CA. *Project Manager and Geotechnical Engineer.* The project included the geotechnical evaluation to increase treatment capability from 4 MGD to 8MGD. Project involved new office and maintenance yard buildings, new percolation ponds, head works, septage receiving, aeration and clarifier tanks, and associated piping.

Calleguas Creek Effluent Pipeline, Camarillo, CA. *Project Manager and Geotechnical Engineer.* The project included the design of a 24-inch-diameter effluent pipeline crossing of Calleguas Creek for the City of Camarillo. Horizontal directional drill (HDD) techniques were used for installation of the pipeline in saturated alluvial soils to reduce environmental impacts and disturbance to the creek. The pipeline was installed to about 20 to 25 feet below the existing stream bed (below the County's estimated scour depth) and extended laterally to accommodate future widening of the creek.

Jamie L. Cravens, PE

Geotechnical Engineer



Firm

- Yeh and Associates, Inc.

Areas of Expertise

- Water/wastewater infrastructure rehabilitation and improvements
- Public works and infrastructure
- Geologic hazards

Years of Experience

- 7

Licensing

- Professional Civil Engineer, CA No. 91504

Education

- MS, Civil and Environmental Engineering – Geotechnical Specialization, California Polytechnic State University San Luis Obispo, CA
- BS, Civil Engineering, California Polytechnic State University San Luis Obispo, CA

Affiliations

- American Society of Civil Engineers
- American Society of Civil Engineers – Younger Member Forum
- CalGeo
- Deep Foundations Institute

Award(s)

- American Society of Civil Engineers, San Luis Obispo Branch – Outstanding Younger Civil Engineer, 2022

Jamie Cravens has been with Yeh and Associates since 2015 performing field logging and exploration, geotechnical analyses for slopes and foundation systems, geotechnical design for retaining walls and landslide repairs, and preparing preliminary and design-level geotechnical reports. She is experienced in performing field exploration and geotechnical evaluations for pump stations, pipelines, reservoirs, water and wastewater treatment plants, and seismic hazard assessments. Jamie's field experience includes mud rotary, rock coring, hollow stem auger and other drilling methods as well as in-situ testing using the cone penetrometer. Jamie has experience in geotechnical investigation, analyses, and report preparation for a variety of public infrastructure projects. Her experience includes:

Morro Bay Lift Station and Pipelines, Morro Bay, CA.

Project Engineer. The project included preparing Preliminary and design-level Geotechnical Reports for the design of two pump stations and approximately 3 miles of new pipeline to convey raw wastewater to the new Morro Bay Water Reclamation Facility. Return pipelines will transport treated water to an existing ocean outfall and be injected for underground storage and reuse for landscape irrigation. Logged borings, prepared graphics, and assisted in the analyses and preparation of the reports that assessed multiple pipeline routes, creek crossings using microtunnel and bore and jack trenchless technologies, and assessed constructability issues for the new lift station and pipelines.

Grover Beach 2017 CDBG and 2020 CDBG Waterline Replacements, Grover Beach, CA.

Project Engineer. Jamie was the lead project engineer for two Geotechnical Reports prepared for two water infrastructure improvement projects for the City of Grover Beach. The improvements consisted of the replacement of approximately 9,000 linear feet of water lines and appurtenances throughout the city. The replacements consisted of 8- to 10-inch diameter PVC pipe with typical cover depths of up to 5 feet below existing roadways. Jamie coordinated the field exploration program and permits, logged borings, performed geotechnical analyses for the trench design, pipe loads, and thrust block resistance, and was the lead for the report preparations.

Recycled Water Distribution Pipeline, Paso Robles, CA. *Staff Engineer.* The project included preparation of the Geotechnical Report for the design of a 9-mile-long

pipeline and 900,000-gallon storage reservoir to supply recycled water to the Airport District and Barney Schwartz Park in Paso Robles. The distribution lines were force mains that ranged from 6 to 24 inches in diameter. The tank was an above-grade, prestressed reinforced concrete tank. The pipeline crosses the Salinas River, Huer Huero Creek, steep bluffs along River Road and various drainages and state highways. Trenchless installations considering microtunneling, bore and jack, and horizontal directional drilling were evaluated.

Avila Beach Wastewater Treatment Plant Upgrade Project, CA. *Project Engineer.* The project included an upgrade to the existing treatment facility to modernize the plant and add redundancy to their processes. The improvements included an above ground foundation to support a prefabricated membrane bioreactor system to improve the treatment of effluent. The pad is planned over an existing sludge drying bed that has since been abandoned. Yeh performed a field exploration program using cone penetration testing to supplement previous phases of exploratory drilling performed for the existing plant facilities. Liquefaction and seismic settlement analyses for the proposed structures was performed. Yeh also prepared a Geotechnical Report for the design and provided engineering support during bidding and construction.

Reservoir No. 2 Water Storage Project, San Luis Obispo, CA. *Project Engineer.* The project included preparation of the Preliminary Geotechnical and Geologic Hazards Report for the design of two new 2.65 million-gallon reservoirs. The tanks will be either post-tensioned concrete or welded steel structures constructed on a single pad cut into the existing slope and may or may not be buried or partially buried. The reservoir will be served by the installation of approximately 4,000 feet of new 24-inch diameter parallel pipelines that will connect to the City of San Luis Obispo's Existing Water Treatment Facility. Alternative locations for the reservoirs were evaluated considering sidehill grading, variable and complex site geology, potential for landsliding and slope instability, and geologic hazards.

High Street-Glenn Coolidge Sewer Replacement, UC Santa Cruz, CA. *Project Engineer.* The project included preparation of a Geotechnical Report for the design of a sewer replacements between High Street and Glenn Coolidge Drive at the University of California Santa Cruz campus. Evaluated replacement of approximately 2,000 feet of existing gravity sewer pipe that was originally constructed in 1969. Existing geotechnical data from the University was used to supplement the project along with

site reconnaissance and geologic mapping performed by Yeh. The pipeline alignment crossed complex geology with areas of perennial springs, residual soil, artificial fill, and hard rock geology composed of schist, granite, marble, and quartz diorite.

South San Luis Obispo County Redundancy Project, Oceano, CA. *Staff/Project Engineer.* The project included the siting and design of the improvements to the South San Luis Obispo County Sanitation District's Wastewater Treatment Facility in Oceano. Geotechnical considerations that Yeh is evaluating for the project have been associated with partially buried aeration basins and clarifiers in loose estuarine deposits prone to settlement and liquefaction, and foundation support and ground improvement to mitigate those potential hazards. Yeh also provided engineering support during construction.

B

APPENDIX

Addendum Acknowledgment



B Appendix B. Addendums

ADDENDUM NO. 1 FOR PROGRAM C WELL EQUIPPING

DATE: November 9, 2022

FROM: Wallace Group
612 Clarion Court
San Luis Obispo, CA 93401
Tel: (805) 544-4011

TO: Prospective Proposers

This addendum forms a part of the Request for Proposals (RFP) dated November 7, 2022, as noted herein. **Each Consultant shall acknowledge receipt of this Addendum as instructed below.**

The following changes or clarifications have been made to the RFP:

CHANGES TO PRIOR ADDENDA:

1. Not applicable.

CHANGES TO RFP:

2. Attachment C, Los Osos CSD Standard Agreement. Replace Standard Agreement in Attachment C, with the attached Standard Agreement.

Please acknowledge receipt of this Addendum No. 1 by signing where indicated below, and emailing a PDF copy of this signed addendum to stevent@wallacegroup.us.

Mianda Patton

November 21, 2022

Company Name

Date

MNS Engineers, Inc.

END OF ADDENDUM



ADDENDUM NO. 2
FOR
PROGRAM C WELL EQUIPPING

DATE: November 15, 2022

FROM: Wallace Group
612 Clarion Court
San Luis Obispo, CA 93401
Tel: (805) 544-4011

TO: Prospective Proposers

This addendum forms a part of the Request for Proposals (RFP) dated November 7, 2022, as noted herein. **Each Consultant shall acknowledge receipt of this Addendum as instructed below.**

The following changes or clarifications have been made to the RFP:

CHANGES TO PRIOR ADDENDA:

- 1. None

CHANGES TO RFP:

- 2. Well Construction Details. Attached is a draft well construction detail. This detail is not final at this time, but is not expected to change appreciably.
- 3. Front and back covers of proposal, tabs/dividers are excluded from page count. Contract exception comments are included in the page count.
- 4. 11x17 exhibits are allowable, and would be considered one page in the page count.
- 5. Requirement for hard copies of proposal remains. One hard copy of fees shall still be provided in a separate sealed envelope, as instructed.
- 6. Clarifications to Scope/Design Parameters:
 - a. District does not have architectural style requirements for well building; however, Consultant shall propose options for consideration by District as part of design process. District may favor a block wall style building over pre-fabricated structure as mentioned in the original RFP. The chemical storage area must be in a separate room and entrance to this building.
 - b. Well Site Conceptual Plan. This Plan in the RFP shows a chain link fence between the new well building and the drainage basin. This fence is not required. New chain link fencing will be required along the east and south perimeter of the site; the southerly fencing shall extend west past the access driveway to the site to the west.
 - c. Standby Power. Provide provision for portable generator on site, see first bulleted item on Page 7 of the RFP.
 - d. Well Sounding. Design shall include provision for 1-1/2" PVC sounding tube and transducer to read water levels in the well; extend wiring to control panel (data transmission via SCADA to be provided by District).

Please acknowledge receipt of this Addendum No. 2 by signing where indicated below, and emailing a PDF copy of this signed addendum to stevent@wallacegroup.us.

Mianda Patton

November 21, 2022

Company Name

Date

MNS Engineers, Inc.

END OF ADDENDUM