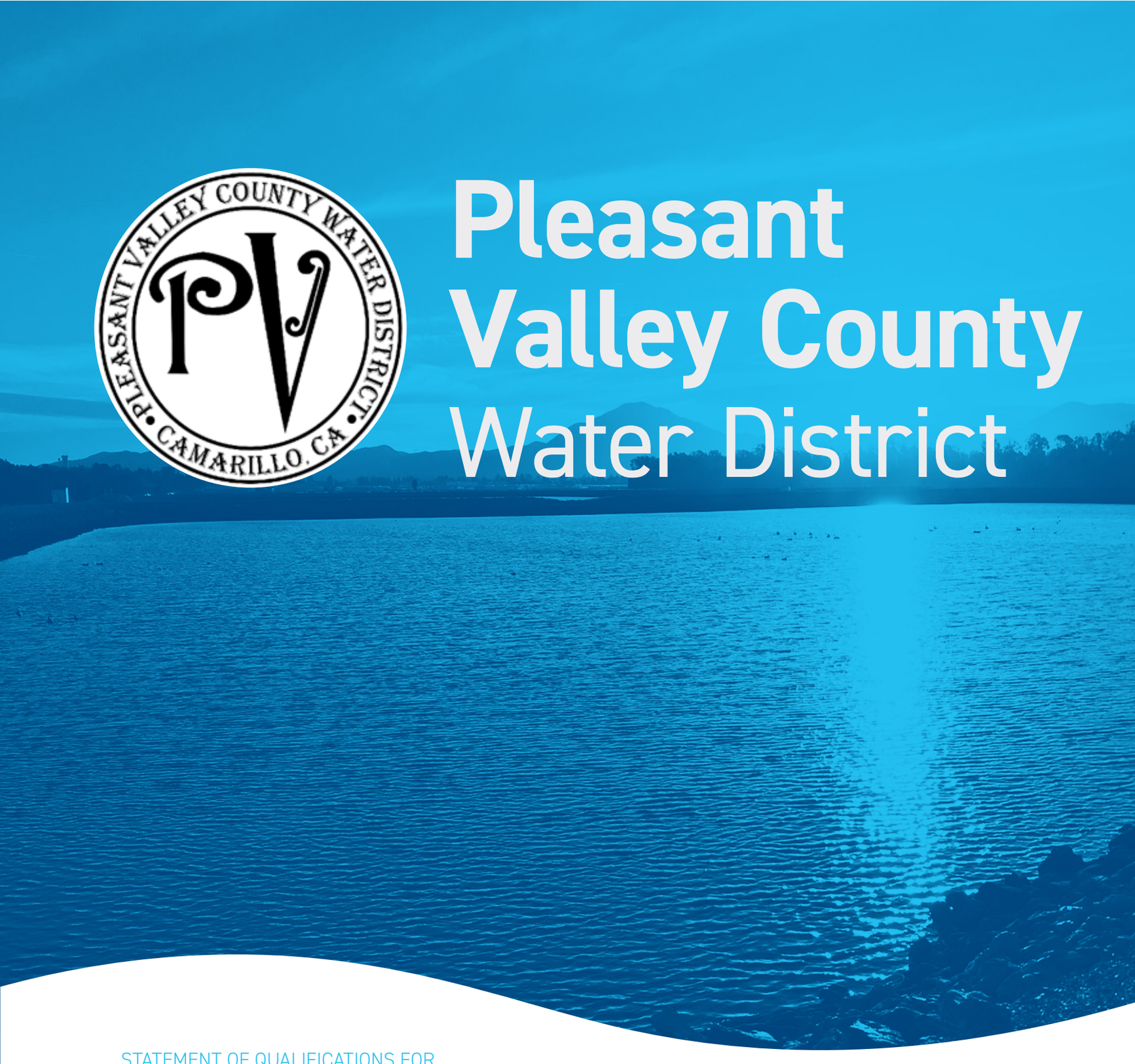

Pleasant Valley County Water District

STATEMENT OF QUALIFICATIONS FOR

Groundwater Sustainability Improvement Program Engineering Support Services

(Contract No. 2022-01)
Submittal Due Date: March 2, 2022 at 4pm
Pleasant Valley County Water District
District General Manager
154 South Las Posas Rd.
Camarillo, CA 93010

MKN | 121 NORTH FIR ST., STE G | VENTURA, CA 93001 | T 805.947.4971

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March 2, 2022

Pleasant Valley County Water District
154 South Las Posas Rd.
Camarillo, CA 93010

Subject: **Statement of Qualifications for Groundwater Sustainability Improvement Program Engineering Support Services (Contract No. 2022-01)**

Dear PVCWD General Manager,

The Pleasant Valley County Water District (District) is seeking to select a group of consultants to assist with various engineering services over the next 3-5 years. With the expedited timeline desired by the District, these as-needed services are best served by consultants with existing background with the District. To be successful, the District will need consultants that can be responsive to a broad range of needs, deliver value on small to mid-size projects, and understand the District's system.

MKN is the ideal fit for your As-Needed Contract. Our team brings the necessary expertise, District experience, and experience on multiple similar on-call contracts with similar sized agencies.

Firm Name: MKN & Associates (S Corporation)

Address: 121 North Fir Street, Ste G, Ventura, CA 93001

Point of Contact:

Frank Dodge, PE
Program Manager
fdodge@mknassociates.us
805.947.4971

MKN Proposal Highlights

Criteria	MKN Differentiators
Firm Overview (15%)	**1. Local Team.** MKN's 45+ person team are all located in Southern California. More importantly, our proposed Program Manager is in our local Ventura office, where he can provide responsive and focused attention to your as-needed projects. **2. Water, Wastewater and Recycled Water Focus.** Since our founding in 2012, MKN has been **focused primarily** on municipal water, wastewater, and recycled water projects. **3. Proven Delivery.** When the District needed a fast paced pipeline repair for Via California, MKN delivered a **full design in less than 3 weeks**. This is the type of responsiveness and commitment the District can expect from MKN, which is why 90% of our work comes from existing clients.
Firm Experience (35%)	**1. Leveraging System Knowledge.** MKN has recent PVCWD experience, including developing the scope of the projects included in the District's Groundwater Sustainability Program and compiling the applications for the DWR SGM Grant. **2. 80+ On-Call Task Orders.** Our ability to deliver on a broad range of project types and sizes is proven by the 80+ task orders successfully completed by MKN across 17 on-call contracts. **3. Relevant Experience.** Our experience matrices highlight the 200+ miles of pipeline, 50+ hydraulic modeling projects, 35+ reservoirs and 50+ pump/lift stations completed by MKN team members.

Criteria	MKN Differentiators
Key Personnel (35%)	**1. Experienced On-Call Team.** Our Principal-in-Charge, Ryan Gallagher, has managed multiple on-call contracts with task orders ranging from $1,000 to +$600,000. Many of these clients are agencies similar in size to the District, including Las Virgenes MWD, City of Thousand Oaks, and Water Replenishment District. **2. Full Capabilities.** The majority of services will be provided by our core MKN team and are augmented by long term subconsultant partners for technical discipline and support services. **3. Pipelines, Reservoir and Pump Stations.** A large portion of CIP projects are related to this infrastructure, which reflects the core function of MKN. As such, multiple highly skilled team members are shown in each of these main project categories. **4. Project Team is Available and Committed.** MKN's key proposed team members have availability between 20-50% and are committed to delivery on your as-needed contract.
Reasonableness of Rates (5%)	MKN is proud of our low overhead structure and efficient company organization, which has allowed us to keep our rates at **10-20% less than our competitors.**
RFQ Compliance (5%)	MKN's proposal is consistent and responsive to all elements of the District's RFQ.
Specific Method and Techniques (5%)	**Section 4** highlights our proven Project Management and Quality Management System, which are tailored for the municipal water industry. We believe our tools and processes not only deliver a better engineering solution but help client project managers stay informed and involved with minimal effort.

Required Statements

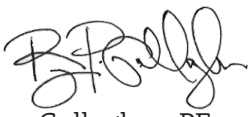
The following statements are being provided in accordance with the RFQ:

1. **Conflict of Interest:** Individuals employed by MKN, or firms employed by or associated with MKN, including our subconsultants/subcontractors, do not have a conflict of interest with the project.
2. **PVCWD Standard Contract:** MKN is prepared to accept and sign the professional services agreement as provided by PVCWD.

We look forward to the opportunity to work with your team over the next several years on the implementation of the Groundwater Sustainability Improvement Program. Thank you for your consideration.

Sincerely,

Frank Dodge, PE
Program Manager



Ryan Gallagher, PE
Principal-in-Charge

1 FIRM OVERVIEW

STATEMENT OF QUALIFICATIONS FOR GROUNDWATER SUSTAINABILITY IMPROVEMENT PROGRAM ENGINEERING SUPPORT SERVICES (CONTRACT NO. 2022-01)

SECTION 1

FIRM OVERVIEW

MKN's Client Centric Origins

MKN is a water, wastewater, and recycled water engineering firm located and focused exclusively in Southern California. Our firm was formed in 2012 and has grown to over 45 professional engineers, planners, construction managers/inspectors, and support staff because of the need from agencies similar to Pleasant Valley County Water District (PVCWD). Since 2012, MKN has focused on meeting a growing need by public agencies for responsive, technically capable consultants who are committed to a long-term relationship based on excellence.

Water is our Focus

Our team has reviewed the RFQ and is aware of the District's desire to expeditiously deliver their Groundwater Sustainability Improvement Program while meeting and managing associated grant funding requirements. We are confident we are the right team for the District. While MKN offers a wide range of water, wastewater and water reuse expertise, ***the engineering services requested in your As-Needed Services represent the core competency for our firm.***

Our principals have decades of experience in management and leadership roles for some of the highest ranked engineering firms in the world, and we are excited to bring our expertise to PVCWD. MKN practice groups include Treatment, Infrastructure, Program Management, Planning and Hydraulic Modeling, and Construction Management.

MKN's Ventura Office is only 14 miles from PVCWD's headquarters. MKN's staff has been working for Ventura County agencies for the past two decades, including City of Ventura, City of Oxnard, and CIBCSD.

MKN is Committed to Ventura County

MKN is local to Ventura County and committed to a long-term relationship with PVCWD.

MKN's staff have been working in Ventura County for nearly two decades and are committed to the local water industry. Our proposed Program Manager, Frank Dodge, is a Ventura County native and resident and currently holds a chair position with the Ventura County chapter of the American Public Works Association.

MKN's strength in storage, pipelines, hydraulic modeling, and planning are an ideal fit for PVCWD's As-Needed Contract. It is these skills that will ensure responsiveness and value for all aspects of the District's Program.

200+ Miles of Pipeline

50+ Pump/Lift Stations

35+ Tanks/ Reservoirs

50+ Hydraulic Modeling Projects

2 FIRM EXPERIENCE

STATEMENT OF QUALIFICATIONS FOR GROUNDWATER SUSTAINABILITY IMPROVEMENT PROGRAM ENGINEERING SUPPORT SERVICES (CONTRACT NO. 2022-01)

SECTION 2

FIRM EXPERIENCE

PVCWD is expecting to procure state funding through the Sustainable Groundwater Management Grant Program to assist in executing a program of projects to reduce Pleasant Valley Groundwater Basin's reliance on groundwater and provide additional water sources to its customers. The District is seeking assistance from the selected As-Needed Contract consultants to expedite the projects included in the program and provide other general engineering and support services.

Key Experience Take-Aways:

- MKN assisted PVCWD with the application for the DWR SGM Grant Funding associated with the District's Program
- Proposed team has direct experience working with the District, including providing On-Call Services and Well Evaluations.

MKN As-Needed Contract

The MKN team has performed successfully on multiple As-Needed Contracts for Clients and project types that are similar to the PVCWD contract. Many of these agencies are similar in size to PVCWD and include many similar projects, including pump stations, pipelines, and hydraulic modeling. Many of the relationships with these agencies extend back to the start of the company and our continued presence demonstrates the quality, responsiveness, and value our firm can deliver.

Our proposed Program Manager, Frank Dodge, and Principal-In-Charge, Ryan Gallagher, have worked directly with PVCWD providing on-call services, including developing the application and exhibits for the Department of Water Resources (DWR) Sustainable Groundwater Management (SGM) Grants. Additionally, our proposed team has performed as-needed services for multiple agencies in Ventura County, including Casitas Municipal Water District, Channel Islands Beach Community Services District, and the City of Ventura.

MKN offers PVCWD a Project Team that is experienced delivering on As-Needed contracts for similar sized agencies.

WRD Water Replenishment District of Southern California

SCV Water

Channel Islands Beach Community Services District

Seal of the City of Santa Barbara, California

East Niles Community Services District, Established December 21, 1954, Bakersfield, California

City of Morro Bay, Incorporated July 17, 1964

City of Merced, California, Incorporated April 1, A.D. 1889

City of Ventura

South San Luis Obispo County Sanitation District, In Service to the Community, Since 1963

Community Services District, Nipomo, Since 1965

Pleasant Valley County Water District, PV, Camarillo, CA

Atascadero, Founded 1913, Incorporated 1979

City of Santa Paula

Calleguas Municipal Water District

City of Thousand Oaks

Casitas

Atascadero Mutual Water Company, Serving the Colony Since 1913

"MKN's staff have been delivering various task orders through our On-Call contract since 2015. Their team has consistently delivered projects on schedule and on budget. What sets MKN apart is their proactive involvement during the development of these projects, providing valuable insights during scoping that has often led to ways to reduce cost or eliminate risk. I would highly recommend MKN and specifically Ryan Gallagher and Keenan Bull to any agency seeking On-Call services." Pete Martinez, General Manager

On-Call for Channel Islands Beach Community Services District

Channel Islands Beach Community Services District, CA

OWNER: Channel Islands Beach Community Services District

KEY PERSONNEL: Ryan Gallagher, PE, Project Manager; Frank Dodge, PE, Project Engineer; Keenan Bull, PE, Senior Engineer; Rob Lepore, GISP, Asset Management

DURATION: On-Call started in 2015 - No end date

ENGINEERING FEE (CONTRACT VALUE): $75,000 per year

CLIENT CONTACT:
Pete Martinez, General Manager
353 Santa Monica Drive
Oxnard, CA 93035
805.827.3000; pmartinez@cibcsd.com

RELEVANCE TO PVCWD:

1. Similar Services - planning studies, condition assessments, and rehabilitation design
2. Similar Key Team Members

BRIEF DESCRIPTION

Serving as District Engineer, MKN provides project management and technical support services for the Channel Islands Beach Community Services District. In this role, MKN's Ryan Gallagher serves as the District Engineer and provides direct support in CIP development, financial planning, project procurement and execution, Board and customer communication and technical support. The major efforts to date include the following:

- Asset Management Software Procurement
- Pipeline Rehabilitation – 3,500 feet of CIPP ($440k construction)
- Hydraulic Modeling for infrastructure reviews
- Lift Station Condition Assessment (7 LS)
- Technical, procurement, and installation support for District wide meter replacement program, converting from manual meters to AMI. Project construction cost approximately $700,000; **completed approximately $60,000 under budget**.
- Pipeline replacement cost estimating
- Sewer CCTV technical and procurement support
- Master Plan and Feasibility Studies
- Administration Building replacement technical and procurement support ($1.5M construction cost)

On-Call for Casitas Municipal Water District

Oak View, CA

OWNER: Casitas Municipal Water District

KEY PERSONNEL: Becca Bugielski, PE, Program Manager; Michael Nunley, PE, Client Manager; Frank Dodge, PE, Project Engineer; Keenan Bull, PE, Engineer; Rob Lepore, GISP, Modeling

DURATION: On-Call started in 2018, 17 task orders issued to date

ENGINEERING FEE (CONTRACT VALUE): $950,000 issued to date

CLIENT CONTACT:
Julia Aranda, Engineering Manager
1055 N. Ventura Ave.
Oak View, CA 93022
805.649.2251; jaranda@casitaswater.com

RELEVANCE TO PVCWD:

1. Pipeline, Pump Station, Reservoir and Modeling Projects
2. Similar On-Call Structure
3. Same Key Team Members

BRIEF DESCRIPTION

MKN is currently serving as one of five firms on the On-Call for Casitas Municipal Water District. The number of task orders sent to our team demonstrates our focus on responsiveness, quality and value ($950k+ engineering services). Many of the task orders issued by Casitas are similar to those anticipated by PVCWD. These include the following:

- **Running Ridge Zone Hydraulic Analysis:** Planning/ Hydraulic Modeling; Contract $19,722.
- **Casitas Ojai Waterline Replacements:** Design (Ongoing); Contract $208,951.
- **Running Ridge Zone Improvement:** Design (Ongoing); Contract $345,591.
- **Signal Tank Replacement and Pump Station Improvements:** Design (Ongoing); Contract $180,594.

Additional Projects: Robles Diversion Fish Screen Alternatives Study; Oak View Pipeline Thrust Restraint Design; Ojai/ Santa Paula Pipe Load Analysis; Ojai Pumping Plant Performance Evaluation.

On-Call for East Niles Community Service District

Bakersfield, CA

OWNER: East Niles Community Services District

KEY PERSONNEL: Josh Nord, PE - District Engineer; Chris Martin, PE - Process Engineer; Jason Wilson, PE - Project Engineer; Jon Hanlon, PE - Project Engineer; J.J. Reichmuth, PE - Project Engineer; Rob Lepore, GISP - Water Resource Specialist

DURATION: On-Call started in 2015, 11 task orders issued to date

ENGINEERING FEE (CONTRACT VALUE): $1.2M issued to date

CLIENT CONTACT:
Tim Ruiz, General Manager
1417 Vale Street
Bakersfield CA 93306
661.871.2011; truiz@eastniles.org

RELEVANCE TO PVCWD:

1. Pipeline, Pump Station, Reservoir and Modeling Projects
2. Similar On-Call Structure
3. Same Key Team Members

BRIEF DESCRIPTION

Since 2015 MKN has served as the District Engineer for East Niles Community Services District (ENCSD). ENCSD serves a population of 32,000 with primary facilities consisting of 7 wells, 13 reservoirs, 9 booster stations, and 110 miles of distribution system. Many of the task orders issued by ENCSD are similar to those anticipated by PVCWD. These include the following:

- **Nitrate Blending Pipeline Study:** Planning; Contract: $18,524.
- **Rosewood Pump Station Relocations:** Planning and Design; Contract: $60,704.
- **ENCSD Concrete Water Storage Tank:** Planning and Design; Contract: $88,762.

Additional Projects: Office waterline extension, Brentwood Sewer Extension, 2000 to 2015 Urban Water Management Plan preparation, TCP Treatment project, Fernvale Sewer Project, Fairfax and Poppy Pipeline Extension, Fairfax and College Pipeline (Phases 1 through 3).

Pleasant Valley County Water District On-Call

Ventura County, CA

OWNER: Pleasant Valley County Water District

KEY PERSONNEL: Ryan Gallagher, PE, District Engineer; Frank Dodge, PE, Project Engineer

DURATION: On-Call started October 2019 - No end date

ENGINEERING FEE (CONTRACT VALUE): $12,000 issued to date

CLIENT CONTACT:
Jared Bouchard, General Manager
154 S. Las Posas Road
Camarillo, CA 93010
jared@pvcwater.com

RELEVANCE TO PVCWD:

1. Local Team Members
2. Same Key Team Members
3. PVCWD Knowledge

BRIEF DESCRIPTION

In addition to providing an evaluation of their wells, MKN has provided on-call services for Pleasant Valley County Water District (PVCWD) since 2019. Under this contract, MKN has assisted PVCWD in generating a Capital Improvement Projects list to help address water concerns within the basin.

Two projects, the Recycled Water Connection Pipeline and the Private Reservoir Program, were identified by Fox Canyon Groundwater Management Association (FCGMA) as high impact projects and applications were developed for California state grant funding through the Department of Water Resource's Sustainable Groundwater Management fund. MKN developed conceptual project descriptions, cost estimates, and schedules of execution and provided other materials, including completed application questionnaires, checklists, and project maps, requested by FCGMA for submission to the State. It is expected that the two projects MKN has assisted in scoping will be pertinent in the District's Groundwater Sustainability Improvement Program to which this RFQ pertains.

Reservoir 2B and 3B Feasibility Study

South Coast Water District | Dana Point, CA

OWNER: South Coast Water District

KEY PERSONNEL: Tanner Bennett - Tanks; Rob Lepore, Hydraulic Modeling; Parasto Azami, Project Engineer, Jon Hanlon, QA/QC; Rincon, Environmental; Michael Putt, Geotechnical

DURATION: September 2020 - March 2021 (anticipated)

ENGINEERING FEE (CONTRACT VALUE: $171,897

CLIENT CONTACT:
Taryn Kjolsing, Principal Engineer
31592 West Street
Laguna Beach CA 92651
949.541.1327; tkjolsing@scwd.org

RELEVANCE TO PVCWD:

1. Local Experience
2. Hydraulic Model Experience
3. Similar Key Team Members
4. Cost Saving Solutions for Complex Problems

BRIEF DESCRIPTION

MKN is preparing a feasibility study for replacement of Reservoir 2B and 3B. The project is 30% underway and has met all deliverable dates and is on-budget. The project includes hydraulic modeling, alternatives evaluation, constraints analysis, environmental and geotechnical evaluation and conceptual design.

MKN prepared seven (7) scenarios within the District hydraulic model to consider various alternatives to demolishing Reservoir 3B and consolidating storage at the Reservoir 2B site. Alternatives included expansion or construction of new pump stations, connection to Moulton Niguel Water District and various pipeline improvements

MKN Experience - Pump Stations

Our team has designed over 35 pumping stations, including both horizontal centrifugal pumps and vertical turbine pumps. This experience covers both small and large, complex pumping facilities with capacities reaching 500 cfs. Our approach to each pump station is to deliver a design that meets your project's unique conditions, whether it be capital or operating cost, reliability, public impact, pump sizing for wide ranging demands, minimal space or access, challenging hydraulic conditions, easement acquisition or retrofitting existing system.

PUMP STATIONS			
Project	Client	Capacity	Type of Work
Kern County Water Agency	Cross Valley Canal Expansion	500 cfs	Preliminary, Design
West Stanislaus Irr District	Pump Station 1A	350 cfs	Preliminary, Design
ND State Water Commission	Devil's Lake Outlet Project	300 cfs	Preliminary, Design
MWD of Salt Lake/Sandy	15000 South PS	150 cfs	Preliminary, Design
Bakersfield	Westside Parkway SW PS	100 cfs	Preliminary, Design
Kern County Water Agency	Northwest Feeder PS	70 cfs	Preliminary, Design
Private Agriculture	Canal Pumping Plant	45 cfs	Preliminary, Design, CM
Kern County Water Agency	North & East PS	40 cfs	Preliminary, Design
ND State Water Commission	Southwest Pump Stations	39 cfs	Preliminary, Design
Monterey County WRA	Salinas River Diversion Facility	35 cfs	Preliminary, Design
Hollister	Seasonal Return PS Facility	20 cfs	Preliminary, Design
Westlands WD	Pumping Plant 7-1 Expansion	6,000 gpm	CM
East Niles CSD	Kern Citrus PS	5,700 gpm	Preliminary, Design, CM
East Niles CSD	Brentwood PS Relocation	3,000 gpm	Preliminary, Design, CM
Burbank Water & Power	RW PS-1 Upgrades	3,000 gpm	Preliminary
NFV-1 /Cal Water	Millerton Zone 640 BPS	3,000 gpm	Preliminary, Design, CM
East Niles CSD	Well 21 PS Phase 2	2,250 gpm	Preliminary, Design, CM
G.L. Bruno Associates	Freeway Tank PS	2,000 gpm	Preliminary, Design, CM
Kern County Water Agency	23 Corner Tank PS	2,000 gpm	Preliminary, Design, CM
Paso Robles	Nacimiento Surface WTP	2,000 gpm	Preliminary, Design, CM
Nipomo CSD	Joshua Road BPS	2,000 gpm	Preliminary, Design, CM
City of Oxnard	BS No. 6 PS	2,000 gpm	Preliminary
East Niles CSD	East Niles PS Replacement	2,000 gpm	Preliminary
Guadalupe	Bonita PS Rehabiliation	1,500 gpm	Preliminary, Design
Guadalupe	Obispo Tank #2 PS	1,500 gpm	Preliminary
San Luis Obispo	Arlita BPS Replacement	1,500 gpm	Preliminary, Design
Missouri-American Water	Pump Station Improvements	1,500 gpm	Preliminary, Design
Missouri-American Water	Warrensburg Tank & Booster	1,500 gpm	Preliminary, Design, Startup
Morro Bay	Desal Plant PS Improvements	1,350 gpm	Preliminary, Design, CM
Cambria CSD	Booster Station Improvements	1,300 gpm	Preliminary, Design
West Basin MWD	Palos Verdes PS	1,000 gpm	Preliminary
Casitas MWD	Signal PS Replacement	600 gpm	Preliminary
San Luis Obispo	Rosemont BPS Replacement	400 gpm	Preliminary, Design
San Lorenzo Valley WD	Regional Intertie No. 2-4,6	350 gpm	Preliminary, Design
Casitas MWD	Running Ridge Improvements	300 gpm	Preliminary, Design

MKN's staff bring 200+ miles of pipeline design experience. This includes a full range of pipe sizes and materials.

PIPELINES

Project Name	Client	Diameter (inches)	Material	Length
Westlake Reservoir	Las Virgenes MWD	30, 36	Steel	2,200
Via California Replacement	South Coast Water District	10	PVC	500
Potable Pipeline Project	Ventura County	12	PVC	20,00
Group Job 1 Pipeline Replacement	Vista Irrigation District	4, 6, 10	PVC	10,000
CDBG Waterline Replacement	City of Grover Beach	8	PVC	2,400
CDBG Waterline Replacement	City of Grover Beach	6, 8	PVC	5,500
West Ojai Pipeline Project	Casitas MWD	8	PVC	5,600
Branch St Water Improvements	Nipomo CSD	8	PVC	2,100
Supplemental Water Project	Nipomo CSD	12, 18, 24	DIP, HDPE	27,000
South Feeder Parallel Pipeline	Antelope Valley/East Kern WA	24, 36, 48	Steel	34,320
95th Street East PS/Turnout	Antelope Valley/East Kern WA	20	Steel	500
North Kern WSD Canal 9-26	California Rail Builders	42	Conc/HDPE	400
Morning and 178 Intertie	East Niles CSD	20	Steel	1,320
Pioneer Pipeline Project	East Niles CSD	12	PVC	1,400
Morning Dr Transmission Pipe	East Niles CSD	20	Steel	5,500
Redbank Rd Pipeline Project	East Niles CSD	8, 14	PVC	6,800
Well 20 Flushing Pipeline Project	East Niles CSD	12	PVC	1,500
Northwest Feeder PS & Pipeline	Kern County Water Agency	42	Steel	21,120
LUSD Connection to Bakersfield	Lakeside Union SD	16	PVC	15,500
Devils Lake Emergency Outlet	ND State Water Commission	30, 54	Steel, HDPE	3,500
Southwest Pipeline Project and PS	ND State Water Commission	24, 30	Steel	448,800
Highland Park Improvement	North of the River MWD	8, 12	PVC	27,000
Tognazzini Well Intertie	City of Guadalupe	8	PVC	600
Highland Waterline Replacement	City of San Luis Obispo	24	DIP	165
VCH Rio Mesa Well & Pipeline	Valley Children's Hospital	12	PVC	1,800
Regional Transmission Mains	City of Fresno	16-48	WSP, DIP	68,640
Friant-Kern Canal Pipeline	City of Fresno	60	WSP	26,400
Salinas River Diversion Facility	Monterey County WRA	20, 30	WSP, DIP	10,560
Nacimiento Water Pipeline	SLO County Flood Control	18-36	PVC, DIP	264,000
Fairview Rd & Foothill Rd Pipeline	Casitas MWD	6-8	PVC	2,600

MKN Experience - Planning, Hydraulic Modeling and Condition Assessments

Planning, Hydraulic Modeling, and Condition Assessments were highlighted for various SCWD Projects. MKN staff have completed 40+ Master Plans and numerous condition assessments and hydraulic model evaluations including development reviews/ infrastructure assessments, water system optimization, flushing studies, and water age analysis (extended period simulations). Through existing on-calls we provide as-needed hydraulic modeling services for multiple agencies, including City of Ventura, City of Tehachapi, City of San Luis Obispo, Channel Islands Beach CSD, Atascadero Mutual Water Company and Casitas Municipal Water District.

"MKN's hydraulic modeling group is responsive, quality orientated and provided tremendous value in addressing our fast paced hydraulic modeling needs. MKN has been there when we needed them and I would highly recommend their hydraulic modeling services". *Adam Bugielski, Ventura Principal Engineer.*

PLANNING & HYDRAULIC MODELING				
Project Name	Client	Master Planning	Modeling/ Modeling	Condition Assessment
Collection System Master Plan Update	Atascadero	•	•	•
Water Reclamation Facility Master Plan	Atascadero	•	•	•
Water Master Plan Update	Atascadero MMC	•		
Water Master Plan	Atwater	•	•	
Downtown Master Sewer Study	Bakersfield		•	
Non-Potable Hydraulic Model	Camrosa Water District		•	
2020 Water and Sewer Plan	Channel Island BCSD	•	•	•
Water Master Plan	East Niles CSD	•	•	
Sewer Master Plan	Grover Beach	•	•	•
Water Master Plan	Grover Beach	•	•	•
Collection System & WWTP Master Plan	Guadalupe	•	•	
Water Master Plan	Guadalupe	•		•
Wastewater Master Plan (staff experience with previous firm)	King City		•	•
Water Master Plan	Merced	•	•	
Blacklake Collection System Master Plan	Nipomo CSD	•	•	
Recycled Water Master Plan	Oxnard	•	•	
Recycled Water Study Update	Santa Paula	•		
Sewer Model Report	Tehachapi	•	•	
Water System Master Plan Update	Tehachapi	•	•	
As-needed Hydraulic Modeling	Templeton CSD		•	
2020 Hill Canyon Treatment Plant Master Plan	Thousand Oaks	•		•
UC Merced 2020 Project Utilities Evaluation	UC Merced	•	•	
Water Master Plan	Ventura	•	•	•

MKN Experience - Reservoirs

STORAGE			
Project Name	Client	Volume (MG)	Type
Westlake Reservoir	Las Virgnes MWD	5	PS
LVLWTF Storage Analysis	Water Replenishment District	5	C
Storage Analysis (Lynwood)	Water Replenishment District	2	PS
Wastewater Treatment	Private (City of Beaumont)	0.1	S
Supplemental Water Project	Nipomo CSD	.5	PS
Terrace Hill & Washwater Tank No. 2	San Luis Obispo	.75 (2)	S
Golden Hill & Merryhill Reservoir	Paso Robles	4, 0.5	S
21st Street Reservoir	Paso Robles	3 (2)	PS
Bonita Tank Condition Assessment	Guadalupe	0.5	S
Obispo Water Storage Tank No. 2	Guadalupe	0.4	S
Elevated Tank Rehabilitation	Guadalupe	0.1	S
Well Tank 4 Recoating	Delano	2	S
Plant 2 Tank Recoating	Delano	2	S
PS Reservoir	East Niles CSD	1.2	PS
Country Club/College Fairfax	East Niles CSD	0.4 (2), 0.8, 2	S
Pepper Drive Tank Project	East Niles CSD	0.4	S
Kern Citrus Tank Project	East Niles CSD	0.8	S
Well 21 Arsenic Treatment	East Niles CSD	0.4	S
Cache Creek System Improvements	Mojave Public Utility District	0.08	S
Warrensburg Tank & Booster	Missouri American Water Company	0.8	PS
Second Dickinson Reservoir	ND State Water Commission (NDSWC)	5	PS
Stockton Reservoir Replacement	Ventura County Water & Sanitation	1	S
Signal Tank and P. S. Replacement	Casitas Municipal Water District	0.3	S
Barger Canyon Reservoir	Goleta Water District	1	C
Meridian Reservoir	Ventura County Water & Sanitation	1.5	S
Tunnel Rd PS & Reservoir Rehab	Santa Barbara	1	S
Pine Knolls Reservoirs	Cambria CSD	0.5 (2)	S
Reservoir No. 2 Replacement	City of San Luis Obispo		PS

(PS = Pre-Stressed, C = Cast-in-Place Concrete, and S = Steel)

3 KEY PERSONNEL

STATEMENT OF QUALIFICATIONS FOR GROUNDWATER SUSTAINABILITY IMPROVEMENT PROGRAM ENGINEERING SUPPORT SERVICES (CONTRACT NO. 2022-01)

SECTION 3

KEY PERSONNEL

Key Project Team Take-Aways:

1. **Local** - Program Manager is 14 miles from PVCWD Headquarters
2. **Know Your System** - Team Members with PVCWD Experience
3. **Proven** - Team has delivered multiple projects together

PRINCIPAL-IN-CHARGE

PRINCIPAL-IN-CHARGE
Ryan Gallagher, PE

PROJECT MANAGEMENT

PROGRAM MANAGER
Frank Dodge, PE

MKN RESOURCES

PIPELINES
Henry Liang, PE
Joseph Reichmuth, PE
Parasto Azami, PE

COST ESTIMATING
Sol Sheikh

PUMP STATIONS
Josh Nord, PE
Keenan Bull, PE

CONSTRUCTABILITY
Peter Brennan, PE, CCM

RESERVOIRS
Jon Hanlon, PE
Tanner Bennett, PE

RESIDENT ENGINEER
Jason Wilson, PE

INSPECTORS
Gary Bohnish
Larry Lewis

HYDRAULIC MODELING
Anthony Herda, PE, MBA

WATER QUALITY & TREATMENT
Chris Martin, PE

SUBCONSULTANTS

CEQA
Jennifer Haddow, PhD, MSC[1]

SURVEY
James P. Fallon, PLS [2]

STRUCTURAL
Travis McFeron, PE, SE[3]

GEOTECHNICAL
Loree Berry, PE[4]

ELECTRICAL AND INSTRUMENTATION
Joe Moraes, PE[5]

1 - Rincon; 2 - Encompass; 3 - PSE; 4 - YEH; 5 - MPA

Frank Dodge, PE - Program Manager

EDUCATION
University of California Irvine
BS Mechanical Engineering & Minor in Material Science

LICENSES & REGISTRATIONS
California Professional Engineer - Mechanical - No. M-38773

Frank Dodge combines his technical and interpersonal skills with his project management experience to visualize project execution, foresee obstacles, and identify mitigations and cost savings. Mr. Dodge has experience as a Mechanical Design Engineer, Project Engineer, and Project Manager for consultants and owners working on water, wastewater, and other fluid and gas handling projects. He is consistently recognized as a hard worker with a strong drive to deliver excellent results, especially when matched against aggressive metrics and difficult project environments.

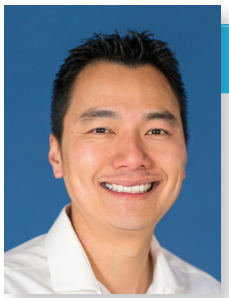
Ryan Gallagher, PE - Principal In Charge

EDUCATION
California Polytechnic State University San Luis Obispo,
BS Civil Engineering

LICENSES & REGISTRATIONS
California Professional Engineer - Civil, No. 74805

Mr. Gallagher has 14 years of experience in the planning, design and construction support services for water, wastewater and recycled water systems projects. This experience includes a wide array of projects from planning to design to construction phase services for various treatment systems, conveyance and storage projects. Ryan has managed multiple on-call municipal contracts delivering task orders that range in size from $1,000 to +$600,000.

"Our Project Manager, Ryan Gallagher, PE, is outstanding. He's uber organized, a great listener, and facilitator. Great sense of humor, he keeps us all on the same page and moving efficiently to define our projects and build them. I couldn't ask for a better Project Manager." - Chuck Rogers, Former HCTP Wastewater Superintendent



Henry Liang, PE - Pipelines

EDUCATION
California State University, Fresno
Masters of Business Administration

University of California, Berkeley
BS Civil and Environmental Engineering

LICENSES & REGISTRATIONS
California Professional Engineer - Civil - No. C68442

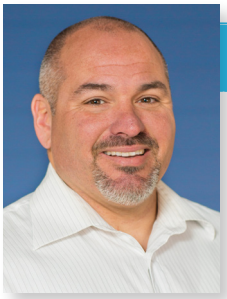
Mr. Liang is a Principal with over 16 years of experience in planning and design of municipal water, wastewater and water resources projects ranging from planning to design of major transmission pipelines, pump stations, and wells including raw and treated water projects throughout California. His expertise includes detailed hydraulic modeling and transient analysis for a variety of water supply projects.

Keenan Bull, PE - Pump Stations

EDUCATION
Missouri University of Science and Technology
MS Civil Engineering
BS Civil Engineering

LICENSES & REGISTRATIONS
California Professional Engineer - Civil - No. C91138

Mr. Bull has over 18 years of professional experience in water, wastewater, and recycled water engineering for private and municipal water and wastewater treatment operations. Proficiencies include the design, planning, and construction/retrofit of water pumping stations and sewer lift stations, water and wastewater treatment facility repair and rehabilitation; aboveground water storage tanks and buried or exposed transmission and distribution pipelines.

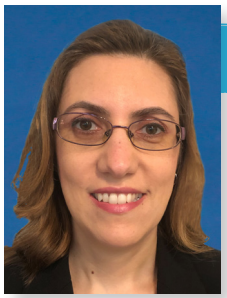


Joseph Reichmuth, PE - Pipelines

EDUCATION
California Polytechnic State University, San Luis Obispo
BS Civil Engineering

LICENSES & REGISTRATIONS
California Professional Engineer - Civil - No. C63124

Mr. Reichmuth has over 10 years of design experience with an emphasis in pipeline design, ranging from condition assessment and rehabilitation to planning and design. Pipelines include various trenchless construction methods, such as horizontal directional drilling and jack-and-bore, and pipeline sizes up to 42-inches.



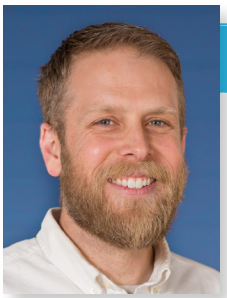
Parasto Azami, PE - Pipelines

EDUCATION
University of California, Irvine
MS Civil Engineering

Tabriz University, Iran
BS Mechanical Engineering

LICENSES & REGISTRATIONS
California Professional Engineer - Civil - No. C91468

Parasto Azami has over 9 years of experience in civil engineering as a design engineer delivering project designs in the areas of water, wastewater, and recycled water infrastructure systems. Her interface with clients is multi-faceted - during projects' proposals, design phases, progress reviews, and submittals.



Josh Nord, PE - Pump Station

EDUCATION
California State University, Fresno
BS Civil Engineering

LICENSES & REGISTRATIONS
California Professional Engineer - Civil - No. C61789

Mr. Nord has nearly 20 years of industry experience including design, analysis, and management of major water supply and water resource projects throughout California. Josh Nord is experienced in water supply and distribution systems specifically pumping station design, water resources, surge analyses, hydraulic transient analysis and water system modeling. Mr. Nord has evaluated, planned or designed over **15 pump stations** and up to 300 cfs in pumping capacity. Mr. Nord brings a public agency perspective to his projects, having served as District Engineer for multiple public agencies.

Peter Brennan, PE, CCM - Constructibility

EDUCATION
Loyola Marymount University
MS Civil and Environmental Engineering
Santa Clara University
BS Civil Engineering

LICENSES & REGISTRATIONS
California Professional Engineer - Civil - No. C53110

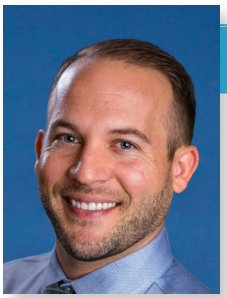
Mr. Brennan brings over **30 years of experience providing construction management and project management** in the water resources industry. He worked for over 22 years with the Los Angeles County Sanitation Districts where he administered construction contracts ranging from $1M to $190M.

Jon Hanlon, PE - Reservoirs

EDUCATION
California Polytechnic State University, San Luis Obispo
BS Mechanical Engineering

LICENSES & REGISTRATIONS
California Professional Engineer - Mechanical - No. M33232
NACE Certified Coating Inspector Level 1 - No. 10431924

Mr. Hanlon is a Principal with nearly 20 years of experience focused in design, analysis, and management of complex multi-disciplined projects including water and wastewater treatment facilities, pump stations, production wells, piping and valves, hydraulic analysis, master planning, and environmental permitting. Mr. Hanlon specializes in reservoir evaluation, rehabilitation, planning and design, having been **involved with over 10 tank projects, ranging in size from 100,000 gallons to 8 million gallons**. He is a certified NACE level 1 inspector with significant experience performing condition assessment of water, wastewater, and recycled water facilities throughout California.

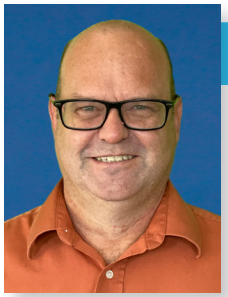


Tanner Bennett, PE - Reservoirs

EDUCATION
California Polytechnic State University, San Luis Obispo
BS Civil Engineering

LICENSES & REGISTRATIONS
California Professional Engineer - Civil - No. C 81334

Tanner Bennett brings over ten years of experience in water and wastewater engineering design and construction. He has been the project engineer in the design of treatment and conveyance facilities, infrastructure, conditions assessments, alternative analyses, equipment selection, engineering estimates, and has led complex projects from design through construction. **Tanner has also developed and been involved in preliminary engineering for over 40 reservoir projects across California and Hawaii.**



Anthony Herda, PE, MBA - Hydraulic Modeling

EDUCATION
Azusa Pacific University, Azusa, California
MBA Strategic Planning
California State University, Sacramento
BS Civil Engineering

LICENSES & REGISTRATIONS
California Professional Civil - No. C78205

Mr. Herda offers over a decade of experience in water resources engineering planning, specializing in master planning, feasibility studies, hydraulic modeling of water systems, capital planning, urban water management planning, and related multi-disciplinary studies including the preparation of multiple integrated utility master plans. Mr. Herda has prepared **over 20 utility master plans** and has extensive training and experience in constructing, calibrating, and utilizing hydraulic models and asset management programs. He uses these skills in combination with sound engineering practice to optimize return-on-investment for capital expenditures on behalf of his client

Chris Martin, PE - Water Quality and Treatment

EDUCATION
University of Washington Seattle, Washington
BS Chemical Engineering

LICENSES & REGISTRATIONS
California Professional Engineer - Chemical - No. CH4597

Mr. Martin is a Principal with over 30 years of experience in advanced water treatment processes, such as reverse osmosis, ion exchange, and specialty adsorbents. **He is an expert in water quality issues both in the municipal and industrial industries, with over 30 treatment plant designs and dozens of evaluations and feasibility studies.** Mr. Martin has presented numerous papers at water industry conferences concerning water quality and treatment topics, and is a recognized expert in these fields.

Jennifer Haddow, PhD, MSC - Rincon Consultants (Rincon)

EDUCATION
University of Aberdeen, UK
PhD Biogeochemistry
MSc Environmental Science
University of California, Davis
BSc Environmental Policy Analysis and Planning

Jennifer Haddow, PhD, Principal Environmental Scientist is responsible for technical oversight and quality assurance of the Rincon team. She has over 15 years of experience managing all levels of environmental documentation for large-and smallscale infrastructure projects, with an emphasis on water supply, conveyance and quality projects, and watershed planning studies.

James Fallon, P.L.S (Encompass Consulting Group) - Survey

EDUCATION
California State University Fresno
BS Surveying Engineering

LICENSES & REGISTRATIONS
Professional Land Surveyor No. 7807, California

James Fallon has over 20 years of experience on a wide variety of land surveying and geomatics projects. He has been responsible for the direct management and production of survey tasks in support of public works and private land development projects, both in the field and in the office. Work performed includes topographic mapping, monument preservation, public agency map and document review, geodetic control networks, boundary surveys, easement and legal description preparation, subdivision mapping, lot line adjustments, ALTA land title surveys, condominium plans, right of way acquisition surveys, construction staking, and data acquisition for Geographic Information Systems (GIS). His work includes numerous public infrastructure projects, encompassing many miles of corridor surveys for design improvements in Ventura, Los Angeles and Santa Barbara Counties.

Travis McFeron, PE, SE - Peterson Structural Engineers (PSE)

EDUCATION
Portland State University
MS Civil Engineering
BS Civil Engineering

LICENSES & REGISTRATIONS
Professional Engineer - CA, CO, GA, HI, MA, MI, NC, OR, VA, TX, UT, WA
Structural Engineer - CA, HI, OR, UT, WA

Mr. McFeron is a Principal at PSE and has over 19 years serving as a structural engineering consultant to numerous owners, contractors, architects and engineering firm partners. His experience includes a broad range of structural engineering disciplines involving experience within structural engineering design, structural analysis, forensic analysis, project management, and plan review services. He has worked on a variety of large scale projects including essential facilities such as municipal treatment plants, water storage reservoirs, and other essential structures.

Loree Berry, PE (Yeh & Associates) - Geotechnical

EDUCATION
University of Wisconsin, Madison
BS Geological Engineering

LICENSES & REGISTRATIONS
California Professional Engineer - Civil - No. 73221
Applied Project Management Professional, APMP
Ventura County Well Inspector

Ms. Berry has more than 15 years of experience in providing geotechnical services in Ventura County. She is proficient in characterizing site conditions, geologic hazards and geotechnical parameters for the design of pipelines and related infrastructure. Her experience includes geotechnical evaluations and construction services for foundation systems, earth retaining systems, seismic and geohazard evaluations, seepage and slope stability analyses, and monitoring and instrumentation.

Joe Moraes, PE - Moraes/Pham & Associates (MPA)

EDUCATION
California State University, San Diego
BS Electrical Engineering

LICENSES & REGISTRATIONS
California Professional Engineer - Electrical - No. 11023

Mr. Moraes is a California registered electrical engineer specialized in the design of electrical and controls systems for water and wastewater facilities, such as reservoirs, pumping stations, sanitary lift stations, PRV stations, wells, and treatment plants. In the past five years he has designed over 200 such projects for 43 southern California municipal end users.

4 PROJECT MANAGEMENT APPROACH

STATEMENT OF QUALIFICATIONS FOR GROUNDWATER SUSTAINABILITY IMPROVEMENT PROGRAM ENGINEERING SUPPORT SERVICES (CONTRACT NO. 2022-01)

SECTION 4

PROJECT MANAGEMENT APPROACH

The assistance provided by experienced on-call consultants can ensure the successful delivery of PVCWD's Groundwater Sustainability Improvement Program through the management of the grant funding requirements and individual projects within the program. This will allow PVCWD to continue to focus on the day-to-day operations of the District.

MKN is an ideal partner. MKN has delivered over 80 task orders over the past 5 years on our existing 17+ On-Call contracts, with our services exceeding $750,000 per year for some contracts.

This experience demonstrates our team can meet the needs of our On-Call clients. This section highlights the keys to our success.

Key Project Management Take-Aways:

1. Project Management Tools that keep the PVCWD PM informed
2. Quality Management System streamlined and tailored for Municipal Water and Wastewater Projects
3. Extensive Track Record of Successfully Managing On-Call Contracts

MKN's Project Management Approach

MKN's Project Management Procedures are based on the driving forces to success which include: (1) Organization, (2) Communication, (3) Risk Management, (4) Quality Control, and (5) Documentation.

Team Organization and Resource Management

MKN's success over the past decade has been predicated on the belief that Client service is the highest goal, and, therefore, our project teams are assembled to achieve this goal.

MKN's Program Manager, Frank Dodge, will strive to understand your expectations for the work in every respect important to you, such as work scope, schedule requirements, level of detail, technical quality, deliverable appearance, staff involvement, team effort, and cost.

Our Program Manager will then identify the best engineers to staff the project. While most companies operate with separate "profit centers", MKN operates our entire 45+ person operation as a single business unit. For PVCWD, this means that there are no barriers to where we can draw expertise and resources from, and more importantly **every MKN employee is driven to deliver the best results for every Client as we succeed as a company not as an office.**

The Program Manager, Frank Dodge, will coordinate the scope, schedule and budget with the selected project team. This ensures that all team members are in agreement with our commitment to the PVCWD.

MKN's Principal-In-Charge, Ryan Gallagher, has managed 75+ projects, ranging in fee from $5,000 to $1M+ and has managed On-Call contracts with similar size agencies such as Water Replenishment District of Southern California, Las Virgenes MWD, and City of Thousand Oaks.

Communication Tools and Approach

Our approach to communication is frequent and focused. To complete this, our Program Manager, Frank Dodge, will hold bi-weekly internal meetings with the Project Team followed by bi-weekly meetings with the PVCWD Project Manager.

MKN utilizes several tools to support our Project Managers in communicating expectations, project status, and project plan, including the following:

1. Project Management Plan. This standard form is completed at the start of the project and serves as our team's roadmap.
2. Microsoft Project Schedule. Our standard includes line items for QC, Client Review, and hard dates for Deliverables.
3. Earned Value Analysis. Our standard spreadsheets are shared with the Client and ensure we are on budget and schedule throughout the project.
4. Project Management Software. Our billing software (BillQuick V20) provides for up to date budget, billing, and payment details.

Our technical teams also utilize tools such as the latest AutoCAD, GIS, and Modeling software (including both Bentley and Innovyze products) to support execution of project work. For construction, our teams utilize Procore, EADocs, and Bluebeam.

Microsoft Teams provides a platform that increases communication, documentation and transparency, while also minimizing the effort required by the PVCWD Project Manager.

MKN's Project Management Plan (PMP) is a requirement of every Task Order, and will set the stage for success by identifying key staff, milestones, quality requirements and risk.

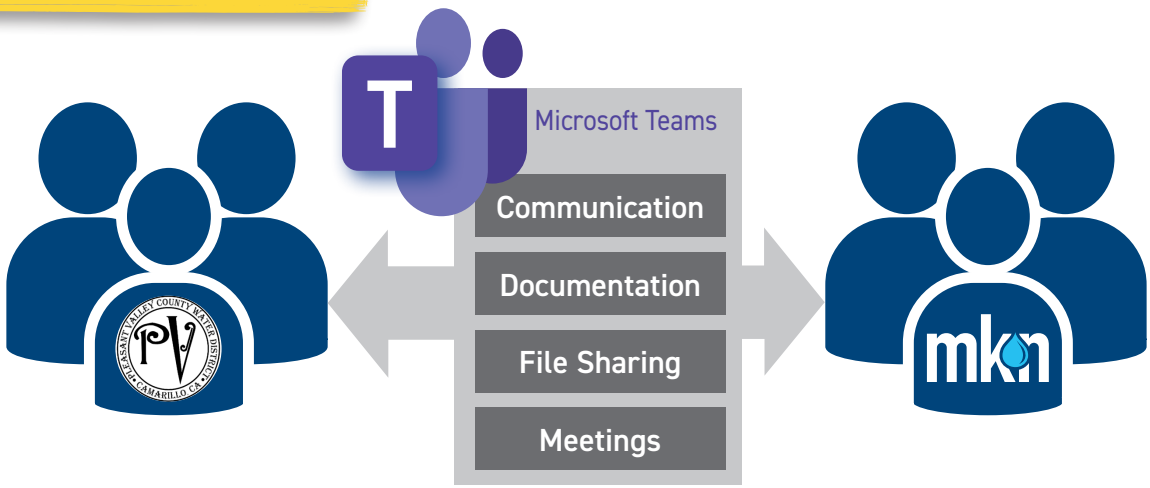
Key Elements of the PMP:

1. Project Summary
2. Client Satisfaction & Project Success "Key Issues"
3. Project Team
4. Contact Information
5. Schedule
6. Preliminary Drawing List
7. Financial Management Plan
8. QA & QC Plan
9. Risk Identification and Avoidance
10. Communication
11. CAD Standards
12. Timesheet Charging Details

MKN's Project Documentation

Our team will also utilize Microsoft Teams for Project related communication, video and screen share meetings, documentation, and management of action items.

PVCWD's Project Manager will be provided full access to the platform and can view these project materials and status at his or her convenience. This instant access to information ensures that the District will always be able to quickly get up to speed on project status.



MKN's Quality Management System is based on our Principals' experience at Fortune 500 Design Firms, but streamlined and focused for Municipal Water projects. This means better quality, faster delivery and lower overhead for our Clients.

Risk Management and Quality Control

The final element of our Project Management Approach is Risk Management and Quality Control, which are both encompassed in MKN's Quality Management System (QMS). This defined program includes three key elements: (1) Quality Planning, (2) Quality Assurance, and (3) Quality Control.

Quality Planning – Plan for Success

Our QMS requires the Project Manager to plan for quality even before a contract is signed. This means that our proposal must include the following:

- **Line Item Scope** – this helps to ensure that the budget is preserved through project execution.
- **Line Item Schedule** – QC is included in our task linked Microsoft Project Schedules to ensure that adequate time is allotted, this typically requires 2-5 days.
- **Identify QC Person** – this person is identified and confirmed prior to submitting.

Once signed, a Project Management Plan is prepared which details key elements of the project, including risks and quality reviews.

Quality Assurance – Prevent Errors

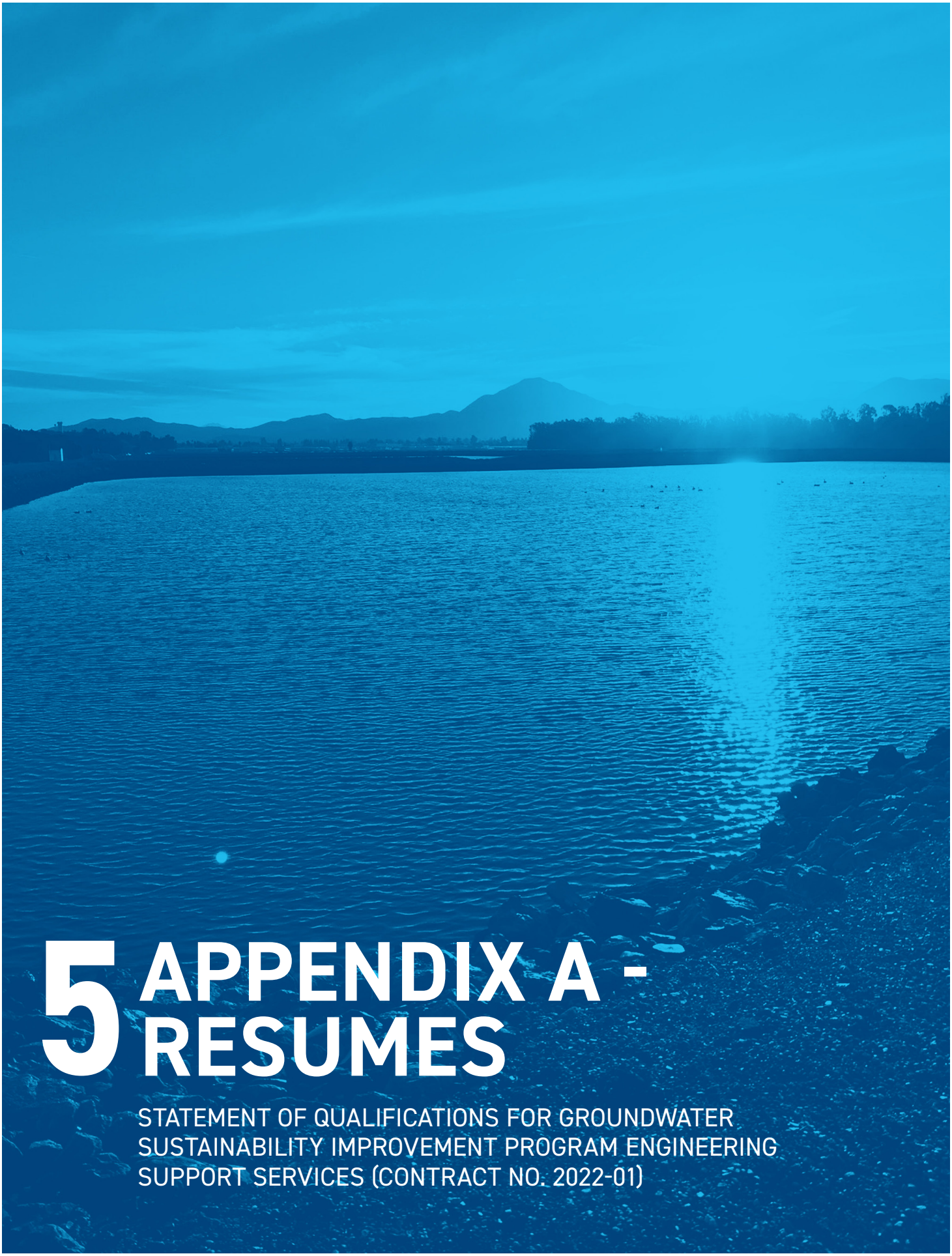
A key element of Quality Assurance is our technical training which is conducted every two weeks. Our engineers are also supported by our design templates, calculation spreadsheets and access to our Technical Practice Groups which maintain and manage many of these documents.

The Technical Review completed at the 10% project phase is another key element of our Quality Assurance program.

Quality Control – Confirm MKN Quality is Met

For PVCWD, Ryan Gallagher will serve as the Principal-in-Charge which requires him to conduct a monthly status meeting with Program Manager Frank Dodge. During this call, project status will be discussed along with adherence to QMS procedures and resource needs.

Every deliverable will be reviewed by MKN approved QC Reviewers, who will follow our defined process for QC review. Our standard review forms will be utilized which identify key elements of review. These documents have been prepared based on our team's extensive experience and "Lesson's Learned".



5 APPENDIX A - RESUMES

STATEMENT OF QUALIFICATIONS FOR GROUNDWATER SUSTAINABILITY IMPROVEMENT PROGRAM ENGINEERING SUPPORT SERVICES (CONTRACT NO. 2022-01)

Frank Dodge combines his technical and interpersonal skills with his project management experience to visualize project execution, foresee obstacles, and identify mitigations and cost savings. Mr. Dodge has experience as a Mechanical Design Engineer, Project Engineer, and Project Manager for consultants and owners working on water, wastewater, and other fluid and gas handling facility projects. He is consistently recognized as a hard worker with a strong drive to deliver excellent results, especially when matched against aggressive metrics and difficult project environments.

FRANK DODGE, PE

PROGRAM MANAGER

EDUCATION

University of California Irvine
BS Mechanical Engineering

LICENSES & REGISTRATIONS

California Professional Engineer - Mechanical - M-38773

PROFESSIONAL ASSOCIATIONS

American Society of Civil Engineers (ASCE), Ventura/Santa Barbara, Vice President of Young Member Section (2017-2018)

Association of Water Agencies (AWA), Ventura County, Council Member (2017-2018)

Relevant Projects

On-Call Engineering Services, Pleasant Valley County Water District | Ventura County, CA

Develop documents for the application for grant funding from the Department of Water Resources (DWR) for Sustainable Groundwater Management (SGM) grants. Applied for $5.8 million (~95% of total estimated project costs) for two projects: Private Reservoir Program and Recycled Water Connection Pipeline.

Advanced Water Treatment Facility Distribution System Startup, City of Oxnard | Oxnard, CA

Provided guidance and engineering support during the startup of the distribution system for the recycled water produced by the AWTF for delivery to agricultural landowners in the Oxnard Plains. Startup activities included: monitoring and gathering TDS and pressure data at multiple locations along the line, managing the startup of pipeline segments and identifying communication and control strategies for users.

5th Street Sewer Main Collapse, City of Oxnard | Oxnard, CA

Managed the response to a sewer main collapse beneath a Union Pacific Railroad track near the Oxnard Train Station. Coordinated efforts between the City, Union Pacific, construction contractor, materials provider, and engineering contractor. Ultimately developed high level costs and timelines for feasible long-term repairs. The work was awarded the 2017 Emergency Response Project of the Year by Ventura County APWA.

Fairview Road and Foothill Road Pipeline Replacement, Casitas Municipal Water District | Ventura County, CA

Project Engineer. Compiled construction documents for the pipeline scope of the Running Ridge program. Developed a tie-in plan since the new pipeline would remain idle until the subsequent program phases were completed. The project consisted of 2,800 ft of 6- and 8-inch C900 pipe with six different tie-in locations.

Termo Pipeline Repairs | Santa Paula, CA

Project Manager. Perform repairs to the DOT-classified Termo Pipeline due to wall thickness concerns. All repairs were located in front of a public school and beneath State Highway 150, which required Cal Trans permitting and traffic control. Total construction cost: $500,000.

Santa Clara Valley Gas Plant Compressor Broad Oaks Upgrade | Piru, CA

Program Manager for the multi-project effort to triple the natural gas sales capacity. The program included: upgrading compressors at the SCVGP Gas Processing Facility; upgrading plant piping, pressure control system, and coalescing filter to increase capacity and pressure rating; upgrading the High Pressure Sales Pipeline to DOT specifications to increase capacity and pressure rating; decommission and abandon the Low Pressure Sales Pipeline per DOT specifications, including activity coordination with SoCal Gas; and coordinate and lead SCVGP shutdowns associated with tying in each phase of the project. Total program cost: $4,500,000.

Frank Dodge, PE

RELEVANT EXPERIENCE (CONT.)

Water Pipeline Upgrade Program | Kern County, CA

Managed the scoping and execution of nearly 10,000 ft of water pipeline upgrade projects for the 5,000+ gpm water system to increase capacity and reduce energy costs.

Groundwater Reliability Improvement Project (GRIP), Program Owner's Engineer, Water Replenishment District of Southern California | Lakewood, CA

Provided engineering support by reviewing submittals for off-plot scope from the EPC contractor. The overall program consisted of a $100 million advanced water purification facility (AWPF) located in Pico Rivera.

The Preserve at Millerton Lake Recycled Water System Improvements, NVF-1 Investments | Madera County, CA

Project Engineer. Developed preliminary and final design documents for a recycled water pump station supplying a 300+ gpm to an irrigation system for a housing development. The design included two vertical turbine can pumps and a hydropneumatic vessel. Developed P&IDs for the potable and recycled water systems to determine the controls strategy across the wells, booster pump stations, and reservoirs.

Conejo Wellfield GAC Treatment, Camrosa Water District | Ventura County, CA

Provide services as the Owner's Engineer including design deliverables review and overseeing the bid and construction phases. Project scope included six granular activated carbon (GAC) vessels, a carbon dioxide dissolution system, a sodium hydroxide feed system, vertical turbine booster pumps, bolted steel tanks, a standby generator, an MCC, and the rehabilitation of four water wells. Complexity was added through pre-purchasing the GAC vessels, MCC, CO2 system, and sodium hydroxide system, contractor prequalification, and two separate bid scopes (construction scope separate from the well rehab scope). Total estimated construction cost is between $10 million and $12 million.

Derrick Tank Rehabilitation, City of Coalinga| Coalinga, CA

Project Engineer. Generated construction documents for the rehabilitation of the 7.5-million-gallon potable water steel tank. Rehabilitation scope included a new roof, new coatings, flexible connections on nozzles and required piping modifications, and replacement of the interior ladder. Bid options for the roof material were included to increase bidding competition due to material procurement volatility. Estimated construction cost was between $3 million and $5 million.

Earl Schmidt Filtration Plant Tank No.1 Improvements, Santa Clarita Valley Water Agency | Santa Clarita, CA

Project Engineer. Produced construction documents for a $2.2 million rehabilitation and improvement effort for one of the two 5-million-gallon steel potable water storage tanks. The improvement scope included replacement of rafters, lateral bracing, and the dollar plate, exterior coating spot repair, complete interior coating replacement, new fall protection on the ladders, a new roof hatch, addition of a level indicator, installation of a flexible inlet coupling, and the addition of a tank mixer with the necessary electrical and controls.

Water Supply Analysis, Channel Islands Beach Community Services District | Channel Islands Harbor, CA

Project Engineer serving as the District Engineer for CIBCSD. Developed 30 water supply alternatives in coordination with District staff. Conducted a board workshop using interactive audience response system (iClicker) to conduct a survey of current priorities and concerns and establish District goals. Assisted the District in initial screening and shortlisting of preferred concepts, including DPR, seawater desalination, and optimization of existing brackish water desalination systems.

Bardsdale to Shiells Water Transfer Pipeline | Fillmore, CA

Project Manager for the installation of a 5-mile water transfer pipeline with a design capacity of 800+ gpm. Included segments of stainless steel, cement lined carbon steel, and fiberglass reinforced HDPE piping materials. Route crossed difficult terrain, multiple Conditional Use Permits, multiple property owners, and State Highway 23.

TB-A to 3rd Grubb Water Transfer Pipeline | Ventura, CA

Project Manager for the installation of an upgraded replacement for an existing water transfer pipeline with mechanical integrity issues, flow restrictions, and routed through environmentally sensitive areas. Performed hydraulic calculations to develop system curves and determine the most cost-effective line size for the pump's performance. The new line doubled the capacity of the system and established a new route that was 13% shorter and was more accessible. The terrain was difficult, with approximately 3000 ft of total elevation change over 3 miles. Total construction cost: $1,500,000.

RYAN GALLAGHER, PE

PRINCIPAL-IN-CHARGE

EDUCATION

California Polytechnic State University, San Luis Obispo

BS Civil Engineering

LICENSES & REGISTRATIONS

California Professional Engineer - Civil - C74805

PROFESSIONAL ASSOCIATIONS

Orange County Water Association (President 2020)

American Society of Civil

Engineers (Santa Barbara/Ventura YMF President 2012)

American Public Works

Association (Ventura County Chapter President 2014)

Association of Water Agencies Ventura County (President 2013, Board of Directors 2010-2016)

Ryan Gallagher; for the past 15 years, Ryan has completed over 100 projects with 25 public agencies in Southern California, serving as the Project Manager for the majority. The estimated construction value of the projects that have been planned, designed and/or constructed exceeds $250 million. Projects include planning through design for water, wastewater and recycled-water conveyance, pumping, storage, and treatment. Ryan specializes in complex multi-agency water supply programs, alternative delivery program management, master planning, and contract negotiations.

Why Ryan for PVCWD's On-Call?

1. **PVCWD History** – Ryan has provided On-Call services to the District since 2019.
2. **Company Principal** – As a company Principal, Ryan can execute contracts, allocate resources, and prioritize District projects.
3. **On-Call Experience** – Managed numerous On-Calls over his career, including: Water Replenishment District, Thousand Oaks, Las Virgenes MWD, Channel Islands Beach CSD, Pleasant Valley County Water District, and City of Oxnard.

Pleasant Valley County Water District

Well Failure Analysis, Pleasant Valley County Water District | Ventura County, CA

Project Manager for well failure analysis included review of well performance and construction documents. Analysis identified mode of failure was due to well misalignment. Prepared report identifying options for replacement which included use of a smaller vertical turbine pump or submersible pump. Prepared equipment selection and supported procurement of the recommended alternative (submersible pump).

Conveyance and Storage

Emergency Interconnects, City of Thousand Oaks | Thousand Oaks, CA

Principal for preliminary and final design for two emergency potable water interconnects between the City of Thousand Oaks and American Water. The interconnects include control valves, metering, below grade vaults and associated appurtenances.

Potable Water Pipeline Project, Ventura County Waterworks District | Somis, CA

Principal-in-Charge overseeing the preparation of 4 miles of 12-inch pipeline design in the congested Los Angeles Avenue (State Route 118) and Somis Road (State Route 34) area. The project included extensive utility mapping in the state highway corridor and direct up-front coordination with the Calleguas Municipal Water District. Work involved investigating alternative pipe installation methods including open-cut, pipe-bursting, horizontal directional drill, replacement on existing alignment (using highline), jack-and-bore, and microtunneling methods.

HDPE Brine Pipeline, Water Replenishment District of Southern California | Pico Rivera, CA

Principal-in-Charge for this project that included an approximately 2,000-foot, 16-inch-diameter, high-density polyethylene (HDPE) pipeline in the city of Pico Rivera. The pressurized pipeline conveyed brine from the Groundwater Reliability Improvement Project (GRIP) Advanced Water Treatment Facility (AWTF) to a 63-inch trunk sewer owned and operated by the Sanitation Districts of Los Angeles County (LACSD). The work included both preliminary and final design. In addition, the preliminary design included evaluation of a turnout structure along a 66-inch reinforced-concrete pipe conveying tertiary effluent from the San Jose Creek Water Reclamation Plant. The objective of the turnout was to deliver influent water to the GRIP AWTF.

Ryan Gallagher, PE

RELEVANT EXPERIENCE (CONT.)

Pressure-Reducing Station, Laguna Beach County Water District | Laguna Beach, CA

Project Manager for the hydraulic analysis of existing conditions, utilities research, and development of a preliminary design for a new pressure-reducing station to offset the need for alternative capital improvement projects.

36-Inch Steel Pipeline and 5 MG Reservoir, Las Virgenes Municipal Water District (LVMWD) | Westlake Village, CA

As Project Manager, prepared plan and profile drawings for 2,200 feet of 30-inch and 36-inch potable-water steel pipeline design for the LVMWD 5 MG potable water reservoir. Completed designs for open-cut installation using blasting and aboveground installation in 42-inch casing on pipe supports across the existing dam. Designs also included 8-inch, 16-inch, and 24-inch steel pipeline designs for overflow, drain line, and other potable-water improvements as part of the project. The project required coordination with the California Department of Water Resources, Division of Safety of Dams and the California Department of Public Health. Conducted extensive public outreach efforts, including a full-day open house with design experts, client staff, and workshop materials.

Recycled Water Alternatives Study, United Water Conservation District | Ventura County, CA

As Project Manager, prepared an alternatives study of three options for delivering recycled water from the City of Oxnard to the District's spreading grounds and agricultural customers. The alternatives consisted of pipelines ranging in size from 1 6 inches to 24 inches for a range of 4 miles to 6 miles, and an annual delivery of approximately 4,000 AFY. Analysis included hydraulic modeling, cost estimates, implementation schedules, operational integration, permitting, utility investigations, coordination with the City of Oxnard's Master Plan, and development of a business plan comparing alternatives against Master Plan alternatives.

Hollywood Beach Pipeline Replacement, Channel Islands Beach Community Services District | Ventura County, CA

Project Manager for evaluation of alternatives for replacing existing 8-inch AC pipeline located within private easements. The analysis included material testing of the AC pipe to determine useful remaining life, alternatives development for rehabilitation and replacement and recommendations. Provided final design services for the recommended solution which included abandonment of the easement pipeline and construction of approximately 800 feet of 6 and 8-inch PVC potable distribution pipelines for a total cost of $400,000.

Hydraulic Modeling

Water System Hydraulic Model, Channel Islands Beach Community Services District | Channel Islands Harbor, CA

Project Manager for a comprehensive study (2010 Infrastructure Review) that included the following tasks: outline existing and future potable-water demands, identify and quantify reliable water sources, develop a steady-state hydraulic model, evaluate current and future distribution capacity, summarize required improvements, and estimate costs.

Riverpark Water System Evaluation | Oxnard, CA

As the Riverpark Development completed partial build-out, it was observed that the potable water system was delivering relatively low-flow pressure. The City requested that our firm develop several model alternatives to increase water supply pressure and meet fire-flow requirements within the new development. Various designs were modeled using WaterCAD software, the alternatives were evaluated based on cost and overall system benefit, and a recommendation was provided.

Wagon Wheel Development Infrastructure Review | Oxnard, CA

Assessed the ability of the City's current and future water distribution system to handle the build-out of the proposed development by means of modeling within the WaterCAD software. Identified other proposed developments in the vicinity and designed a looped system, which could provide adequate potable-water pressure and fire-flow to the Wagon Wheel Development, and also prepared the City for other future developments.

JASON WILSON, PE

RESIDENT ENGINEER

EDUCATION

University of Central Florida
BS Civil Engineering

LICENSES & REGISTRATIONS

California Professional Engineer - Civil - No. C89117

PROFESSIONAL ASSOCIATIONS

American Society of Civil Engineers

Mr. Wilson is a Project Manager with design experience as a Project Engineer specializing in water supply and distribution systems specifically pumping station design, surge analysis, transmission mains, distribution systems, water treatment, and construction management. Mr. Wilson is also experienced in wastewater collection systems assessment and rehabilitation.

Water Supply/Treatment/Storage/Pumping/Distribution

East Niles Community Services District, Rosewood Pump Station Relocation | Bakersfield, CA

Project Engineer for the project that included the design of a 2,500 gpm replacement booster pump station and transmission pipeline for aging infrastructure. Contributions to the project included, Hydraulic calculations and analysis, development of system and pump curves, vertical turbine pump design, water transmission pipeline design, coordination of subconsultants, generation of construction documents, and bid phase services. Construction phase contributions to the project included reviewing technical submittals, responding to RFI's, construction observation, construction management, development of progress pay estimates and evaluation of contract change orders.

Valley Children's Hospital, Rio Mesa Well & Pipeline | Madera, CA

Project Engineer for the project that included the design of a 600 gpm well equipping and transmission pipeline project that will add a third potable water well to the hospitals water distribution system. Contributions to the project included, Hydraulic calculations and analysis, development of system and pump curves, vertical turbine pump design, coordination of subconsultants, generation of construction documents. Construction phase contributions included reviewing technical submittals, responding to RFI's, and field inspections.

East Niles Community Services District, Choate Street Well Equipping Project | Bakersfield, CA

Assistant Engineer for the project that included the design of a submersible vertical turbine pump for an existing abandoned municipal groundwater well. Contributions to the project the project conducted under the supervisions of the project engineer included, material selection and layout of the well discharge piping, hydraulic calculations and generation of pump curves for the submersible vertical turbine pump, design of a water transmission pipeline connecting the well site to a water storage facility, coordination with subcontractors for specialized portions of the design, and generation of project specifications.

East Niles Community Services District, Well 19 Rehabilitation Project | Bakersfield, CA

Assistant Engineer for the project that included the replacement of the well pump bowls and column tube assembly and rehabilitation of the well casing. Engineering phase contributions to the project conducted under the supervisions of the project engineer included, hydraulic calculations, pump bowl sizing and selection, development of construction documents and bid phase services. Construction phase contributions to the project included reviewing technical submittals, responding to RFI's, construction observation, construction management, development of progress pay estimates and evaluation of contract change orders.

TY Lin International, LAX Taxiway C-14 Project – Deluge Fire Protection System Surge Analysis | Los Angeles, CA

Project Engineer for the project that included surge analysis of upgrades to the American Airlines High Bay Hanger's fire suppression system. Contributions to the project included generation of fire suppression system hydraulic model, development of surge scenarios, surge analysis, determination of effects of surge on system improvements, and development of surge analysis summary report.

Jason Wilson, PE

RELEVANT EXPERIENCE (CONT.)

East Niles Community Services District, Water Line Extension for Office | Bakersfield, CA

Project Engineer for the project that included the design and installation of a water line extension for the future District offices. Contributions included engineering and construction phase services. Engineering phase contributions to the project included, pipe design, alignment selection, hydraulic calculations, development of construction documents, and bid phase services. Construction phase contributions to the project included reviewing technical submittals, responding to RFI's, construction observation, and construction management.

East Niles Community Services District, East Niles Pump Station Concrete Water Storage Tank | Bakersfield, CA

Project Engineer for the project that included the design and installation of a 1.1 MG concrete water storage tank. Engineering phase contributions to the project included, pipe design, hydraulic calculations, development of construction documents, and bid phase services. Expected contributions as the project moves into its construction phase are expected to include reviewing technical submittals, responding to RFI's, reviewing change order request, and construction management.

East Niles Community Services District, Well 22 Arsenic Treatment | Bakersfield, CA

Project Manager for the project that included the design and installation of an well head arsenic treatment system at the District's Well 22 Site. Contributions included engineering and construction phase services. Engineering phase contributions to the project included, treatment vessel design, pipe design and alignment, hydraulic calculations, development of construction documents and bid phase services. Construction phase contributions are expected to include reviewing technical submittals, responding to RFI's, and construction management.

East Niles Community Services District, Well 21 TCP Treatment | Bakersfield, CA

Project Manager for the project that included the design and installation of an well head 1,2,3 Trichloropropane (TCP) treatment system at the District's Well 21 Site. The Well 21 TCP treatment system also included a separate Water treatment system of the District's nearby Choate Street Well. Contributions included engineering phase services. Engineering phase contributions to the project included, treatment vessel and process piping sizing, design and placement, yard piping design and alignment, hydraulic calculations, development of construction documents and bid phase services. Construction phase contributions are expected to include reviewing technical submittals, responding to RFI's, and construction management.

City of Delano, Well 32 Nitrate Blending Pipeline Analysis | Delano, CA

Project Engineer for the project that included analysis and conceptual design of a 1.2 mile transmission main connecting the City's Well 32 site to a future 2.0 MG water storage tank located adjacent to their Well 22 site and blending analysis of raw water from Wells 32 and 22. Contributions to the project included pumping capacity analysis for both well sites, blended water quality analysis, conceptual transmission main alignment selection, and development of the associated conceptual design report

East Niles Community Services District, Well 20 Flushing Pipeline | Bakersfield, CA

Assistant Engineer for the project that included the design and installation of a flushing pipeline with the ability to also operate as a transmission pipeline. Contributions included engineering and construction phase services. Engineering phase contributions to the project conducted under the supervisions of the project engineer included, pipe design and alignment selection, hydraulic calculations, development of construction documents and bid phase services. Construction phase contributions to the project included reviewing technical submittals, responding to RFI's, construction observation, construction management, development of progress pay estimates and evaluation of contract change orders.

City of Bakersfield Department of Water Resources, Five Wells Arsenic Treatment Project | Bakersfield, CA

Assistant Engineer for the project that included the installation of arsenic treatment systems at City owned groundwater wells. Contributions included engineering and construction phase services. Engineering phase contributions to the project conducted under the supervisions of the project engineer included, pipe design and placement, hydraulic calculations, development of construction documents and bid phase services. Construction phase contributions to the project included reviewing technical submittals, responding to RFI's, construction observation, construction management, start-up testing, development of progress pay estimates and evaluation of contract change orders.

KEENAN BULL, PE

PUMP STATIONS

EDUCATION

Missouri University of Science and Technology (formerly University of Missouri-Rolla)

MS Civil Engineering

Missouri University of Science and Technology (formerly University of Missouri-Rolla)

BS Civil Engineering

LICENSES & REGISTRATIONS

California Professional Engineer - Civil - No. C91138

Arizona Civil Engineer - No. 68967

Missouri Civil Engineer - No. 2006019594

Illinois Civil Engineer - No. 062.059597

North Dakota Civil Engineer - No. PE-10549

PROFESSIONAL ASSOCIATIONS

American Water Works Association (AWWA)

Orange County Water Association (OCWA)

WateReuse Association, Orange County

Keenan Bull has over 18 years of professional experience in water, wastewater, and recycled water engineering for private and municipal water and wastewater treatment operations. Proficiencies include the design, planning, and construction/retrofit of water pumping stations and sewer lift stations, water and wastewater treatment facility repair and rehabilitation; aboveground water storage tanks and buried or exposed transmission and distribution pipelines.

He has expertly managed the coordination of design personnel and subconsultants in the development of design drawings and specifications for construction as well as the coordination of project approvals with local regulatory permitting agencies.

Relevant Projects

Palos Verdes Recycled-Water Pipeline & Lago Seco Pump Station, West Basin Municipal Water District | Carson, CA

Project Task Leader for preliminary design and environmental assessment for a recycled-water pipeline conveying water through Torrance and Palos Verdes Estates. The project includes approximately 16,000 feet of 8-inch to 10-inch-diameter pipeline, a recycled water pump station, and a connection to the Palos Verdes Golf Course and several parks, schools, and other irrigation customers along the route. Several options were established which reduced overall project cost by approximately $750,000. Major project elements included easement assessment, hydraulics, pump station concept development, a California Department of Transportation (Caltrans) crossing, and an expedited schedule. Total project cost is estimated at $6.2M.

Casitas Municipal Water District Ojai Valley Pumping Plant Evaluation | Ojai, CA

Project Senior Engineer. Project consisted of conducting pump tests to determine energy deficiencies of two pairs of existing, aged vertical turbine and horizontal axial split-case pumps that exhibited unusually low pumping efficiency. Developed pumping scenarios based on new system curves and proposed pump performance curves, identified several viable alternatives, and provided recommendations for replacements for four pumps. Also developed pumping scenarios based on electric utility (SCE) Time-of-Use (TOU) rate structure to provide maximum energy efficiency and savings on annual pumping costs.

Effluent Pump Station Replacement | Guadalupe, CA

Project Engineer. Project to replace three submersible pumps at a City effluent pump station with the addition of a flowmeter vault on the effluent line (ongoing).

Pump Station Improvements, Missouri-American Water | Fenton, MO

Project Manager and Design Engineer in charge of designing, permitting, and providing construction/contract administration for pump station improvements to two booster stations. The project scope included the retrofit of an existing underground concrete vault booster station and the retrofit of an existing underground prefabricated booster station.

Cambria Community Services District, Cambria WWTP Improvements | Cambria, CA

Project Senior Engineer for the design of wastewater treatment plant upgrades including the installation of a new flow equalization pump station, screw press feed pump station, RAS/WAS submersible pump station, scum pump replacements, process air blowers and process water pump station replacement. Scope of work also included design for pump replacements and improvements at water distribution booster stations, including a new booster pumping facility and four (4) well pump replacements in the Cambria Community Services District San Simeon and Santa Rosa well fields.

Keenan Bull, PE

RELEVANT EXPERIENCE (CONT.)

Ground Storage Tank and Booster Station, Missouri-American Water | Warrensburg, MO

Project Manager and Design Technical Lead during planning, design and construction supervision/contract administration for a 750,000-gallon prestressed wire-wound concrete ground-storage tank. The project scope also included the planning, design, procurement, and installation of a prefabricated 3.5 mgd booster station along with approximately 3,000 feet of 16-inch buried ductile iron water main from the distribution system to the tank site.

East St. Louis Water Treatment Facility (WTF) Electrical Improvements, Illinois American Water (ILAW) | Belleville, IL

Project Manager for the design and construction of a new 4,160-volt switchgear for the East St. Louis WTF, along with the installation of a new 2.5 MW generator, diesel fuel pump building, switchgear building, and communications and electrical feeds to new and existing transformers. Responsibilities included project management of civil site design; collection and review of record drawings for existing electrical infrastructure; verification of existing conditions at the WTF; verification of the location and depth of existing utilities; coordination and communication with various State departments; coordination and securing of permits and approvals from regulatory agencies; and preparation of final bid documents including bid quantities, engineer's estimate, specifications, and construction drawings in compliance with American Water Standards. The project construction cost was $5.7 million.

Anaheim Valve Vault, Orange County Water District | Anaheim, CA

Vault and Pipeline Design Task Leader for the Anaheim Lake Valve Vault project. The pipeline distributes water to various locations throughout the District's facilities, including Anaheim Lake, Miller Basin, Kraemer Basin, Atwood Channel, and the Carbon Creek Diversion Channel. Several connections to the Anaheim Pipeline are directly buried within a small area just north of a spillway between OC-28 and Anaheim Lake, and are inaccessible to District staff without deep excavation posing potential problems should emergency repairs be necessary. This project involves replacing two (2) valves and includes construction of a subterranean vault that will house a total of five (5) valves. They include: two (2) 48-inch butterfly valves (requiring replacement from the Warner Pipeline to the Anaheim Pipeline), two (2) additional existing 48-inch valves (connecting Warner Pipeline to the Atwood Channel), and one (1) 72-inch valve (allowing the District to distribute water received from Metropolitan Water District deliveries via OC-28 to the Anaheim Pipeline).

Pilgrim Creek Lift Station Improvements Constructability & Design Review | Oceanside, CA

Provided support as sub-consultant to City of Oceanside during design of repair and replacement alternatives for the existing lift station. Provided technical support by reviewing the project specifications and design plans for mechanical equipment replacement and repair. Project included valves, pumps, piping, spill prevention and mechanical assemblies in addition to site work concrete and asphalt improvements.

Roja Lift Station Constructability & Design Review | Oceanside, CA

Provided support as sub-consultant to City of Oceanside during design of repair and replacement alternatives for the existing lift station. Provided technical support by reviewing the project specifications and design plans for mechanical equipment replacement and repair. Project included valves, pumps and mechanical assemblies in addition to site work concrete and asphalt improvements.

City of Santa Paula WRF Desalter (AWTF) | Santa Paula, CA

Project Senior Engineer. Projects consists of designing and constructing a 1.44 MGD advanced water treatment facility to lower the WRF's effluent chloride below 110 mg/L. Facility consisted of multimedia filtration, nanofiltration, reverse osmosis, precipitative softening, and brine concentration units to reduce blended WRF effluent chloride concentrations to acceptable levels and minimize brine production. Prepared construction plans, specifications, and cost estimates for AWTF Feed Pump Station, civil sitework, yard piping, grading plans, and drainage plans and details. (Ongoing)

Wastewater Treatment Plant Improvements Preliminary Design, Avila Beach CSD | Avila Beach, CA

Project Senior Engineer. Project consists of preliminary design for wastewater treatment plant improvements to increase capacity for future flows and loadings. The existing WWTP consists of a primary clarifier, trickling filter, secondary clarifiers, chlorination, and an anaerobic sludge digester. Due to the constrained site and need for additional secondary treatment, the project consists of adding a package membrane bioreactor treatment plant as a separate, side-stream treatment system, and improvements to the influent lift station, including concrete coating and pump/piping replacement.

Henry Liang has extensive experience in water, wastewater and water resources projects ranging from planning to design of municipal water systems, wastewater collection systems, transmission pipelines, pump stations, and wells. His expertise includes detailed hydraulic modeling and transient analysis for a variety of water and wastewater systems.

HENRY LIANG, PE

PIPELINES

EDUCATION

Craig School of Business, California State University, Fresno

Masters of Business Administration

University of California, Berkeley

BS Civil and Environmental Engineering

LICENSES & REGISTRATIONS

California Professional Engineer - Civil - No. 68442

PROFESSIONAL ASSOCIATIONS

American Society of Civil Engineers

American Council of Engineering Companies

Relevant Projects

Valley Children's Hospital Rio Mesa Well & Pipeline | Madera, CA

Project Manager for the preliminary engineering, design development, bidding, and construction administration of a 600 gpm well equipping and transmission pipeline project that will add a third potable water well to the hospital's water distribution system. Project required extensive utility research, coordination with the surrounding community, development of technical standard details and specifications, in-depth alignment evaluation, and development of construction cost estimates.

Regional Transmission Mains Schematic Design | Fresno, CA

Project Manager for the preliminary design services related to the construction of approximately 13 miles of 16- to 66-inch-diameter pipelines, designated as RTMs, for conveyance of potable water from the proposed new Southeast Surface Water Treatment Facility (SESWTF) to the City's transmission grid mains (TGMs) and distribution system. Project required extensive utility research and coordination efforts with all utility companies in the Fresno area, development of technical standard details and specifications, in-depth alignment evaluation, pipe material study, and development of construction cost estimates.

60-inch Diameter Friant-Kern Canal Raw Water Pipeline | Fresno, CA

Project manager for the design of a 5-mile long, 60-inch raw water pipeline between the Friant-Kern Canal and the City of Fresno Surface Water Treatment Facility. Project also includes flow control facilities and additional appurtenances and structures for draining the pipeline. Project has consisted of performing computerized hydraulic and transient analysis, preparation of PS&E for the pipeline, specialized large diameter pipeline appurtenances & connection details to the treatment plant, environmental evaluation, and coordination with the design team, utility companies, public agencies, and landowners.

Various Sewer Pipeline Rehabilitation Projects | Fresno, CA

Project manager for the rehabilitation of approximately 4 miles of critical collector sewers in the City of Fresno's sewer collection system. Rehabilitation consisted of cured in place pipe (CIPP) lining of 12"-24" concrete sewer pipe. Project requirements included preparation of plans, specifications, and cost estimates for the lining work. Design included development of bypass concepts and implementation of staging and traffic control requirements.

San Lorenzo Mutual Water Company Emergency Pipeline Repair and Wellfield Improvements | King City, CA

The SLMWC relies on a single 36-inch transite transmission pipeline to deliver water to its irrigation system, and the pipeline began leaking at a pipe joint during the middle of the irrigation season. The location of the leak was directly in the middle of a vineyard, so access to the pipeline was difficult. SLMWC retained MKN to identify the cause of the leak and implement a solution to repair the leak with minimal disruption to the grape vines. Since the leak occurred during the middle of the irrigation season, the

allowed downtime was minimal. MKN teamed with WM Lyles to assess the situation and engineered a solution that replaced one stick of transite pipe with plastic irrigation pipe using custom fabricated steel compression couplings. The team minimized impacts to existing vines by using vacuum extraction excavation methods and light-duty construction equipment.

MKN also performed the condition assessment and piping improvements for San Lorenzo Mutual Water Company's (SLMWC) wellfield, which consists of 8 water supply wells, wellhead piping, and 24- to 48-inch diameter transmission pipelines. The condition assessment included a detailed inspection of the wellhead piping, appurtenances, and surge tanks. Deficiencies were identified as part of the condition assessment, and MKN staff teamed with WM Lyles Construction to design-build the improvements. The improvements included replacement of all wellhead piping, air release valves, check valves, butterfly valves, pressure gauges, the addition of flowmeters, and a 48-inch diameter isolation valve installed along the existing transite pipe.

Kit Carson School Water System Improvements, Kit Carson Union School District | Hanford, CA

Project manager for the final design of the water system improvements for the school. The project consisted of approximately 2 miles of 6-inch to 12-inch water line from the City of Hanford to the school that required multi-agency coordination including Kings County and Caltrans, a 75,000-gallon steel water tank, and a booster pump station for the school. The design team also helped the school secure over $2M in grant funding through the Drinking Water State Revolving Fund program where we assisted the school with the grant application, administration of grant funds, and obtaining reimbursements from the State.

Salinas River Diversion Facility, Monterey County Water Resources Agency | Salinas, CA

Project manager for the planning and design of a river diversion pump station and pipeline. Directly prepared PS&E for the vertical turbine pump station, 1-mile of 30-inch steel pipeline, automatic screen filter station, and 20' diameter steel standpipe. Developed water balance and storage capacity calculations with Bentley's WaterCAD, performing various hydraulic analysis runs to determine the capacity of the existing distribution system based on varying pipe configurations and demands. The overall project consisted of the pump station, reinforced concrete wetwell structure, 1+ mile of transmission pipeline, 0.5 mile of gravity flow drainage pipeline, automatic screen filter station, river intake facility, inflatable dam facility in the Salinas River, and a fish ladder facility.

Seasonal Storage Ponds | Hollister, CA

Project manager for the hydraulic analysis and preparation of PS&E for the Hollister Seasonal Storage Ponds Return Pump Station Facility. The analysis included developing and analyzing a water system model capable of conveying treated wastewater into a set of storage ponds and pumping out of the ponds to a distribution system. The design work included PS&E for three variable frequency drive submersible pumps, a pipe network consisting of pipes ranging from 18-inch to 30-inch diameter pipes conveying water to and from a treatment plant to an off-site facility, a 40' deep reinforced concrete wetwell, hydraulic control structures interconnected between storage ponds to allow diversion of water, and three bore and jack pipeline installations across a state highway. Additional duties also included computerized hydraulic analysis to determine the pipe sizes and configurations required to gravity flow water from the treatment plant into the storage ponds and to convey pumped water from the Return Pump Station back to the treatment plant.

Wastewater Treatment Plant Phase 1 Improvements, Valley Children's Hospital | Madera, CA

Project manager for the design of the Phase 1 wastewater treatment plant (WWTP) improvements, which consisted of a new 50,000-gallon reinforced concrete equalization tank, rehabilitation of existing tanks, and process changes to relocate anoxic and sludge holding zones within a packaged WWTP system. The hospital is undergoing significant expansion, which will result in increasing wastewater flows requiring expansion of the existing WWTP. This project included design of air piping and diffusers, process piping, relocation of equipment, coating for steel tanks and development of a construction sequencing plan. Services included design engineer support during construction.

Mr. Reichmuth is a Senior Engineer with over 10 years of design experience as a project engineer specializing in wastewater treatment facilities, lift stations, pipelines, and water facilities and performing construction management services. Mr. Reichmuth also has nearly a decade of experience working in the geotechnical engineering discipline specializing in field engineering and construction observation..

JOSEPH REICHMUTH, PE

PIPELINES

EDUCATION

California Polytechnic State University, San Luis Obispo

BS Civil Engineering

LICENSES & REGISTRATIONS

California Professional Engineer - Civil - No. C63124

PROFESSIONAL ASSOCIATIONS

American Society of Civil Engineers

NASSCO Certification Inspector Training and Certification Program
- Manhole Rehabilitation
- Cured In Place Pipe

Relevant Projects

2019 CDBG Waterline Replacement | Grover Beach, CA

Project Engineer. Project consists of abandoning 50-year-old water mains and installation of approximately 2500 linear feet of new 8 and 6 inch water mains, reconnecting water services and installation of new fire hydrants. MKN developed pipeline alignment alternatives, produced plans and specifications for public bid and an opinion of construction cost.

2020 CDBG Waterline Replacement | Grover Beach, CA

Project Engineer. Project consists of abandoning 50-year-old water mains and installation of approximately 4800 linear feet of new 8 and 6 inch water mains, reconnecting water services and installation of new fire hydrants. MKN developed pipeline alignment alternatives, produced plans and specifications for public bid and an opinion of construction cost.

Tognazzini Well Intertie Pipeline | Guadalupe, CA

Project Engineer. Performed design and production of construction documents for 300 feet of 8 inch PVC transmission pipeline to convey well water to the City's distribution system. Also provided construction phase service for the City.

Heights Waterline Upgrade | Pismo Beach, CA

Project Engineer. Responsible for design of main water lines to consolidate pressure zones in the area. Design included the preparation of plans, details, specifications, and opinions of cost for the construction of over 3000-lf of 12-inch PVC and 650-lf of 8-inch PVC distribution main. Project also involved connection to a new booster station, replacing a pressure reducing station, reconnecting laterals, fire hydrants, and new meters.

Branch Street Waterline Improvements, Nipomo CSD | Nipomo, CA

Project Engineer. Project consists of abandoning an aged 6-inch waterline and installation of approximately 400 linear feet of new 8 inch waterline, reconnecting water services and installation of a new fire hydrant. MKN developed project alternatives, provided recommendations to the District, produced plans and specifications for public bid and an opinion of construction cost.

Eastside Force Main Project, Templeton Community Services District | Templeton, CA

Project Manager. Designed and prepared construction documents for two sewage lift stations. The new lift stations diverted flow currently being conveyed to the City of Paso Robles to the District's Meadowbrook WWTP. Design included two lift stations consisting of solids handling submersible pumps, rehabilitation of an existing lift station, and a total combined force main length of over 2.5 miles. The force main included three creek crossings and crossing under Highway 101. In addition to open cut trenching of the force main the design included HDD and jack and bore construction techniques.

Highland Waterline Replacement | San Luis Obispo, CA

Joseph Reichmuth, PE

RELEVANT EXPERIENCE (CONT.)

Project Engineer. Performed preliminary design services for replacement of 165 feet the City's 24-inch water transmission line located within Highland Drive. This section of transmission main travels under a creek culvert system and railroad bridge. Due to the site constraints mentioned this section of pipe was not included in a 1995 project that replaced remaining portions of the transmission main. MKN analyzed four potential replacement alignments and has identified the alternative that minimizes construction complexities and provides the City with access for future maintenance activities.

Highland Way Sewer Line Project | Grover Beach, CA

Project Manager. Developed construction documents for installation of 1,300 linear feet of new sewer line for the City of Grover Beach. This new extent of the sewer collection system is intended to service costumers within the City limits and to eliminate on-site wastewater disposal systems. Project include coordination with proposed construction plans for future development along the alignment.

Sulfur Spring Pipeline Construction Phase Services | El Paso de Robles, CA

Project Engineer/Construction Observer. Project to capture spring water that erupted in the City Hall parking lot as a result of the San Simeon Earthquake. Provide construction management and construction observation for collection system, pipeline, and leach field to transport thermal spring water to the Salinas River.

Nipomo Waterline Intertie Project, Nipomo CSD | Nipomo, CA

Project Engineer. Responsible for coordination and management of subconsultants (HDD, Environmental/Permits, Geotechnical, and property acquisition). Responsibilities also included the preparation of plans, details, specifications, and opinions of cost for construction.

Hollister Avenue Waterline Replacement | Pismo Beach, CA

Project Engineer. Responsibilities included the preparation of plans, details, specifications, and opinions of cost for the construction of 350-lf of 8-inch PVC distribution main. Project also involved reconnecting laterals, fire hydrants, and new meters.

Water Treatment Plant Pipe Gallery Improvements | San Luis Obispo, CA

Project Engineer. Performed design services for replacement of 30-inch steel pipe at the City's Water Treatment Plant. A recent pipe inspection identified a portion of a piping that connects the treatment plant to the City's storage and distribution system in need of immediate repair due to sever corrosion. MKN provided the City with technical memorandum outlining potential new piping configurations and methods of rehabilitating the existing pipe. Based on this memorandum the MKN developed construction documents for installation of a new pipe to both replace the severely corroded section for existing pipe and to provide the City more flexibility in operation for the treatment system.

Calleguas-Crestview Interconnection Facility | Camarillo, CA

Project Engineer. Performed design services for an interconnection facility to connect the Crestview Mutual Water Company (Crestview) with Calleguas Mutual Water District (Calleguas). This connection will provide Calleguas with an emergency source of water during outages of imported water from other sources. The interconnection facility consist of a subsurface vault with a flow meter, pressure reducing/sustaining valve, and associated piping. The vault is connected to Crestview's water distribution system and Calleguas' Springville Reservoir via 650 feet of 12-inch CML&C welded steel pipe.

Arroyo Grande Creek Sewer Rehabilitation Project | Arroyo Grande, CA

Project Engineer. Developed construction documents for the rehabilitation of 2,400 feet of aging sewer main for the City of Arroyo Grande. Due to the close proximity of the sewer main to the Arroyo Grande Creek, cured-in-place-pipe (CIPP) was proposed. Construction phase services was also performed for the City.

Terrace Hill and Washwater Tank Rehabilitations | San Luis Obispo, CA

Project Engineer. The City retained MKN to develop construction documents for recoating and repair of two steel water storage tanks. Additionally, MKN developed seismic improvements of the Terrace Hill Tank, revisions to the inlet/outlet piping, and passive mixing systems to address water age and improve turnover of the tank. The seismic improvements included construction documents for a new ringwall footing and anchorage, as well as installation of flexible connections. Based on the anticipated cost of the necessary repairs, MKN assisted the City in evaluating alternatives for abandoning the Terrace Hill Tank. Ultimately, MKN designed a new 16-inch waterline and PRV connection to allow for removal of the tank while maintaining service to the Terrace Hill Zone.

Parasto Azami has over 9 years of experience in civil engineering as a design engineer delivering project designs in the areas of water, wastewater, and recycled water infrastructure systems. Her interface with clients is multi-faceted - during projects' proposals, design phases, progress reviews, and submittals.

PARASTO AZAMI, PE

PIPELINES

EDUCATION

University of California Irvine, California

MS Civil Engineering

Tabriz University, Iran

BS Mechanical Engineering

LICENSES & REGISTRATIONS

California Professional Engineer - Civil - No. 91468

PROFESSIONAL ASSOCIATIONS

American Society of Civil Engineers

Association of Woman in Water, Energy & Environment

Woman in Water (OC Chapter)

Relevant Projects

Rehabilitation of Western Regional Sewer, Orange County Sanitation District | Fountain Valley, CA (2019-2020)

Design Engineer for rehabilitation (cured-in-place liner) and replacement of **16 miles of sewer pipes** and over 200 manholes to extend sewer system's reliable life by 50 years. Major tasks include preparation of preliminary and final design technical reports, design of plan & profile, civil details, bypass plans, paving plans, construction schedule, cost estimate and specifications. Work also included coordination and attending progress review meetings with client, utility agencies and sub-contractors. Also, coordination with various agencies to identify submittal and permit requirements.

Morena Pump Station & Conveyance System (Pure Water), City of San Diego | San Diego, CA (2017-2019)

Design Engineer for design of over **11 miles of 48-inch Force main and 30-inch Brine line to convey sewer** from Morena pump station to North City Pure Water Facility and producing 15 MGD of purified drinking water. Major tasks include hydraulic analysis, steel pipe calculations (AWWA M-11), preparing plan & profile, civil and connection details, air release valve and blow-ff vaults, and associated appurtenances. Also, designed pressure reducing facility (PRV), prepared specifications and O&M manual.

Otay 2nd Pipeline, City of San Diego | San Diego, CA (2018-2019)

Project Engineer for design of **2 miles of new 48-inch water line** and a pressure reducing facility. Designed PRV, conducted hydraulic calculations and steel pipe welding size, developed plan & profile, civil details, and technical reports. Also, coordinated with vendors to obtain PRV sizing and requirements.

Water Pipeline Design, Channel Islands Beach Community Services District | Channel Islands Harbor, CA (2021)

Design Lead for evaluating existing conditions and risk mitigation measures associated with an existing potable pipeline located within private easements. Task included utility research, hydraulic analysis, meter relocations, developing plan & profile for **new 6-inch and 8-inch water lines**, civil details, specifications, and cost estimate.

Emergency Interconnects, City of Thousand Oaks | Thousand Oaks, CA (2020)

Design Lead for final design for two emergency potable water interconnects between the City of Thousand Oaks and American Water. The interconnects include control valves, pressure relief valve, **new 8-inch PVC pipeline** connections, metering, below grade vaults and associated appurtenances. As part of project, evaluated multiple locations and alignments, coordinated with both agencies to obtain design requirements, and coordinated with surveying and pot-holing subconsultants.

Pressure-Reducing Station, City of Thousand Oaks | Thousand Oaks, CA (2020-2021)

Design Lead for final design of two pressure reducing facilities and associated

pipelines. Major tasks include hydraulic analysis of existing conditions, utilities research, new **8-inch PVC** pipeline connections, and development of a preliminary and final design for a new pressure-reducing station to offset the need for alternative capital improvement projects.

Sunnyside Regional Treatment Facility, Spill Containment & Drainage Improvement, County of San Bernardino | San Bernardino, CA (2019)

Project Engineer for design of new **10-inch drainage pipes** and drainage vaults for the treatment facility site. Major tasks include hydraulic analysis, developing system curve and pump selection. Also, prepared technical memorandum, construction schedule and specifications.

Santa Anita Debris Dam Seismic Strengthening, County of Los Angeles | Arcadia, CA (2019)

Project Engineer for design of **8-inch water line** to provide temporary water for construction and future fire hydrant at dam site. Tasks include developing scope, budget and work schedule for project addendum, design of waterline, hydraulic calculations, site plan, plan & profile, civil details, construction schedule and cost estimate.

Reservoir 2B Replacement, South Coast Water District | Laguna Beach, CA (2021)

Project engineer for design of replacement of existing 0.1 MG water reservoir to meet the emergency fire demand. Major tasks include hydraulic analysis, reservoirs siting evaluation, constraint analysis, environmental and geotechnical evaluation. Prepared site plan, paving and grading plans, civil and mechanical details, construction schedule and cost estimate.

Lift Station Rehabilitation, Channel Islands Beach Community Services District | Channel Islands Harbor, CA (2020)

As Project Engineer, evaluated alternatives for replacement or rehabilitation of existing raw wastewater lift station in the District service area. Prepared report with recommended improvements covering mechanical, structural, electrical, and instrumentation.

Lift Station Condition Assessment, South Coast Water District | Laguna Beach, CA (2021)

Project Engineer for assessment of 12 lift stations for South Coast Water District. Major tasks included development of a standard condition assessment form, preparation of observations and condition ratings, and uploading data and form into online ArcGIS platform. Results were used to establish a 10-year implementation plan based on prioritization ranking and collaboration with District operations staff.

Capital Improvement Water, Sewer and Reclaimed Water lines, Portola Parkway, Irvine Ranch Water District | Irvine, CA (2010)

Project Engineer for design over **2 miles 30-inch domestic transmission water line, 10-inch sewer line, 16-inch recycled water lines** and over 200 feet of trenchless/ tunneling pipe for new developments along Portola pkwy. Prepared civil details, plan & profile, Air/vac relief and blow-off vaults, sections, paving plans, construction schedule and specifications.

Terminal Link Road Triturator, San Diego County Regional Airport Authority | San Diego, CA (2016)

Design Engineer in charge of designing trenchless 8-inch sewer line and connections to convey airlines sewer from Triturator facility to city sewer. Major tasks include preparing plan & profile, civil details, sections, grading, and paving plans, evaluation of access road alternatives, construction schedule and cost estimate.

Mentone Boulevard SR-38 Sewer System, City of Redlands | Redlands, CA (2010)

Design Engineer for the design of over one mile 10-inch sewer line to provide sewer service for new senior center and library. Major tasks include preparing preliminary and final design report, plan & profile, and civil details. Conducted utility research, performed alignment study, calculated hydraulics, prepared construction schedule, cost estimate, and specifications. Reviewed construction submittals and performed site inspection.

SOLOMON SHEIKH

COST ESTIMATING

EDUCATION
California Polytechnic State University, San Luis Obispo

BS Mechanical Engineering
HVAC Concentration

For the past 13 years, Solomon Sheikh has honed his project and construction management experience in both the public and private sectors. His skillsets as a project leader have been an active and respected addition to projects ranging in size from $25,000 to $13 Billion. Projects include conveyance, wastewater treatment plants, pump stations, commercial office spaces, oil refineries, and dams. Solomon specializes in complex construction projects and cost estimating, having prepared hard bids and constructability reviews for various projects totaling over $300M.

Cost Estimating, Budgeting, & Constructability

- IEUA RP-5 Liquids Treatment to 22.5 MGD; Estimated Value $329M
- IEUA RP-1 Flare Improvements; Estimated Value $5.5M
- IEUA RP-4 Primary Clarifier; Estimated Value $10.5M
- LASAN DC Tillman Eq Basin; Estimated Value $100M
- LADWP Silver Lake Reservoir Ph#3; Estimated Value $25M
- SFPUC Calaveras Dam Replacement; Estimated Value $15M
- EMWD Perris Valley RWRF Plant #3; Estimated Value $8M
- Confidential Client in Cupertino, CA; Estimated Value $15M
- Google Disk Drive Buildings; Estimated Value $2M
- Google Stierlin Court Buildings; Estimated Value $1M
- XL 2621 Tenth Street; Estimated Value $1M
- City of Oceanside Loma Alta Sewer Relocation Phase 2; Estimated Value $4M
- City of Oceanside North Valley Lift Station Force Main Bridge and Channel Improvements; Estimated Value $1M
- City of Oceanside Pilgrim Creek Lift Station; Estimated Value $2.4M
- Gunner Ranch Inc. Valley Children's Healthcare Water System Expansion; Estimated Value $1.1M
- East Niles Community Services District Well 19 Arsenic Treatment Project; Estimated Value $1.4M

Select Project Experience

Calaveras Dam Replacement Project, San Francisco Public Utilities Commission (SFPUC) | Sunol/Fremont, CA

Project Engineer for Joint-Venture Contractor Team of Dragados-Flatiron-Sukut on $800M+ project for San Francisco Public Utilities Commission. Project consisted of building a replacement earthen dam directly downstream of the existing dam. Major works included construction of new intake structure, new spillway, earthen dam, outfall structure with associated piping.

Perris Valley RWRF Plant 3 Expansion, Eastern Municipal Water District (EMWD) | Perris, CA

Field Engineer, Project Engineer, and Mechanical Superintendent for Kiewit Infrastructure West Co. the general contractor self-performing majority of work on the project. This $180M project involved the construction, startup, and testing to an expansion of an existing wastewater facility. At completion, the plant processing capacity was increased from 14 MGD to 22 MGD including new solids waste processing.

Roja Sewer Lift Station Improvements, City of Oceanside |Oceanside, CA

Solomon Sheikh

RELEVANT EXPERIENCE (CONT.)

Resident Engineer for the modifications to the Roja Lift Station in Oceanside, CA. The project totaled $400k to overhaul an existing sewer lift station in a residential neighborhood. Primary works include the removal and replacement of duplex sump pumps, piping, valves, and associated power & controls systems. In addition, the existing concrete sump was rehabilitated and relined.

Green Lane Pumping Plant Force Main No.1 Replacement and Force Main No. 2, Los Angeles County Sanitation Districts (LACSD) | Redondo Beach, CA.

Assistant Resident Engineer for the modifications to existing force main piping and installation of new force main piping at Green Lane and Nelson Avenue in Redondo Beach, CA. The project totaled $600k to remove and replace one force main line, install new force main line to run in parallel to existing, and install new precast vaults. In addition to force main piping and precast structures, project required the abatement and removal of existing asbestos piping, temporary bypass pumping, pump process piping replacement, and traffic shutdowns.

Silver Lake Reservoir Complex Phase #3, City of Los Angeles Department of Water and Power (LADWP) | Los Angeles, CA.

Piping and Structural Steel Estimator for budgetary pricing on behalf of W.M. Lyles Co who was acting in a construction management role. Budgetary pricing was completed using issued for construction (IFC) drawings for all works associated with the construction, commissioning, and startup of four large bore valve vaults including associated structural steel, several hundred feet of 24”-78” steel piping, and several tie-ins to existing systems.

PHMRF Storm Water Capture Project, Los Angeles County Sanitation Districts (LACSD) | Whittier, CA

Assistant Resident Engineer for the modifications to the Puente Hills Material Recovery Facility in Whittier, CA. This $4.3M project was to upgrade the storm water capture and conveyance system at an existing solids recovery facility. Major works included construction of (4) storm water lift stations, earthen basins, above and below grade conveyance piping with associated instrumentation, new electrical power conveyance, SCADA integration, and fiberoptic communications.

LCWRP Power Distribution System Modifications Project, Los Angeles County Sanitation Districts (LACSD) |Cerritos, CA

Assistant Resident Engineer for the modifications to the Los Coyotes Water Reclamation Plant in Cerritos, CA. Construction of this $28M project is currently ongoing and is designed to add 100% power distribution redundancy to an existing wastewater plant. Major works include replacement of the existing SCE power service, additional 2,500 kW diesel-engine generators, removal and replacement of 90% of the low-voltage power distribution equipment at the plant, transition/cutover from existing power system to new power systems, and thousands of feet of electrical conduit and wire.

Jones Road Tenant Improvements Project, City of Oceanside | Oceanside, CA

Resident Engineer for the modifications to the existing Water Utilities Building located at 110 Jones Road in Oceanside, CA. The Project totals $2.4M to retrofit the original building constructed in the 1930s. Upgrades to the building include new roofing, removal and replacement of existing MEPF systems, new roof framing including seismic retrofits to existing framing, 750 sq. ft building extension, and new water meter test bench equipment. Other works include site improvements, security upgrades, and new data and communications systems.

JOSH NORD, PE

PUMP STATIONS

EDUCATION

California State University, Fresno
BS Civil Engineering

LICENSES & REGISTRATIONS

California Professional Engineer - Civil - No. C61789

PROFESSIONAL ASSOCIATIONS

American Public Works Association (Kern Branch) Past President

American Society of Civil Engineers

Mr. Nord has 20+ years of industry experience including analysis, modeling, design, and management of major water supply and water resources projects throughout California for municipalities, utilities, large-scale agriculture, and State Special Districts. Mr. Nord's experience includes leading design and construction management services for water wells and wellhead treatment systems. Josh has designed and overseen construction of water supply wells, water distribution systems (e.g., interzone pump stations and boosted/ hydropneumatic zones), major closed-conduit water conveyance systems (e.g., lake intake pump stations, intermediate booster stations, and associated transmission mains), and open canal conveyance systems. Mr. Nord brings a public agency perspective to his projects, having served as District Engineer for a public agency for many years.

Relevant Projects

Supplemental Water Project, Nipomo Community Services District | Nipomo, CA

Project Engineer during design and project manager during construction phase. Participated in the design of booster pump station and transmission facilities to deliver supplemental water from the City of Santa Maria water system to the Nipomo CSD water system. The design consists of over 5 miles of waterline, chloramination facilities, PRV stations, a 3,000 linear foot horizontal directional drill river crossing, several jack-and-bore crossings, a 0.5 million gallon reservoir, and a 2,000 gpm pump station. Responsibilities included compilation of technical reports summarizing design considerations, hydraulic modeling, analysis, and recommendations for design, compilation of relevant technical specifications and assistance with pipeline and pump station facilities layouts.

Northwest Feeder Treated Water Pump Station, Kern County Water Agency | Bakersfield, CA

Design Engineer. Pump station includes four 14 cfs (800 hp) variable frequency drive equipped can-mounted pumping units, including one standby unit. Pump station has a design flowrate of 70 cfs at a total dynamic head of 204 feet. Facilities include a 3,200 cubic foot air chamber for surge control as well as a 12-foot diameter partially-buried standpipe for surge control upstream of the pumps.

North and East Pump Station Project, Kern County Water Agency | Bakersfield, CA

Design Engineer. Pump station includes four 600 hp variable frequency drive equipped can-mounted pumping units (3 duty – 1 standby) at the North Pump Station and one 500 hp wet-well mounted unit for the East Pump Station. The Total dynamic head of the two respective systems ranges between of 308 and 445 feet. Facilities include two air chambers (300 and 250 cubic feet respectively), modifications to existing air chambers, and pump station piping reconfiguration. Staging of construction was carefully detailed to minimize impacts to the existing systems.

Tehachapi East Afterbay Pump Station, Antelope Valley – East Kern Water Agency | Antelope Valley, CA

Project Engineer. Work consisted of the preparation plans, specifications, and estimates for the design of a nominal 4,500 gpm pump station (four vertical turbine units – 3 future) including metering and discharge piping and appurtenances. The facility takes water from the Pool 42 of the California Aqueduct.

Kern Citrus Pump Station, East Niles Community Services District | Bakersfield, CA

Project Manager / Lead Designer. The pump station includes a nominal flow of 5,700 gpm at a Total Dynamic Head of approximately 170 feet provided by four identical 100 hp constant speed can-mounted vertical turbine pumping units, including one standby unit. The pump station replaces a 60-year old facility. The pump station is a key facility in the District's infrastructure that distributes flows from the District's

groundwater wells to the higher elevation areas of the District. Facilities at the station include an air chamber for surge control, discharge piping and appurtenances, and connection to the Kern Citrus Tank.

East Niles Pump Station Replacement Preliminary Design Report, East Niles Community Services District | Bakersfield, CA

Project Manager / Lead Designer. The project includes full replacement of the pumping units (four total - future) that deliver water from the East Niles zone to the College-Fairfax and Country Club zones. The preliminary design accounts for keeping the existing facility in operation while the new facility is constructed and commissioned. This pump station is a key distribution point for the District and has been in service since before 1959.

Well 21 Arsenic Treatment and Pump Station Phase 1 Project, East Niles Community Services District | Bakersfield, CA

Project Engineer. The work included designing an adsorptive media arsenic treatment system (three vessels in series) to treat the well water using existing District vessels from a decommissioned water treatment plant, as well as designing the piping, automated valving, and appurtenances required to support the treatment system.

Well 21 Arsenic Treatment and Pump Station Phase 2 Project, East Niles Community Services District | Bakersfield, CA

Project Engineer. Work included design of a 2,250 gpm booster pump station (including a pump building and chemical feed appurtenances), a 428,000 gallon bolted steel tank, and ductile iron and steel piping and appurtenances to tie the treatment system from the Phase 1 Project into the reservoir and booster pump station.

Brentwood Pump Station Relocation Project, East Niles Community Services District | Bakersfield, CA

Project Manager for preparation of plans, specifications, and estimates for the relocation of a key District pump station that conveys water between two pressure zones. The design included the 3,000 gpm pumping unit, zone piping modifications, site improvements, and electrical and instrumentation components. Design challenges included accounting for high-voltage overhead transmission mains.

Freeway Tank Pump Station, G.L. Bruno Associates | Bakersfield, CA

Project Manager / Lead Designer. Project will be constructed in East Niles Community Services District to serve the G.L. Bruno medical campus which would be the first point of service in ENCSD's 900 zone. The pump station design includes three present (1 future) nominal 750 gpm 30 hp constant speed vertical turbine can-mounted pumping units. The design also included a hydropneumatic tank for pressure regulation, discharge piping and appurtenances, a block building, and a standby generator.

Cross Valley Canal Expansion Project, Kern County Water Agency | California

Existing Cross Valley Project conveys water from the California Aqueduct to metropolitan Bakersfield through a 17-mile long concrete lined canal with six intermediate low-head pump plants. The expansion project work included designing six parallel pumping plants (500 cfs capacity – 224,000 gpm) as well as a raised liner (1 to 1.5 feet) to accommodate the increase in system capacity from 922 cfs to 1422 cfs. The work included modeling of the canal section using HEC-RAS as well as preliminary modeling of surge events in the canal using Root Canal.

23 Corner Tank Pump Station Project, Kern County Water Agency (operated by ENCSD) | Bakersfield, CA

Project Manager / Lead Designer. Predesign efforts included analysis of hydraulic impacts resulting from expanded flows and analysis of potential for hydraulic transients. The pump station includes the addition of two nominal 1,000 gpm vertical turbine can-mounted constant speed pumping units at a Total Dynamic Head of approximately 92 feet. The project took to build-out the Corner Tank Pump Station design from the mid-1980's. Facilities included refurbishment of an air chamber for surge control, controls enclosure replacement, and discharge piping and appurtenances. Staging of construction was carefully detailed to minimize impacts to the existing systems.

Mr. Brennan brings over 30 years of experience providing construction management and project management in the water resources industry. He worked for over 22 years with the Los Angeles County Sanitation Districts where he administered construction contracts ranging from $1M to $190M. In this position, he served as a Project Manager/Senior Resident Engineer for various projects such as wastewater treatment plants, pipelines, pump stations, and landfill construction. He also worked for the City of Los Angeles with the Los Angeles World Airports-Airports Development Group where he was responsible for multiple aspects of project/construction management for airport infrastructure renovation and expansion.

PETER BRENNAN, PE, CCM

CONSTRUCTABILITY

EDUCATION

Loyola Marymount University, CA

MS Civil and Environmental Engineering

Santa Clara University, CA

BS Civil Engineering

LICENSES & REGISTRATIONS

California Professional Engineer - Civil - C53110

PROFESSIONAL ASSOCIATIONS

American Society of Civil Engineers

California Water Environment Association

Construction Management Association of America

Relevant Projects

Owner's Agent/Owner's Engineer (OA/OE) Services for the Groundwater Reliability Improvement Program (GRIP) | Water Replenishment District of Southern California (WRD), CA

Construction Manager. WRD established the GRIP to find alternative sources of water to offset the imported water used for replenishment in the Montebello Forebay. As part of the GRIP, an advanced water treatment facility (AWTF) is being designed and constructed to treat 10,000 acre feet per year of tertiary recycled water. The GRIP AWTF is located in a 5.2-acre lot, adjacent to the San Gabriel River in the City of Pico Rivera. Treatment processes include automatic strainer to protect downstream membrane treatments systems from large particles; microfiltration (MF) or ultrafiltration (UF) to reduce turbidity and silt density index (SDI) of reverse osmosis (RO) feed water; cartridge filtration to project downstream of the RO process; RO to remove salts, minerals, metal ions, organic compounds, and microorganisms; advanced oxidation with utraviolet light (UV) treatment using hydrogen peroxide in concert with UV to reduce N-Nitroso-Dimethylamine (NDMA) concentrations and provide additional disinfection; decarbonation to release excess carbon dioxide and stabilize the product water; and pH adjustment/corrosivity stabilization. The 11,700 sf treatment facility is LEED certified with approximately 40,000 sf of additional surface landscape and bioretention, 4,000 sf of vegetated roof garden, with 79,000 sf of surface parking and pedestrian hardscape.

New Turn-Out Structures at the San Gabriel River Coastal Basin Spreading Ground | Water Replenishment District of Southern California, CA

Construction Manager. This project constructs two new turn-out structures and associated discharge structures at the San Gabriel River Coastal Basin Spreading Grounds, which will provide needed operational flexibility for the spreading of an additional 11,000 acre-feet per year (AFY) of tertiary recycled water and 10,000 AFY of advanced treated recycled water. Additional work includes shotcrete lining of an existing approximately 6,400-linear-foot distribution channel and the installation of new 66-inch pipelines approximately 500 linear feet along with electrical and instrumentation and control systems.

Rehabilitation and Expansion of Lenain Water Treatment Plant | Anaheim, CA

This $10M project expanded and rehabilitated the Lenain Water Treatment Plant for the City of Anaheim. Work included demolition, grading, retaining walls, replacement of reservoir inlet valves, installation of 1000 lineal feet Of new 36-inch CML&C steel plant effluent piping, steel tank rehab, replacement of plate settlers, replacement of lamella plates, orifice plates, rapid mixer and flocculation mixer, washwater balance tank improvements, replacement of valves, actuators and chemical piping at the chemical feed facilities, electrical and instrumentation improvements and other appurtenant work.

El Estero Wastewater Treatment Plant Tertiary Filter Replacement | Santa Barbara, CA

Construction Manager. This $8.4M project replaced the treatment plant's existing

filtration system with a microfiltration (MF)/ultrafiltration (UF) facility. Work included demolition of an existing gravity filter, installation of driven concrete piles, construction of a new MF/UF facility, new filter feed pumps, replacement of chemical feed pumps, modifications to the chlorine contact basin, modifications to the reclaimed water storage reservoir, new reclaimed water transfer pumps, yard piping modifications, associated electrical and instrumentation modifications, and other appurtenant work.

El Estero Wastewater Treatment Plant Secondary Process Improvements | Santa Barbara, CA

Construction Manager. This $22.6M project converts the existing conventional activated sludge process to biological denitrification. These improvements will result in increased quality secondary effluent feed to the new ultrafiltration (UF) facility. Project work includes modifying the aeration basin, including new inlet and outlet gates, baffle walls, aeration diffusers, mixers, and aeration piping as well as structural modifications; replacing return-activated sludge pumps and piping; replacing two aeration process air blowers; adding new concrete flume structure to distribute mixed liquor flow to the secondary clarifiers; modifying secondary clarifier, including replacing and modifying sludge collector mechanisms; adding new mixed liquor pumps and associated piping; adding new chemical facilities (ammonium sulfate, ferric chloride, and polymer) including tanks, pumps, and injection diffusers; adding secondary effluent recycle facility including diversion box and gate; and modifying associated 480V power upgrades.

Advanced Water Purification Facility and Product Water Pump Station Project | Monterey Regional Water Pollution Control Agency, CA

Technical Advisor. This $48M project involves the construction, testing, and startup of a 4-million-gallon-per-day (MGD) Advanced Water Purification Facility (AWPF) and pump station to treat various wastewater sources from the Peninsula and Salinas Valley for injection of approximately 3,500 acre feet per year (AFY) of purified recycled water to the Seaside Groundwater Basin. The new 22,560-square-foot AWPF is being constructed on a 5.7-acre site within the confines of the Monterey Regional Treatment Plant (RTP) and adjacent to the operating Monterey Regional Waste Management District (MRWMD). Both facilities must be kept in full operation during construction. Access and security of vehicular traffic, construction work, and staff must be coordinated with the existing plant operations team. In addition to access and security issues, ongoing coordination with plant operations personnel prevents potential impact to the ongoing operation of the existing wastewater treatment plant. Provided construction management, construction inspection, testing, startup, and commissioning services.

Aerated Sludge Holding Tank Replacement | Carpinteria Sanitary District, CA

Construction Manager. This $6M project demolished two aging aerated sludge holding tanks and constructed two new concrete digesters that meet current seismic standards, use state-of-the-art aeration equipment and computerized process control systems, enhance treatment of solids, and dramatically improve energy efficiency through the use of ultra-efficient pumps and blowers. The solid foundation comprised of 170 stone columns beneath the new tanks prevent future seismic liquefaction. To avoid major noise impacts associated with pile driving, a unique process involving a vibrating head and hollow shaft extended these densified rock columns 55 feet deep into the ground. This work required a massive 250-ton crane. These substantial structures—each approximately 50 feet by 50 feet and 20 feet deep—were outfitted with piping, equipment, and instrumentation necessary to provide maximum operational flexibility and optimized biological treatment. Additional project elements included the installation of a temporary sludge handling system and new aeration blowers; relocation of existing chemical facilities; and modifications to yard piping, electrical and instrumentation, and other appurtenant work.

Los Angeles County Sanitation Districts | Los Angeles County Sanitation Districts, CA

Construction Manager. CM's responsibilities included design consultation, constructability review, value engineering, plan and specification review, supervision of inspection and survey staff, quality assurance, project controls, document control, submittal and shop drawing review, RFIs, change management, CPM scheduling, monthly progress payments, claims management, dispute resolution and change order negotiation, start up and commissioning, and O&M manuals.

Jon Hanlon, after over 18 years of serving as project engineer, project manager, and ultimately as an operations manager for a Fortune 500 consulting engineering firm, joined MKN and Associates, Inc. specializing in water, wastewater, and water reuse engineering for public agencies. His expertise includes management, planning, and design of water, wastewater, and recycled water facilities throughout California. As a Principal Engineer at MKN, Mr. Hanlon's experience has included design, analysis, and management of complex multi-disciplined projects, including water and wastewater treatment facilities, pump stations, production wells, piping and valves, hydraulic analysis, master planning, and environmental permitting.

JON HANLON, PE

RESERVOIRS

EDUCATION

California Polytechnic State University, San Luis Obispo

BS Mechanical Engineering

LICENSES & REGISTRATIONS

California Professional Engineer - Mechanical - No. M33232

NACE Certified Coating Inspector #10431924

PROFESSIONAL ASSOCIATIONS

National Association of Corrosion Engineers (NACE)

American Water Works Association

American Society of Mechanical Engineers

American Public Works Association

Water Storage

Reservoir No.2 Replacement Feasibility Study | San Luis Obispo, CA

Project Manager. MKN was retained by the City of San Luis Obispo to prepare a Feasibility Study to identify the preferred approach to upgrading the City's Reservoir No. 2. The purpose of the study was to evaluate storage, hydraulic impacts, water age, construction costs, and technical considerations associated with replacing the existing 7.44 million gallon reservoir. As part of the project, MKN evaluated three potential locations for the new reservoir which required development of the City's hydraulic model, preparation of a dynamic city-wide water age analysis, analysis of City Transfer Pump Station, and an analysis of temporary storage requirements during construction.

Terrace Hill and Washwater Tank No.2 Rehabilitations | San Luis Obispo, CA

The City retained MKN to develop construction documents for recoating and repair of two steel water storage tanks. Additionally, MKN developed seismic improvements of the Terrace Hill Tank, revisions to the inlet/outlet piping, and passive mixing systems to address water age and improve turnover of the tank. The seismic improvements included construction documents for a new ringwall footing and anchorage, as well as installation of flexible connections. Based on the anticipated cost of the necessary repairs, MKN assisted the City in evaluating alternatives for abandoning the Terrace Hill Tank. Ultimately, MKN designed a new 16-inch waterline and PRV connection to allow for removal of the tank while maintaining service to the Terrace Hill Zone.

Bonita Tank Condition Assessment and Rehabilitation | Guadalupe, CA

Project Manager. Performed a condition assessment and analysis of the City's 500,000 gallon welded steel Bonita Reservoir. It was determined that the reservoir should be retrofitted with a new foundation, and that the reservoir roof and rafters be removed and replaced. Surface preparation and new coatings were recommended for all surfaces. MKN was retained by the City to prepare construction documents for the tank rehabilitation.

Golden Hill/Merryhill Storage Tank Rehabilitation | Paso Robles, CA

Project Manager. Project involved rehabilitation and seismic improvements to two City water storage tanks. Improvements to Goldenhill Tank (4 MG) included repair and replacement of roof structural members, and associated recoating. Improvements to Merryhill reservoir included new inlet/outlet piping, design of new perimeter ringwall foundation and seismic anchors, repair and replacement of tank shell penetrations, and recoating of all internal and external tank surfaces.

Golden Hill Tank Seismic Repair | Paso Robles, CA

Project Engineer. Project to design structural repairs to existing 3 MG steel reservoir. Coating assessment and specifications to be provided for recoating two City reservoirs.

Jon Hanlon, PE

RELEVANT EXPERIENCE (CONT.)

21st Street Reservoir Replacement Project | Paso Robles, CA

Project Engineer. Project involved the replacement of 4MG earthen reservoir with two partially buried 3MG pre-stressed concrete reservoirs.

Obispo Water Storage Tank #2 | Guadalupe, CA

Project Manager. Design and construction of a new 350,000 gallon welded steel tank to serve new development in the City of Guadalupe. In addition to design of the AWWA D100 tank, project includes design of a municipal booster pump station and water production well along with associated SCADA, backup power supply, pump station building, and facilities for secondary disinfection using monochloramine residual.

Earl Schmidt Filtration Plant (ESFP) Two 5MG Tanks Improvements, Santa Clarita Valley Water Agency | Castaic, CA

Project Engineer. MKN performed planning and preliminary design services for two, 1970's era 5MG welded steel tanks at the Agency's Earl Schmidt Filtration Plant. The Scope of Services included development of a technical memorandum which included rehabilitation alternatives, recommendations, opinions of probable construction costs, and 30% design drawings. The tank improvements will consist of roof and rafter structural retrofits and upgrades, recoating, safety enhancements, and seismic upgrades. MKN is currently performing final design and developing construction documents for the Final Design.

Derrick 7.5 MG Tank Improvements, City of Coalinga | Coalinga, CA

Project Engineer. MKN performed assessment and design services (currently being performed) for rehabilitation of a failed 7.5 MG welded steel tank. The project involves an alternatives analysis for the replacement of the tank roof and support structure, as well as replacement of coatings. The project elements include safety enhancements, and seismic upgrades. Prior to removing the tank from service, MKN will evaluate the feasibility of meeting the City's standard and emergency water demands through alternate connections and operational improvements.

Elevated Tank Rehabilitation | Guadalupe, CA

Project Manager. The City of Guadalupe owns an elevated tank that was fabricated in 2008 and has a nominal storage capacity of 100,000 gallons. The high water level of the tank is 139 feet above ground elevation with just over 20 feet of head available within the tank. A tank inspection identified multiple coating failures on the exterior of the tank and support structure, with some evidence of coating failure on internal surfaces. MKN was retained to prepare plans and specification for removal and replacement of coatings on the exterior of the tank and support structure, repairs to the internal coatings, and structural repairs to damaged portions of the support tower.

Disinfection Byproduct Reduction Project | San Luis Obispo, CA

Project Manager. Project includes preparation of construction documents for improvements at the water treatment plant and in the water distribution system. The City identified two locations for TTHM reduction: 1) A two-million gallon tank located at the WTP, and 2) A four million gallon tank located on the southern side of the City. MKN reviewed prior efforts and recommended revisions to the planned approach that would improve efficacy, reduce operating cost, and have lower construction cost.

Water Master Plan | Guadalupe, CA

Project Manager. Project consists of a condition assessment and capacity evaluation of the City of Guadalupe water distribution system. Specific responsibilities included evaluation of existing water production, storage, and distribution facilities; creation of a GIS-based hydraulic water model, preparation of GIS-based system atlas, review of water quality requirements and goals; development of potential future requirements and evaluation of equipment alternatives; identification of deficiencies under existing and future conditions; development of Capital Improvements Program (CIP); and cost opinions for existing and future improvements.

Hydraulic Model Update and Calibration, Cambria CSD | Cambria, CA

Project Engineer. Project to develop and calibrate a District-wide hydraulic model to assist the District in identifying deficiencies in the water distribution system. Deficiencies in delivery and fire protection were identified through the modeling, allowing the District to develop and prioritize capital improvement projects (CIPs).

Distribution System Hydraulic Modeling, Atascadero Mutual Water Company | Atascadero, CA

Project Engineer. Performed distribution system hydraulic modeling and corrosion reduction study.

Mr. Bennett brings over ten years of experience in water and wastewater engineering design and construction. He has been the project engineer in the design of water and wastewater infrastructure, treatment and conveyance facilities, conditions assessments, alternatives analyses, equipment selection, and has provided engineers opinions of probable construction costs. He has led complex projects through construction and has worked on several alternative delivery projects. Mr. Bennett has also developed and been involved in preliminary engineering for over 40 concrete tank projects across California and Hawaii. Tanner is client-focused, results-driven, and seeks to build lasting relationships in which he can be viewed as a trusted advisor.

TANNER BENNETT, PE

RESERVOIRS

EDUCATION

California Polytechnic State University, San Luis Obispo

BS Civil Engineering

LICENSES & REGISTRATIONS

California Professional Engineer - Civil - No. C81334

HAZWOPER Certification

A/E/C Project Management Training (PSMJ)

PROFESSIONAL ASSOCIATIONS

American Society of Civil Engineers

California Water Environment Association

American Water Works Association

WateReuse

Orange County Water Association

Relevant Projects

Earl Schmidt Filtration Plant (ESFP) Two 5MG Tanks Improvements, Santa Clarita Valley Water Agency | Castaic, CA

Tanner served as the PM for the planning and preliminary design services for two, 1970's era 5MG welded steel tanks at the Agency's Earl Schmidt Filtration Plant. He coordinated meetings and field inspection activities including both specialty coatings and structural subconsultants to perform destructive and non-destructive tests, reviewed previous record drawings and dive inspection reports, and coordinated and developed a technical memorandum including rehabilitation alternatives, recommendations, opinions of probable construction costs, and 30% design drawings. He is currently serving as the PM for the Final Design of the Tank #1 Rehabilitation. Improvements consist of roof and rafter structural retrofits and upgrades, interior and exterior recoating, safety enhancements, and seismic upgrades.

7.5MG Derrick Reservoir Rehabilitation, City of Coalinga | Coalinga, CA

Tanner is served as the Tank Technical Lead for the preliminary engineering for rehabilitation of a 7.5MG welded steel reservoir. He is now serving as the technical lead for the Rehabilitation Final Design. He performed a field inspection, coordinated with coatings and structural subconsultants, reviewed previous reports and record drawings, and developed a Preliminary Engineering Report including rehabilitation alternatives, a recommendation for roof replacement, structural and freeboard analysis, opinions of probable construction costs, and a full replacement estimate.

Reservoirs 2B & 3B Replacement Project, South Coast WD | Laguna Beach, CA

As the Tank Technical Lead for this project, Tanner has led the effort for the reservoir siting evaluation technical memorandum and has helped to refine the overall Project Concept Plan. He performed a field inspection along with the geotechnical and environmental subconsultants, devised several alternatives, defined project constraints, and developed figures for various alternatives. Additionally, Tanner assisted with contractor outreach for preparing cost estimates and obtaining feedback on constructability limitations and concerns at both of the District's difficult sites.

Reservoirs 2B Final Design, South Coast WD | Laguna Beach, CA

Tanner is serving as the technical lead for the final design of the Reservoir 2B Replacement. This project consists of two new 100,000 gallon AWWA D100 welded steel tanks, site civil improvements and yard piping, new retaining walls, hydrology and drainage study, environmental, geotechnical, electrical, and structural design.

1.1MG Concrete Tank, East Niles Community Services District | Bakersfield, CA

Assisted with geotechnical reviews, site layout, and construction document preparation for a 1.1MG Prestressed Concrete Tank for East Niles CSD. Assisted with performance plans and specifications as well as procurement requirements for this contractor-provided structural design.

Tanner Bennett, PE

RELEVANT EXPERIENCE (CONT.)

Stuart Street Tanks, Cambria Community Services District | Cambria, CA

Performed an alternatives analysis between tank material types to replace two aging bolted steel tanks in Cambria, CA. Evaluated AWWA D100 Welded Steel, AWWA D103 Bolted Steel, ACI 350 rectangular concrete, and a modified ACI-350 circular concrete. Analyzed requirements for planning and design and construction phasing.

Morning Drive Tank Recoating Project, East Niles Community Services District | Bakersfield, CA

In a technical advisory role, provided review for a Technical Memorandum documenting findings from field tests and inspections on the existing 3.8 MG Morning Drive Tank. Reviewed and assisted with the documentation and recommendations to fully remove and replace the exterior tank coatings as well as spot repairs of ancillary facilities such as pump stations mechanical piping, pressure reducing stations, and hydropneumatic tank.

East Dunne Avenue Reservoir | Morgan Hill, CA

Civil engineering discipline lead for the design of a 1.0MG welded steel tank on a new, sloping hillside site with a large retaining wall. Performed site visits and review of roadways, stormwater, yard piping, and conveyance facilities.

Lake Millerton Preserve Water Tank | Madera County, CA

Assisted with review of tank inlet/outlet configuration and tank mixing system.

New Third Digester & Existing Digesters Rehabilitation Project, Las Virgenes Municipal Water District | Calabasas, CA

This project included construction of a third concrete digester, new digester building, and a new hot water heating system for both the new and existing digesters at the site of the Rancho Las Virgenes composting facility. Responsibilities included reviewing contractor submittals and coordinating with other design leads to review submittals. Processed Requests for Information and issued clarifications. Identified and coordinated the design of major pipe supports. Participated in bi-weekly construction progress meetings and regular site visits to check on construction progress. Point of contact for the design team and assisted the onsite construction manager. Revised specifications, issued new specifications, and issued clarification drawings.

Chemical Storage Tank and Feed System, Pajaro/Sunny Mesa CSD | Watsonville, CA

Assisted in the sizing and design of a caustic soda tank and chemical feed pump for the wastewater district. Performed equipment research and selection and associated engineering calculations.

Tesoro Viejo Wastewater Treatment Plant Design | Madera County, CA

As the Project Engineer, Tanner coordinated the design of a membrane bioreactor wastewater treatment plant for a new community development north of Fresno and in Madera County as part of an alternative delivery/design-build project with W.M. Lyles Construction. The wastewater treatment plant had an initial design capacity of 0.25 MGD, but was designed with a phased expansion up to a design capacity of 3.0MGD at buildout. Tanner designed the influent pump station, coarse screening, yard piping, the initial packaged membrane bioreactors, the sodium hypochlorite chemical feed area, and the sludge dewatering area. He also coordinated between disciplines and all other process mechanical designers. Tanner was involved with specification preparation, client interactions, development of the guaranteed maximum price, and project management duties such as coordinating with the WWTP project team and providing them with labor hour goals and deliverable schedule milestones. He also worked with the Project Manager to review budget and schedule and develop plans for executing the work.

Pre-stressed Concrete Tank Projects | Various locations, California and Hawaii

As a Regional Manager for the leading designer/builder of AWWA D110 Type I Prestressed Concrete Tanks, Tanner was involved in the development and preliminary engineering of 40+ water and wastewater tank structures, constituting over 136+ million gallons of storage. Tanner was involved in site layout and constructability reviews, geotechnical reviews, coordinating with internal and external structural designers and engineers, and estimating project costs. He also worked with various Owners and consultants in California and Hawaii to see the projects through the full cycle of planning through bidding and construction.

GARY BOHNISCH

INSPECTOR

EDUCATION
University of La Verne
Business Coursework

Gary Bohnisch has over 25 years of experience providing construction inspection services for wastewater projects. For the past 15 years, Gary has specialized in inspecting new construction, rehabilitation, and site improvements for wastewater infrastructure projects. Prior to MKN, Gary worked for Safework Inc. whose clients included the Sanitation Districts of Los Angeles County (LACSD). His experience gave him the opportunity to provide construction inspection for the Joint Water Pollution Control Plant, one of the largest wastewater treatment plants in the world, as well as other wastewater treatment plants under LACSD's jurisdiction.

Relevant Projects

Rehabilitation and Expansion of Lenain Water Treatment Plant-Anaheim | California

Gary was the lead inspector on this $10M project to expand and rehabilitate the Lenain Water Treatment Plant for the City of Anaheim. Work included demolition, grading, retaining walls, replacement of reservoir inlet valves, installation of 1000 lineal feet Of new 36-inch CML&C steel plant effluent piping, steel tank rehab, replacement of plate settlers, replacement of lamella plates, orifice plates, rapid mixer and flocculation mixer, washwater balance tank improvements, replacement of valves, actuators and chemical piping at the chemical feed facilities, electrical and instrumentation improvements and other appurtenant work.

San Gabriel River Diversion | Whittier, CA

This $1.2M project included the demolition and reinstallation of two 180' inflatable rubber dams and compressor equipment.

Rio Hondo River Diversion | Pico Rivera, CA

This $600K project required cutting into existing 10'x12' box culvert upstream of the river for construction of new reinforced concrete structure with inflatable rubber dam and 36" slide gate, level controls and instruments.

Dewatering Facility Modifications for the Joint Water Pollution Control Plan | Carson, CA

This $11M modifications project included construction of reinforced concrete structures and CMU block building; installation of District-furnished screening equipment, mechanical piping, instruments, and pumping equipment; demolition and reinstallation of intake/exhaust fans and ventilation duct at the existing centrifuge building.

Lancaster Water Reclamation Plant Expansion, Stage 5 | Lancaster, CA

This $150M plan expansion involved construction of new reinforced concrete structures, tanks, pump stations, pipe galleries, digesters, and chemical stations; installation of a tertiary filtration system, sludge collection equipment, flare station, steam boiler room, process air compressors, dissolved air floatation equipment, fine bubble air diffusion equipment; installation of mechanical piping, valves, pumping equipment, instruments, and controls; and verification and acceptance of all mechanical installations, pressure testing and initial startup procedures.

Secondary Treatment Facility, Whittier Narrows Water Reclamation Plant | Whittier, CA

This $9M project constructed a new RAS pump station and pipe gallery; installed process air compresses and fine air diffusion; and involved mechanical piping, pumping equipment, power, and controls.

UV Disinfection Project-Whittier Narrows Water Reclamation Plant | Whittier, CA

This $9M project involved modification of the existing concrete tanks; installation of District-furnished "Trojan" UV disinfection equipment; and included mechanical and power/control installations.

Gary Bohnisch

RELEVANT EXPERIENCE (CONT.)

Marina Pump Stations 1 and 2 | Long Beach, CA
This $500K project included installation of 1,300 lf. of double barrel 12-inch ductile iron cement lined force main with cathodic protection; and construction of a new reinforced concrete valve box and junction structure with arrow-lock protective lining.

Westlake Farm's Composting Facility Site Improvements | Kettleman City, CA
This $6.2M site improvements project was completed in two phases. Construction elements included: Line treated soil stabilization, grading and construction of roads onto site; installation of wick drains; and construction of 20" high pre-consolidation pile covering 17 acres. Additional elements included excavation/grading of borrow pits and double-lined storm water ponds.

Carbon Scrubber and Bio-trickling Odor Control Project, Joint Water Pollution Control Plant | Carson, CA
This $37M project involved construction of three independent systems to control odor from existing primary sedimentation tanks. Construction elements included construction of reinforced concrete structures; installation and support in place 72" to 6" FRP piping; installation of blower equipment, pumping equipment, instruments, and controls.

CNG Fill Facility, Joint Water Pollution Control Plant | Carson, CA
This $1M site improvements project installed District-furnished "Clean Energy" compressor equipment, fuel dispensers, and canopy; and installed mechanical, piping, valves, and instruments.

Existing Channel 2 Repairs, Joint Water Pollution Control Plant | Carson, CA
This $800K project repaired the existing walls (joint prep and sika concrete repairs) and installed an arrow-lock protective concrete lining. This project also demolished and reinstalled six, 60" stainless slide gates.

Entrance Security Improvements, Joint Water Pollution Control Plant | Carson, CA
This $700K project enhanced security to the plant's entrances. Responsibilities included inspecting the automatic controlled swinging gates, guard stations, card readers and cameras.

Existing Sludge Tanks 1 and 2 Rehabilitation, Joint Water Pollution Control Plant | Carson, CA
This $800K rehabilitation project involved demolition of the existing lining, joint preparation, concrete repairs, and reinstallation of arrow-lock protective concrete lining.

Secondary Influent Pump Station Phases 1 and 2, Joint Water Pollution Control Plant | Carson, CA
This two-phase, $5.6M project involved the following improvements: Phase 1 demolished and reinstalled District-furnished equipment, five, 16 cylinder Waukesha natural gas-fired engines, Flow-serve 81 PMR vertical pumps, and engine cooling radiators and continuous emission monitoring equipment. Phase 2 installed 18,000 gallon LPG storage tanks with fire protection systems as well as mechanical piping, valves, instruments and ABB local/remote controls.

Stage 3 Secondary Treatment Reactors and Clarifiers, Joint Water Pollution Control Plant | Carson, CA
This $91M project involved the construction of new reinforced concrete tanks, pipe galleries, and pump stations; installations of above and underground mechanical piping, valves, pumping equipment, instruments, and controls; and verification of all mechanical testing and startup.

Puente Avenue Drain | La Puente, CA
This $1.2M drainage improvement project involved laying to grade 48"x12" RCP piping and installing catch basins and curbs/gutters.

Big Dalton Dam Rehabilitation | La Puente, CA
This $9M project involved the seismic retrofit of the existing gravity arch dam. Responsibilities included form and place of 70,000 CY of mass concrete, and demolished and raised parapet walls.

Quality Assurance Inspector | Alameda Corridor Transportation Authority, CA
Gary served as the Quality Assurance Inspector for the $6M Los Angeles River Bridge project. His responsibilities included oversight of the installation of CIDH piles, columns, abutments, and pier caps; and off-site inspection of pre-stressed/pre-cast concrete girders.

LARRY LEWIS
INSPECTOR

Larry Lewis is a water and wastewater industry veteran with 25 years of experience working on a variety of pumps, treatment plants, wells, pipelines and rehab projects. Mr. Lewis has excelled at his role as a Senior Construction Inspector through his dedication to quality assurance and in-depth knowledge of water and wastewater systems.

EDUCATION

Hinds Junior College, Utica, MS

AAS in Drafting & Design

University of Phoenix, Southern California Campus,

Bachelor of Science in Business Administration

University of Phoenix,
Master of Arts in

Organizational Management

CERTIFICATION

International Code Council

Structural Masonry Special Inspector #348460

Reinforced Concrete Special Inspector #348460

ACI Concrete Field Testing Technician Grade 1 #01014034

Relevant Projects

Mission Village Pump Station and Force Main- Five Point | Valencia, CA

Larry was the lead inspector for the construction of this sewage pump station and force main at the Newhall Ranch project for Five Point. Work consisted of construction of a new sewage lift station including, excavation, structural concrete, mechanical piping and valves, masonry building, electrical and instrumentation and other appurtenant work.

Lancaster Water Reclamation Plant Stage Five Expansion $142M 2008-2012 | California

Larry was the Senior Inspector for this $142M wastewater plant expansion project. Highlights included placement of over 50,000 cubic yards of reinforced concrete. This was a four year construction project that hydraulically expanded an existing plant and converted the plant from secondary treatment using aerated ponds to activated sludge. Project elements included influent pumps, primary sedimentation tanks, aeration tanks, final sedimentation tanks, gravity tertiary filters, chlorine contact tanks, chemical stations, digesters, solids handling facilities, and associated mechanical, electrical, and instrumentation work.

Lancaster Water Reclamation Plant Installation of Membrane Bioreactor and Ultraviolet Disinfection Pilot Plant Equipment $9.5M 2004-2005 | California

Larry was the Senior Inspector for this $9M MGD MBR plant project. The project included the construction of a complete standalone 1MGD Membrane bioreactor plant. The Zenon Membrane Bioreactor plant construction included grading, site work, concrete, tanks, mechanical, electrical, control system and other appurtenant work.

Lancaster WRP Stage 4 Expansion $27M 1995-1996 | California

Larry was the Senior Inspector for this wastewater treatment plant expansion. Work included new digesters, influent pumps, primary sedimentation basins, chemical stations, aeration pond improvements and other appurtenant work.

Saugus WRP Nitrification Denitrification Retrofit $22M 1997-1998 | California

Larry was the Senior Inspector for this plant modification NDN conversion project. Work included a new aeration tank, modifications to existing aeration tanks, new aeration blowers, odor control scrubbers, sodium hypochlorite station improvements, control system modifications and other appurtenant work.

Long Beach Main Pumping Plant Influent Pump Replacement $6M 2006-2007 | Long Beach, CA

This project involved replacing the existing pumps and VFDs at a major LACSD pumping plant. Work included staged pump replacement, control system modifications, mechanical and electrical work.

Westlake Farms Composting Facility Phase - Mixing and Composting Facilities $46M 2013-2014 | Kettleman City, CA

This project involved constructing a new sludge composting facility in Kettleman City CA. Work included sight grading, utilities, buildings, mechanical and electrical and other appurtenant work.

Various LACSD Sewer Construction and Rehab Projects | California

Larry acted as Senior Inspector on various large diameter sewer construction projects. Typical projects involved excavation, large diameter VCP or RCP pipe installation, construction of manholes, backfill, paving and street restoration. Projects included open cut, jack and bore and microtunneling methods.

ANTHONY HERDA, PE, MBA

HYDRAULIC MODELING

EDUCATION

Azusa Pacific University, Azusa, CA

MBA Business Administration

California State University Sacramento, California

BS Civil Engineering

LICENSES & REGISTRATIONS

California Professional Civil - No. C78205

PROFESSIONAL ASSOCIATIONS

American Society of Civil Engineers

American Water Works Association

Mr. Herda offers over a decade of experience in water resources engineering planning, specializing in master planning, strategic planning, feasibility studies, hydraulic modeling of water systems, capital planning, urban water management planning, forensics and peer review, public outreach, conceptual design, preliminary design, and related multi-disciplinary studies.

With a diverse background in civil engineer, business management and the humanities, Mr. Herda brings a unique perspective to master planning inclusive of the needs of critical stakeholders. Mr. Herda routinely evaluates and applies all pertinent scientific, engineering, organizational, financial, demographic, economic, regulatory and legal aspects pertaining to successful delivery of master planning services.

With experience on over 20 utility master plans, Mr. Herda has extensive training and experience in constructing, calibrating, and utilizing hydraulic models and asset management programs in combination with sound engineering practice to optimize return on invest for water resources expenditures.

Mr. Herda is an accomplished technical writer having prepared dozens of hydraulic analyses for development planning, water master plans, feasibility studies, specific plans, and a variety of other government documents. He is a certified English instructor (TESOL). Mr. Herda is certified business consultant through the Genysys Group with training and experience in strategic planning and stakeholder facilitation.

Relevant Project Experience

On-Call Engineering Planning Services | Santa Clarita Valley Water Agency, CA

Engineering Planner. Prepared numerous hydraulic assessments for new development within the SCWD retail water service area. Hydraulic assessments included demand analysis, programming the hydraulic model, application of design criteria, preliminary design of proposed expansion of the distribution system, and cost estimation for onsite and offsite improvements. To facilitate efficient and consistent preparation of hydraulic assessments, prepared and maintained an interactive database for calculation of demand and for associated assessment of impacts to existing storage, transmission and supply facilities.

Feasibility Study for the 2011 Multi-Agency Regional Groundwater Recover Project

Project Engineer. Provided research, analysis, site inspection, stakeholder outreach and technical writing for the preparation of this feasibility study. The study was a coordinated effort involving Three Valleys Municipal Water District, Rowland Water District, Azusa Light & Water, Walnut Valley Water District, and the City Glendora. The goals of the study included identifying wells in the Main San Gabriel Basin that had been shut down due to low to moderate groundwater contamination, siting a centralized treatment facility to receive contaminated raw water from the existing wells, evaluating treatment options, estimating the capital and operating costs of alternative concepts, and recommending a preferred concept for consideration by the project sponsors.

2013 Water Master Plan Update | Santa Clarita Water Division, CA

Project Manager. Prepared the SCWD 2013 Water Master Plan, which culminated in a $54 million capital improvement program and implementation strategy. It also provided technical guidance for the implementation and monitoring of a development impact evaluation process, surge analysis for all transmission facilities, disinfectant residual decay analysis, a comprehensive water conservation program, an operational efficiency program, and long-range supply acquisition requirements. The master plan was closely coordinated with established local and regional planning documents. The basis for recommending capital improvements was the application of a series of predictive models developed specifically for this

effort, including a population growth model, a water demand model, a demographic demand model, a development impact model, a project cost estimating model and a computer hydraulic model. Ongoing preparation of this master plan featured regular executive meetings included top management (retail, engineering, operations, finance and compliance), members of the board's subcommittee on capital expenditures, and self (consultant).

Water Master Plan | Santa Clarita Valley Water Agency, CA

Engineering Planner. Assisted in the development and calibration of the Castaic Lake Water Agency hydraulic model and programmed scenarios to evaluate wholesale system performance under extreme loading and production conditions. Evaluated seismic vulnerability of wholesale distribution network and recommended alignment of future pipelines to avoid rupture zones. Recommended upgrades to operational controls to avoid low pressure at turnouts and flow monitoring for more accurate billing.

Groundwater Reliability Improvement Program (GRIP) Feasibility Study

Project Manager. Prepared a feasibility study of the Groundwater Reliability Improvement Program (GRIP) in 2014. The GRIP project proposed the installation of advanced wastewater treatment equipment (i.e. microfiltration, ultraviolet oxidation and reverse osmosis) at the San Jose Creek Water Reclamation Plant in Whittier to create a blending source for tertiary treated wastewater to be used as groundwater replenishment in Central Basin at the Montebello Forebay spreading grounds in Pico Rivera. Mr. Herda was tasked as an impartial third party to facilitate the review of the GRIP Draft Environmental Impact Report (DEIR) prepared by the Water Replenishment District of Southern California (WRD) on behalf of the Southeast Water Coalition (SEWC) and the Gateway Water Management Authority (GWMA). SEWC and GWMA represent the interests of 43 cities with adjudicated groundwater extraction rights in the Central Basin. They understood that investment in GRIP by WRD would ultimately impact Central Basin pumping assessment fees; therefore, an evaluation of the environmental, economic and engineering feasibility of the project was required to determine whether to support or oppose it. The feasibility study included a critique of the DEIR focusing on water quality degradation and impact to existing groundwater production infrastructure, an engineering estimate for construction and operation of the GRIP facility, an evaluation of cost escalation for imported water as an alternative blending source, a calculation of payback comparing GRIP water to imported water, an opinion on the implications for groundwater assessment fees, and a review of related replenishment projects in the region. The stakeholder facilitation process included meetings with SEWC and GWMA representatives, issuance of findings, solicitation and processing of comments, and drafting and presentation of formal comments on the DEIR to WRD, the project's lead agency.

2018 Reclaimed Water Master Plan | Corona, CA

Project Manager. Worked on-site at Corona City Hall with a team of City engineers to prepare the 2018 Reclaimed Water Master Plan. The purpose of the plan was implementation of a City ordinance that requires reclaimed water use for all allowable purposes that are determined to be technically, economically and financially feasible. The plan provided guidance for making the feasibility determinations and identified and prioritized a set of projects in a capital improvement program as well as recommendations for operations and supply management. Responsible for analysis of multiple data sets to build a foundation for planning efforts including demographics, land use, supply, demand, physical and jurisdictional constraints, existing infrastructure, pump efficiency, planned development and O&M costs. The greatest challenge was accommodating a shift in supply. One of the City's three water reclamation facilities was scheduled to be decommissioned and a portion of the City's wastewater diverted to a new regional facility for processing and return as reclaimed water. This shift made an already overstressed transmission pipeline highly inefficient and incapable of meeting customer expectations for flow and pressure. A looped transmission system was proposed which alleviated the bottleneck and opened up a large volume of potential irrigation customer conversions to reclaimed water via the new alignment. The greatest discovery was the City's opportunity to control both supply and demand over the course of the day. About 90% of all reclaimed water was sold to landscape maintenance districts and schools for irrigation. These customers operated within a relatively short window during the night so parks and schools could be occupied during the day. The engineering team demonstrated to operations that they could dramatically improve system performance by spreading their demands across the entire irrigation window rather than programming all irrigation controllers to start at the beginning of the window. The greatest potential for cost savings was implementation of a supply management system. Operators have three choices what to do with finished reclaimed water: sell via the reclaimed water distribution system, replenish the local aquifer, discharge to the Santa Ana River. The engineering team demonstrated to management methods to reduce waste and increase sales.

Mr. Martin has 35 years of experience in advanced water treatment processes, such as reverse osmosis, ion exchange, and specialty adsorbents, including processes for PFAS/PFOA removal. He is an expert in water quality issues both in the municipal and industrial industries, with over 30 treatment plant designs and dozens of evaluations and feasibility studies. Mr. Martin has presented numerous papers at water industry conferences concerning water quality and treatment topics, and is a recognized expert in these fields.

CHRIS MARTIN, PE

WATER QUALITY & TREATMENT

EDUCATION

University of Washington
Seattle, Washington

BS Chemical Engineering

LICENSES & REGISTRATIONS

California Professional Engineer - Chemical - No. CH4597

PROFESSIONAL ASSOCIATIONS

American Water Works Association

American Membrane Technology Association

Relevant Projects

Conejo Wellfiled GAC Treatment | Camrosa Water District

Served as technical lead for review and management of a project to provide GAC treatment for 1,2,3-TCP removal at the Conejo Wellfield. MKN provided project management and technical review services for design, supply, and construction of the project.

Wellhead Treatment Improvement Wells 177-185 | City of Fresno

Served as technical lead for design of new and replacement GAC treatment for wells 177 and 185 for 1,2,3-TCP treatment for the City of Fresno. The project required expansion of treatment capacity and replacement of existing, outdated pumping and filtration equipment.

Well 19 GAC Treatment Project | East Niles Community Services District

Served as technical lead for design of new GAC treatment for wells 19 for 1,2,3-TCP . The project required installation of six new GAC vessels and integration into the existing treatment scheme at the Well 19 site.

Well 8 Nitrate Treatment Feasibility Study | Meiners Oaks Water Company

Served as technical lead for evaluations of treatment and blending methods to return high-nitrate Well 8 to service. Evaluated ion exchange, reverse osmosis, biological treatment, and blending with alternative water supplies.

Disinfection Alternatives Study | Villa del Monte Mutual Water Company

Prepared a Preliminary Engineering Report and Standard Operating Procedures for VDMWC to allow integration of a new water treatment system and reservoir into their existing system. This included providing operating methods to minimize and detect nitrification in the distribution system.

PFAS Remediation | Atascadero Mutual Water Company

AMWC detected PFAS-related substances in a number of wells, causing the wells to be taken out of service. MKN was selected to assist AMWC in identifying remediation methods to bring the wells back into service. MKN developed pilot testing protocols and coordinated installation and operation of the pilot, and has begun design of a GAC treatment plant capable of PFAS compounds from up to 20 MGD of groundwater at a new treatment facility. The new facility also includes a new reservoir and pump station as well as a new central SCADA facility and corporate office. Served as technical lead for treatment processes.

Santa Paula WRF Odor Control Biofilter Design | Santa Paula, CA

Project manager for design of new biological trickling filter odor control system to replace failing Aerisa ionized air system and GAC scrubber.

H2S Abatement Pilot Study Design | North of Sanitary District

Developed pilot study protocol for evaluation of chemical remediation of H2S

corrosion in a 17-mile gravity sewer. The project included developing sampling protocols, selecting chemical addition sites, developing injection facilities, and developing operating protocols.

Various CEOR Systems

Developed processes and methods for treating seawater and produced water to provide injection water for over 30 users in various locations throughout the world, both onshore and offshore. Provided water quality consultation to clients to ensure the viability of the CEOR process.

Water Systems for St. Joseph EOR Pilot Project and Angsi CEOR Field Development Project FEED

Designed the membrane treatment systems and was responsible for directing all process engineering activities, including the development P&IDs, PFDs, and HMBs.

City of Santa Nella, CA

Project engineer responsible for development of chemical storage and metering facilities for a 20 MGD membrane filtration treatment plant for municipal water supply.

Capistrano Desalter

Project engineer for design of treatment process and chemical systems, including reverse osmosis process, iron and manganese removal, storage systems, and chlorine and ammonia feed equipment for chloramination.

Long Beach Water Department

Performed a feasibility evaluation for onsite chlorine gas generation for the Long Beach Water Department's Groundwater Treatment plant.

Santa Margarita Water District

Design engineer for chlorine and ammonia feed systems and UV disinfection system for the Upper Chiquita Reservoir project.

Front Porch Development

Provided peer review of evaluation of the Marina Coast Water District seawater desalter to determine cost and feasibility of returning the desalter to service after 10-year shutdown.

Poseidon Resources

Provided concept-level design for 50 MGD seawater desalination system to be located in Carlsbad, CA. Design included significantly constrained site. Design was used to support proposal to MWDSC to obtain subsidy.

Metropolitan Water District of Orange County

Technical leader for concept level design of 50 MGD seawater desalination plant to be located near Dana Point. Design was used to support proposal to MWDSC to obtain subsidy. Provided process design for the 1.15 MGD Cambria, California seawater reverse osmosis treatment plant.

Town of Hull, MA

Prepared feasibility report for regional seawater desalination plant for Cape Cod. Provided process design for small seawater RO treatment plant for private client in Puget Sound.

Southern Nevada Water Authority

Provided process and cost evaluation for feasibility of 80 MGD RO desalting plant, a concept intended to intercept saline subsurface flows that add significant salinity to the Colorado River upstream of Hoover Dam.

Santa Clara Valley Water District

Prepared process evaluation and costs for concept selection for Bay Area Regional Desalination Project.

EDUCATION

Ph.D., Biogeochemistry, University of Aberdeen, UK

M.Sc., Environmental Science, University of Aberdeen, UK

B.Sc., Environmental Policy Analysis and Planning, University of California, Davis

Associate Institute of Environmental Management and Assessment

Jennifer Haddow, PhD, MSc, AIEMA

PRINCIPAL ENVIRONMENTAL SCIENTIST

Jennifer Haddow, PhD, Principal Environmental Scientist is responsible for technical oversight and quality assurance of the Rincon team. She has over 15 years of experience managing all levels of environmental documentation for large-and small-scale infrastructure projects, with an emphasis on water supply, conveyance and quality projects, and watershed planning studies. Dr. Haddow's philosophy is to provide excellent, "no-surprises" consultancy advice and expertise to her clients. This includes advising on both environmental and stakeholder issues that may arise during the documentation process but also the implications of decisions made as part of the CEQA/NEPA process that could impact schedules and costs as the project progresses through design and construction

PROJECT EXPERIENCE

WATER INFRASTRUCTURE PROJECTS

- Palos Verdes Reservoir Relining Project IS-MND, Addenda and Environmental Compliance Monitoring, Metropolitan Water District of Southern California (Metropolitan)
- Technical Documentation for the Maywood Mutual No. 2 Water System, Water Replenishment District of Southern California
- Montebello Hills Recycled Water Pipeline IS-MND, Central Basin Municipal Water District
- New Non-potable Water Connections Project IS-MND, Coachella Valley Water District
- Santa Ana River Bridge Seismic Retrofit Routine Maintenance Project IS-MND, Addenda and Environmental Compliance Monitoring, Metropolitan
- Palos Verdes Recycled Water Pipeline IS-MND, West Basin Municipal Water District
- Los Angeles-Glendale Wastewater Treatment Plant, Cultural Resources Report, Biological Resources Assessment and CEQA Documentation, City of Los Angeles
- Recycled Water Pipelines Project IS-MND, United Water Conservation District
- Piru 1MW Solar Project IS-MND, United Water Conservation District
- Palm Desert Groundwater Replenishment Facility Project Biological Resources Assessment and EIR, Coachella Valley Water District
- Water Resource Recovery Facility Upgrades Project EIR, City of San Luis Obispo
- Central Coast Blue Project EIR, EA & Regulatory Permitting
- Monterey-Pacific Grove Area of Special Biological Significance Stormwater Management Project EIR, County of Monterey
- Jensen 1 MW Solar Project CEQA Documentation, Metropolitan
- Lakeview Pipeline Environmental Constraints Analysis, Biological Resources Assessment and CEQA Addendum, Metropolitan
- Lakeview/Inland Feeder Intertie Connection Environmental Compliance Monitoring, Metropolitan
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PROJECT EXPERIENCE, CONT'D

- Lakeview Pipeline Bernasconi Tunnel No. 2 Steel Liner Installation Environmental Compliance Monitoring, Metropolitan
- F.E. Weymouth Water Treatment Plan Upgrades Project Environmental Compliance Monitoring, Metropolitan
- Memorial Park Water Treatment Project CEQA Documentation, San Mateo County Parks Department
- Lower Santa Clara River Salt and Nutrient Management Plan Substitute Environmental Document, County of Ventura Watershed Protection District
- Urban-Runoff Diversion Project - Phase 3 Project IS-MND, City of Pacific Grove
- Wastewater Treatment Plant Bed Improvements Project CEQA Documentation, Ojai Valley Sanitary District
- Medea Creek Restoration Project IS-MND, City of Agoura Hills/subcontract to Questa Engineering

TRAVIS MCFERON, PE, SE

Structural QA/QC

Travis is a Principal at PSE and has over 19 years serving as a structural engineering consultant to numerous Owners, Contractors, Architects and Engineering Firm partners. His experience includes a broad range of structural engineering disciplines involving experience within structural engineering design, structural analysis, forensic analysis, project management, and plan review services. He has worked on both small and large scale projects including essential facilities such as municipal treatment plants, water storage reservoirs, fire stations, schools, churches, recreation centers and other high occupancy structures. This includes projects involving new construction as well as those involving alterations and/or upgrades to existing structures. He has completed numerous condition assessments for pump stations, reservoirs and water/wastewater related structures.

Relevant Projects

Cawston Lift Station Assessment, *Hemet, CA*
As part of a structural condition assessment, PSE completed an ASCE 41 "Seismic Evaluation and Retrofit of Existing Buildings" Tier 1 deficiency screening evaluation and report for Eastern Municipal Water District's Cawston Lift Station. The evaluation included the main seismic resisting elements of the building, as well as nonstructural items such as life safety systems, mechanical and electrical equipment, light fixtures, etc.

City of Garden Grove, Pump and Well Building Evaluations, *Garden Grove, CA*
As part of a master plan, PSE evaluated multiple pump station facilities spread over 12 sites, including 5 pump/booster station structures and 13 wells structures. Evaluations were in conformance with an ASCE 41 "Seismic Evaluation and Retrofit of Existing Buildings" Tier 1 deficiency screening, which involves a rigorous checklists based on the performance objective, hazard level, and type of construction. The screenings were performed considering all structures as Risk Category IV and were based on the review of as-built drawing as well as on-site assessments at each site. Original construction eras for the structures ranged from 1966 to 1997, and the quality and condition of the individual structures varied significantly. PSE provided a report which identified levels of deficiencies and corresponding risks as well as a detailed analysis meeting the ASCE 41 criteria.

City of Escondido, WTP Improvements, *Escondido, CA*
PSE provided structural engineering services for improvements to several existing components within the Escondido-Vista WTP. Scope included new roof mounted equipment and replacement of existing Hypochlorite tank. PSE performed a site visit to verify existing structural components and gather as-built information on the building and foundation elements. PSE analyzed the proposed tank and was able to demonstrate that the existing pad had sufficient capacity for the increased loading for the new tank.

Hayden Bridge Water Filtration Plant Evaluations, Eugene Water & Electric Board, *Eugene, OR*
PSE provided structural design services related to the filtration basins and the filtration plant building in conjunction with upgrades to the plant. PSE performed site visits to review the existing as-built condition and proposed changes; reviewed the original construction documents; and performed a full code level structural analysis and evaluation of the structures using current code as well as ASCE 41 seismic evaluation criteria. PSE led phased structural upgrades and modifications to the basins and filtration plant building to bring the building into conformance with current code requirements while the plant remained running and in service.

Pendleton WWTRRF Facilities Plan, *Pendleton, OR*
PSE performed a site investigation and condition assessments for eight wastewater treatment structures at the Pendleton Water Treatment Plant including clarifiers, digesters and contact chambers. Investigation involved two site visits to walk through and document the conditions of the existing structures. Observations included measurement, photographs, sounding test, and steel UT measurements. The investigations provided a baseline report of the current conditions of the structure to inform planning for future improvements and maintenance.

EDUCATION

MS Civil Engineering,
Portland State University

BS Civil Engineering,
Portland State University

YEARS EXPERIENCE

19

REGISTRATIONS

Professional Engineer: CA, CO, GA, HI, MA, MI, NC, OR, VA, TX, UT, WA

Structural Engineer: CA, HI, OR, UT, WA

MEMBERSHIPS

Structural Engineers Association

American Council of Engineering Companies

American Society of Civil Engineers

American Water Works Association

American Institute of Steel Construction

NCEES Structural Committee

LICENSING
Professional Land Surveyor No. 7807, California

EDUCATION
B.S. Surveying Engineering, California State University Fresno, 1999

PROFESSIONAL AFFILIATIONS
Past Officer, California Land Surveyors Association, State & Channel Islands Chapter

Past President, ACEC, Channel Coast Chapter

Past Committee Member, Channel Islands CLSA Chapter - Joint Professional Practices Committee

Member, International Right of Way Association (IRWA)

BACKGROUND

Over 20 years of experience with Base Topographic Mapping, Geodetic Control Surveys and Geographic Information Systems

James Fallon has nearly 20 years of experience on a wide variety of land surveying and geomatics projects. He has been responsible for the direct management and production of survey tasks in support of public works and private land development projects, both in the field and in the office. Work performed includes topographic mapping, monument preservation, public agency map and document review, geodetic control networks, boundary surveys, easement and legal description preparation, subdivision mapping, lot line adjustments, ALTA land title surveys, condominium plans, right of way acquisition surveys, construction staking, and data acquisition for Geographic Information Systems (GIS). His work includes numerous public infrastructure projects, encompassing many miles of corridor surveys for design improvements in Ventura, Los Angeles and Santa Barbara Counties.

Mr. Fallon has extensive experience with static GPS, real time kinematic GPS and GPS control networks utilizing Continuously Operating Reference Stations (CORS) through both the National Geodetic Survey (NGS) and California Spatial Reference Center (CSRC). Mr. Fallon is thoroughly familiar with AutoCAD Civil 3D, the Microsoft Office Suite, Trimble GPS processing software, ESRI ArcGIS and major surveying data collection and network adjustment software packages.

EXPERIENCE

PUBLIC AGENCIES

- **Casitas Municipal Water District, Ojai, CA**
- **California American Water, Southern California**
- **United Water Conservation District, On-call Services Agreement, Ventura County, CA**
- **Calleguas Municipal Water District, Ventura County, CA**
- **Santa Clarita Valley Water Agency, On-Call Services Agreement, Santa Clarita, CA**
- **Ventura Regional Sanitation District, Santa Paula, CA**
- **County of Ventura, On-Call Services Agreement, Ventura, CA**
- **City of Ventura, On-Call Services Agreement, Ventura, CA**
- **City of Camarillo, On-Call Services Agreement, Camarillo, CA**
- **City of Port Hueneme, Port Hueneme, CA**
- **City of Oxnard, On-Call Services Agreement, Oxnard, CA**
- **Camarillo & Oxnard Airports, Ventura County, CA**
- **City of Santa Barbara, On-Call Services Agreement, Santa Barbara, CA**

RELEVANT PROJECTS

North Pleasant Valley Desalter, Camarillo, CA
Project surveyor and task manager for the base mapping in support of design efforts on a new desalter facility and related waterlines. The project corridor covered approximately 7,500 linear feet and a 4 acre plant site. Mapping was performed by conventional ground methods, ground based Lidar and included record right of way and utility research and compilation.

Santa Felicia Dam Monitoring, Piru, CA
Project surveyor and task manager for high precision monitoring surveying services as part of the biennial structural monitoring of the Santa Felicia Dam since 2005. The work includes high order leveling across miles of ground from and to the monitoring benchmark, across the dam crest and to other historical monitor points. Extensive horizontal and alignment measurements are made along the crest, and all the data are presented in historical tables for District review and use.

Lynnwood Drive Sewerline Replacement , Camarillo, CA
Project surveyor and task manager for the base mapping for a replacment Camrosa Water District sewer line in Camarillo. Mapping was performed by conventional ground methods, ground based Lidar and included record utility research and right of way compilation.

Arbolada Pump Station Upgrade, Ojai, CA
Project surveyor and task manager for the base mapping in support of design efforts on an upgrade to existing facilities within the Casitas Municipal Water District system. The project corridor covered approximately 3,500 linear feet and a 1 acre plant site. Mapping was performed by conventional ground methods, ground based Lidar and included record right of way and utility research and compilation.

Ojai Waterline Improvments, Ojai, CA
Project surveyor and task manager for the base mapping in support of design efforts on an upgrade to existing facilities within the Casitas Municipal Water District system. The project corridors covered approximately 5,300 linear feet over 3 project areas. Mapping was performed by conventional ground methods, ground based Lidar and included record right of way and utility research and compilation.

Casitas Municipal Water District Pipeline Replacements, Ojai, CA
Project surveyor and task manager for the base mapping in support of design efforts on several pipeline replacment projects. As of 2019, the project corridors covered approximately 10,000 linear feet and multiple reservoir sites. Mapping was performed by conventional ground methods, ground based Lidar and included record right of way and utility research and compilation.

Portrero Road Recycled Waterline Project, Thousand Oaks, CA
Project surveyor and task manager for the base mapping in support of design efforts on a new recycled waterline and the extension of an existing Triunfo Santitation District waterline. The project corridor covered approximately 4,000 linear fee. Mapping was performed by conventional ground methods, ground based Lidar and included record right of way and utility research and compilation.

California American Water Mission View Blend Station, Temple City, CA
Project surveyor and task manager for the base mapping for a new 5,400-foot waterline connecting existing CAW pump stations. Mapping was performed aerial mapping, supplemented by ground surveys and included record utility research and compilation.

Middlebank Drive Waterline Project- Newhall Water Company, CA
Project surveyor for the base mapping and construction of a replacement waterline within a residential neighborhood. Survey included ground based topographic mapping, utility research and providing construction staking for the installation of the new line.

Yeh and Associates, Inc.
Geotechnical • Geological • Construction Services

Loree A. Berry, PE
Senior Project Manager

Education

BS, Geological Engineering, University of Wisconsin, Madison, 2001

Registrations

- Registered Professional Civil Engineer: California No. 73221
- Applied Project Management Professional, APMP
- Ventura County Registered Well Inspector
- City of Oxnard Registered Well Inspector

Professional Associations

- American Public Works Association – Ventura County Chapter, Executive Board Member (2017 to present)
- American Society of Civil Engineers, Younger Member Forum Board Member (2005-2009)
- California Geotechnical Engineering Association
- American Water Agencies of Ventura County

Joined Yeh

4/2018

Professional Experience

Loree has more than 21 years of professional engineering experience with 17 of those working along the Southern California coast providing geotechnical engineering and geology services for a wide range of private and public agency clients, utility districts, transportation departments, special geologic hazard districts, and construction services. She is proficient in AWWA and building code design for water infrastructure to complete reporting to characterize site and subsurface conditions, manage geologic hazards, and provide geotechnical parameters for the design of public improvements, structures, roadways and bridges, and utility infrastructure. Her experience includes efficient permitting, subsurface exploration and data collection to support design and reporting and construction services for deep and shallow foundation and earth retaining systems, highway pavements and structures, low impact development, seismic and geohazard evaluations, seepage and slope stability analyses, and landslide monitoring and instrumentation.

Relevant Work History

Signal Tank Zone Improvements, Casitas Municipal Water District, 2019-2020

Project Manager for geotechnical services for replacement of an existing welded steel water storage tank and new booster station as well as approximately 2,400 linear feet of new waterline to expand the Signal Zone system. The project is located within the City of Ojai and requires subsurface investigation within shallow bedrock as well as for pipelines with the City right of way. A portion of the new pipeline alignment will traverse an existing slope behind private residential homes. Geotechnical services included permitting, utility clearance, geophysics, backhoe exploration, drilling and sampling, laboratory testing, engineering and preparation of a draft and final geotechnical report.

Arbolada Pump Station, Casitas Municipal Water District, 2019

Project Manager for the design of approximately 3,400 linear feet of new water line upgrades and replacements, two pressure reducing vaults, and a replacement pump station. Yeh used hollow stem auger drilling to retrieve soil samples for laboratory testing and evaluate subsurface conditions at select locations along the proposed alignments. Drilling for this project required included encroachment permitting with the city and arranging traffic control. In a draft and final geotechnical report, Yeh provided a typical trench design and material specifications for construction, geotechnical and seismic inputs for the design of the new pipeline, thrust blocks, pressure reducing vaults, and the pump station foundation slab, and general grading recommendations.

Waterline Replacements and System Improvements, Casitas Municipal Water District, 2018

Project Manager for a geotechnical investigation along five replacement segments of waterline throughout the City of Ojai. The project included the design of a total of 7,000 linear feet of pressurized 8-inch PVC waterline. Geotechnical services included permitting, utility clearance, drilling and sampling, laboratory testing, engineering evaluations for pipeline design, thrust blocks, stabilization and backfill, and preparation of a draft and final geotechnical report.

Heidelberger Tank and Pump Station, Casitas Municipal Water District, 2020

Project Manager to provide a range of mitigation options to avoid, protect, mitigate or manage ongoing erosion entering the District facility from the adjacent slope and drainages. The selected alternative was a debris diversion wall to help direct flow to a designated area that can be maintained and cleaned out, as needed.

Loree A. Berry, PE
Senior Project Manager

Rincon Pump Station Upgrades, Casitas Municipal Water District, 2020
Project Manager for geotechnical engineering services during construction for a new at-grade electrical building at the Rincon Pump Station in Oak View, CA. Yeh provided geotechnical observations during construction of the exposed subgrade soil and footing bottoms and reviewed the suitability of onsite soils for structural backfill. Yeh also managed materials testing and special inspections during grading and building construction.

Civic Center Wastewater Treatment Plant Phase 2, City of Malibu, 2019 to present
Project Manager for geotechnical services supporting the design of the next phase of the City's wastewater project. Services include geotechnical field investigation within private and public residential streets, which requires community coordination and advanced scheduling. Yeh is performing soil borings, rock coring, cone penetration testing, and geophysical surveys to explore the project as well as laboratory testing, engineering analsyes and report preparation for approximately 3 miles of new pipeline, 5 sewer lift stations, an HDD segment through bedrock, and a jack and bore below Pacific Coast Highway.

Santa Paula Water Recycling Facility Advanced Treatment System, Odor Control Unit, and Bypass Basin, City of Santa Paula, 2019-2021
Project Manager for geotechnical services for a new Advanced Treatment System at the existing Water Recycling Facility to reduce chloride concentrations in the treated water. The equipment will be housed in an at-grade structure constructed on a 17,000 square foot building pad. Up to 7 feet of fill will need to be placed within an existing basin to raise the site grades of the proposed structure. Yeh performed data review, drilling, laboratory testing, and prepared a Geotechnical Report for the project that included recommendations for shallow foundation design, seismic considerations, grading and material specifications. Yeh used existing geotechnical data to provide micropile recommendations for an adjacent odor control unit and also provided recommendations for grading an exiting percolation basin to be a lined effluent bypass basin.

Corona del Mar Treatment Plant Access Road Stabilization, Goleta Water District, City of Goleta, CA, 2019-2020
Project Manager supporting the deisgn of a re-aligned access road to the Corona del Mar Treatment Plant in Goleta, CA. A portion of the existing access road is failing and slipping out to the creek below due to ongoing erosion of the creek bank and ecventural undermining of the raod. Several repairs have been implemented over the years to stabilize the road and mitigate erosion. The more recent road failure has driven the Goleta Water District to aquire land adjacent ot the existing road to re-align the failed segment away from the creek bank. Geotechnical services drilling and sampling, lab testing, and engineering analyses and input for wall design, roadway wideining, and preparation of a draft and final geotechnical report.

Recycled Water Storage Reservoir at the Camarillo Water Reclamation Facility, City of Camarillo, CA, 2019 to present
Project Manager for geotechnical services for design and construction of a partially buried 1-million gallon concrete water storage reservoir and associated conveyance pipelines at the existing water reclamation facility. Geotechnical services included permitting, utility clearance, drilling and sampling, well installation, environmental soil and water screening, geotechnical laboratory testing, engineering evaluations and preparation of a draft and final geotechnical report.

Hall Canyon Storm Drain Project, City of Ventura, CA, 2018
Project Engineer and Manager for a geotechnical investigation conducted for the proposed design and construction of an 800 linear foot long segment of new 24-to 36-inch reinforced concrete pipe storm drain to be installed along Fairview Drive between Palomar Street and across Hall Canyon Road, where the pipe will tie into an existing Reinforced Concrete Box (Prince Baranca) located approximately 20 feet below grade. The scope of work including permitting and project coordination, subsurface exploration, laboratory testing, and geotechnical engineering and reporting.

MPA MORAES / PHAM & ASSOCIATES
CONSULTING ELECTRICAL ENGINEERS

JOE MORAES, PE (#E11023)

Project Manager/Electrical Engineer

Mr. Moraes is a California registered electrical engineer specialized in the design of electrical and controls systems for water and wastewater facilities, such as reservoirs, pumping stations, sanitary lift stations, PRV stations, wells, and treatment plants. In the past five years he has designed over 200 such projects for 43 southern California municipal end users. With his wealth of experience and continuous design activity, Mr. Moraes maintains proficiency in state of the art solutions to complex designs involving pumping systems, generators, variable frequency drives, PLC's, telemetry, and SCADA systems. Relevant recent project experience includes the following:

Yorba Linda Water District

- San Antonio Pressure Reducing Station
- Equipping Well 21
- Yucaipa PRS
- Hidden Hills PS Upgrade

Irvine Ranch Water District

- PA 6 Tomato Springs Pump Station and Reservoir
- Zone 6 & D Reservoirs
- Add RMS at Nine Reservoirs
- Add Mixers at Ten Reservoirs
- Reservoir Dechlorination Project
- Upgrade Various PRV's
- Santiago Permanent Generator Additions
- Newport Coast PRV 4
- Stockdale West Wellhead
- ILP North Conversion Reservoir

Vallecitos Water District

- Meadowlark Water Reclamation Facility Expansion 2 MGD to 5 MGD
- Questhaven Lift Station #3
- North Twin Oaks Reservoir
- High Point Booster Pump Station

City of Newport Beach

- Upgrade various sewer lift stations
- Dolphin and Tamura Wells
- 16th Street Pump Station Improvements

City of Carlsbad

- Poinsettia Sewer Lift Station
- Cannon Road Sewer Lift Station
- El Fuerte Sewer Lift Station
- Foxes Landing Sewer Lift Station Electrical Upgrade
- Home Plant Sewer Lift Station Rehabilitation
- Terramar Sewer Lift Station Upgrade
- Maerkle Reservoir Cover Addition
- Maerkle Reservoir Cover Replacement

Orange County Water District

- Five Coves and Lincoln Basin
- Miraloma Recharge Basin Project
- Talbert Injection Wells I24/I25

Olivenhain Municipal Water District

- Midpoint Lift Station
- NH3 Lift Station
- Via Ambiente Lift Station
- Building J

Padre Dam Municipal Water District

- Pump Station 7 Standby Generator Addition
- SCADA Phase II System Wide Upgrades

South Coast Water District

- Lift Stations #13 and #14
- Reach 7 PRS

Mouton Niguel Water District
- Generator Additions to Various Sites

Eastern Municipal Water District
- Commonwealth and Warren Road Pump Stations Upgrades
- HSJ IRRP Phase 1 Raw Water Recharge Basins
- Orange and Ellis Tanks
- Menifee Tanks
- Trumble Ponds
- Canyon Cove Reservoir
- Goetz Tank and Pump Station
- Pourroy SLS

City of Anaheim
- Parkview Pump Station
- Linda Vista Reservoir and Pump Station
- La Palma Reservoir and Pump Station Complex
- Equipping of Well #59

Encina Wastewater Authority
- Agua Hediona Pump Station Electrical Upgrades
- Buena Vista Pump Station Upgrades
- Buena Creek Pump Station
- EWA Headworks Upgrades
- EWA AFRC (FOG) Facility

City of Corona
- WRP 1 and 2 Headworks Upgrades
- WRP 2 Tertiary Treatment Addition
- WRP 1 Oxidation Project (in progress)
- Various Wellsite Generator Additions
- WRP 1 Generator/ATS Addition

City of San Diego
- Various Pressure Reducing Vaults
- Otay Water Treatment Plant – Raw Water Pump Station Upgrades
- Scripps Poway Parkway Pump Station
- Princess Park Pump Station
- Point Loma Reservoir Rehabilitation
- Citywide Fluoridation Project
- Canyonside Pump Station

Santa Margarita Water District
- Upper Chiquita Reservoir and Pump Station
- Zone B Domestic and Reclaimed Reservoirs
- Zone B Pump Station

City of San Clemente
- Well No. 8

City of Oceanside
- Peacock Hills PRS
- Wells 10 and 11

Leucadia County Water District
- Leucadia Lift Station Electrical Upgrade
- Avacado & Diana SLS Upgrades
- Saxony Pump Station Upgrades

City of Poway
- Highland Ranch SLS Upgrade

Elsinore Valley Municipal Water District
- Mc Vicar Lift Station Upgrade
- Alberhill 1601 and 1801 Pump Stations and Reservoirs
- Wildomar Pump Station
- 1601 pump station and reservoir

Pala Casino
- Pala WWTP

City of Garden Grove
- Wellsite Chlorination Project
- Westhaven Pump Station Upgrade
- West Garden Grove Reservoir and PS upgrade

Helix Water District
- Valve Vault Replacements

Otay Water District
- 640 Zone Reservoir

Rancho California Water District
- Teneja Pump Station

Arroyo Grande/Corporate Office
530 Paulding Circle, Ste. B
Arroyo Grande, CA 93420

Bakersfield
1800 21st St., Ste C
Bakersfield, CA 93301

Fresno
8405 North Fresno St., Ste. 120
Fresno, CA 93720

Irvine
38 Executive Park, Ste. 320
Irvine, CA 92614

Santa Clarita
23942 Lyons Ave., Ste. 215
Newhall, CA 91321

Ventura
121 North Fir St., Ste G
Ventura, CA 93001

mkn