



On-Call
**ENGINEERING
SUPPORT SERVICES**



QUALIFICATIONS | October 2017



October 27, 2017

Marina Coast Water District
Michael Wegley, PE, District Engineer
11 Reservation Road
Marina, CA 93933

Subject: Qualifications for On-Call Engineering Support Services

Dear Mr. Wegley:

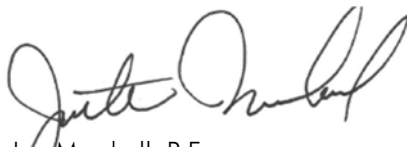
The District is looking for a consultant to provide as-needed civil engineering services. Carollo's team of experienced professionals is already familiar with working with the District; working within the District's service area; coordinating with developments and other consultants; and working with the surrounding agencies. Whether your needs are planning, design, review, and/or staff augmentation, we are confident that we will provide you with the technical expertise you need and the responsive client service you have come to expect from us. Our team offers:

- **Project leadership you can trust.** Jon Marshall, project manager, and Anne Prudhel, principal-in charge, have worked with the District over the past 10 years. They know how to effectively coordinate with the District to provide you with a quality product while completing each task on schedule and within budget. Jon and Anne will be supported by a cohesive team of hydraulic modeling, pipeline, pump station, tank, well, and construction management specialists who can address a comprehensive suite of needs from planning through construction.
- **Technical expertise you can count on.** Our understanding of construction impacts, operations, applications and limitations of technologies, and permit requirements for various site conditions will provide the District with the confidence needed to move your projects forward. We will work collaboratively with the District to either provide support as an extension of staff, or to help define, design, and implement projects.
- **A quality team with local knowledge.** Our team includes Dru Nielson of McMillen Jacobs Associates (geotechnical), Denise Duffy & Associates (environmental), and Whitson Engineers (survey), all of whom have done work in the area and whom we have worked with extensively. The Carollo team has the local knowledge and expertise needed to provide the District with support and expertise, while accommodating the unique local requirements.

We look forward to continuing to provide the District with responsive client service and working collaboratively with you to implement successful projects. If you have any questions or require additional information, please contact me at 925-977-3039 or APrudhel@carollo.com.

Sincerely,

CAROLLO ENGINEERS, INC.



Jon Marshall, P.E.
Project Manager



Anne Prudhel, P.E.
Principal-in-Charge/Associate Vice President



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CAROLLO'S APPROACH

APPROACH TO PROJECT DELIVERY

The feasibility and schedule for water, wastewater, and recycled water infrastructure projects are often driven by environmental review, permitting, easements, and stakeholder/customer buy-in. Because of this, project success is as dependent on cost and schedule management, and clear concise communication, as it is on technical quality.

What does a successful project look like?

A project that...

1. Provides resource strain relief for District staff,
2. Meets or exceeds the District's expectations,
3. Is supported by the community,
4. Is completed on time and on budget,
5. Results in low change orders.

The list could go on. Below are some of the management, technical, and quality measures we will implement to help the projects progress smoothly and end successfully.

Project Management Approach

Key elements of our management approach include:

- **Emphasis on communication with you and within the project team.** Establishing clear expectations and lines of communication when the project begins is key to project success. At the kick-off meeting, our goal is to develop a joint District/Carollo project strategy and set key milestones. Having the District's engineering staff as well as operations and maintenance staff involved at the outset of the project is important for developing consensus on the project approach and developing a project that will meet the objectives of all parties involved. The strategy developed at the kick-off meeting will be the basis for the development and implementation of our Project Management Plan (PMP). The PMP will be the primary tool used to manage and integrate all activities, including subconsultants, required by the scope of work.



- **Staffing.** Our fundamental approach is to assemble the best-qualified team to match the project requirements. We have identified a core team of engineers who have the expertise and availability to dedicate to your project. Carollo has a deep bench of talent not only in Northern California, but across the country. If the need arises, we can add staff to augment our core team to meet fast-track schedules or accommodate multiple projects during the same period.



- **Schedule and Cost Control.**

Our team has the agility and flexibility to cost-effectively deliver your project. To make certain that the District is receiving the highest value for their consulting engineering services, cost control starts at the earliest stage of the project and continues through project startup. Our water and wastewater infrastructure experts focus on developing innovative technical solutions that result in savings to the client while providing improved performance. Our approach is to work directly with District staff from project initiation through system startup to eliminate unnecessary project changes due to a lack of understanding of the existing infrastructure or operation.



- **To monitor this through the project, we develop an "S" curve at the outset of the project.** At least once a month, the project manager assesses the project's percent complete on a per task basis, in a defined manner, independent of budget review. The project manager does not obtain budget status until after the percent complete has been estimated. We then compare the estimated percent complete to the planned percent complete to determine if the project is on schedule. Staff and resource adjustments, if any, are then made to ensure we continue to meet the project goals. In addition to monitoring project progress, we will also control costs by alerting the District immediately of any out of scope work or any foreseeable problems that may have cost or schedule impacts.

Technical Approach

The best technical approach for a project is unique to that project's location and requirements. However, there are common ways of approaching projects to help identify feasible and cost effective solutions.

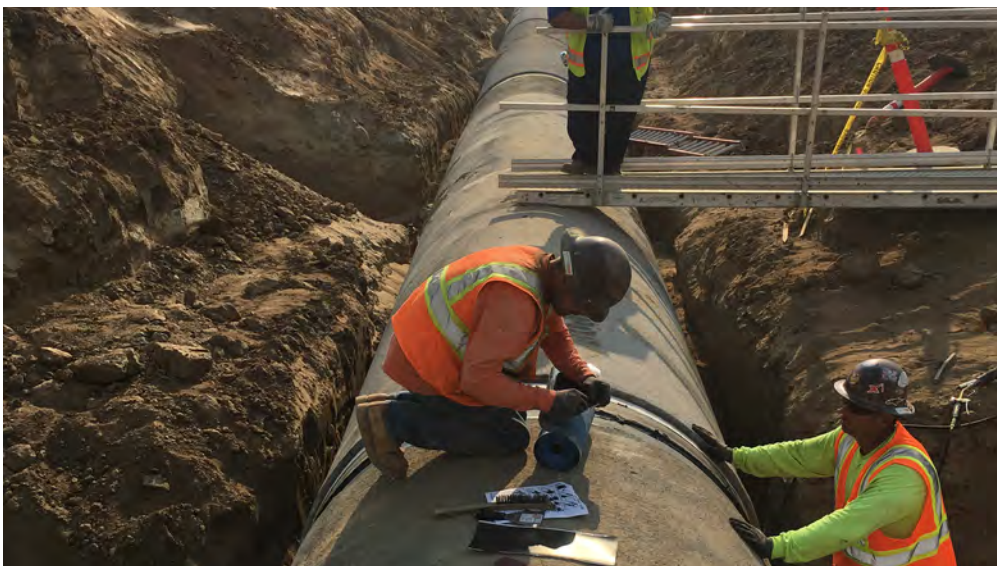
- For an alternatives analysis, involving District staff (including management, engineering, and operations and maintenance) in the development of the evaluation criteria and the evaluation process results in expediting a preferred project while gaining buy-in from key District staff.
- Identifying long lead time items such as required permits, easement acquisition, or environmental requirements early in the project will reduce schedule impacts.
- Engage permitting agencies early to identify construction requirements so there are no surprised in cost at the end of the design process.
- If permits are required from agencies requiring 90 percent to 100 percent complete plans, break out that portion of the project and expedite the design to minimize schedule impacts due to the permit review process.
- Understand the geotechnical conditions in the project area prior to selection of construction methods to determine feasibility and to avoid costly change orders during construction.



Quality Control Approach

Carollo has a strong and long-term commitment to quality. Our QA/QC review process provides systematic and proven results as we plan and manage quality to be a part of every project. We start our QA/QC process at the initiation of the project with the preparation of a Project Management Plan (PMP). The PMP is tailored to specific project needs and will include job-specific procedures and standards, team member roles and responsibilities, report and design checklists, approval processes for project management, formal internal work product reviews, coordination reviews, progress design submittal reviews, cross-checking procedures, construction cost reviews, discipline calculation checks, and project reviews with the District.

Before submitting a deliverable to the District, we will conduct a QA/QC review using senior level engineers with expertise in the appropriate discipline area. Additionally, we will continually emphasize quality control to our project team by conducting informal reviews of the predesign and final design deliverables as the work progresses.



PROJECT TEAM EXPERIENCE

The success of a project stems directly from the dedication, capabilities, and applicable experience of the individuals assigned. You want a team that you know and has working knowledge of your facilities, and operations—a team that will work seamlessly, as an extension of District staff.

Because of our history working with the District, we have the unique ability to assemble the ideal team to deliver the District's CIP.

Anne Prudhel is Carollo's Chief of Infrastructure Design as well as the Northern California Infrastructure Regional Lead. She has developed a core team of engineers in Walnut Creek, Sacramento, and Fresno that focus solely on the delivery of infrastructure projects. From planning through detailed design of pipelines, pump stations, and storage facilities, our Northern California team has the capabilities to meet your needs. Our talented group of engineers work together seamlessly across offices, to successfully deliver projects for our clients every day.

Jon Marshall, our proposed project manager has recent experience managing the RUWAP Recycled Water Pipeline project for the District and has been working with District staff for the past two years. His previous work at Contra Costa Water District gives him the unique ability to look at your projects as an owner as well as the designer.

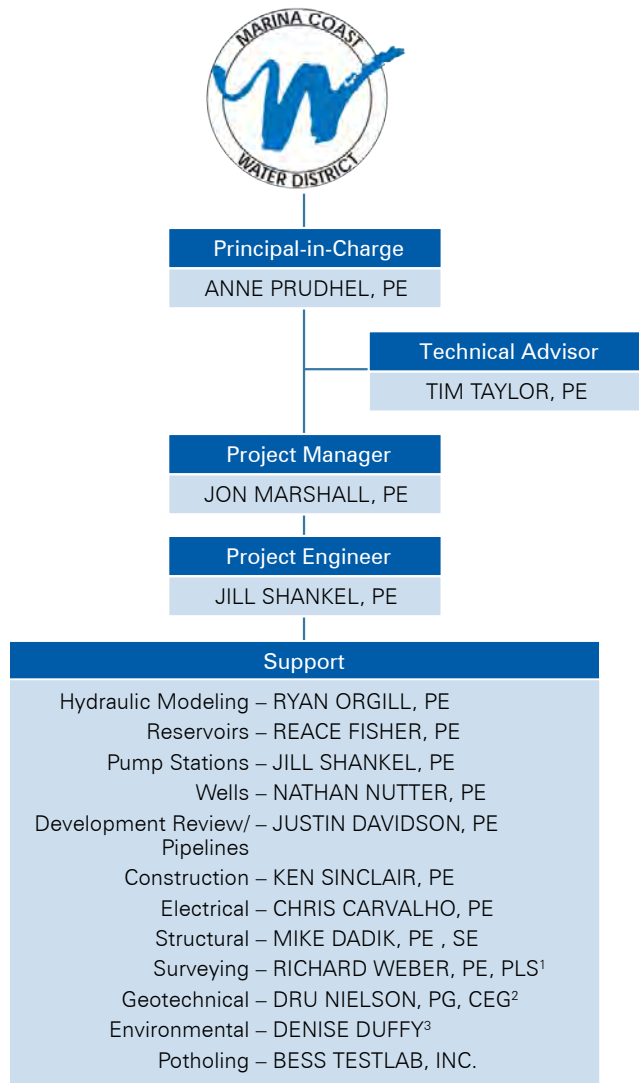
Both Jon and Anne have demonstrated their ability to work closely with the District, the cities of Marina and Seaside, the County of Monterey, U.S. Army, CSU Monterey Bay, Fort Ord Reuse Authority (FORA), Monterey Regional Water Pollution Control Agency, and various utilities on previous projects and are intimately familiar with your procedures and facilities. The team's professional "style" and overall work ethic is assurance that they will complement your staff without disruption.

Team members Rich Weber and Mike Hink, Denise Duffy, Chris Carvalho, and Mike Dadik are also well known to the District, each bringing their own unique capabilities and experiences to the project team.

This hand-picked group was assembled to offer you a roster of experts, each of whom has an established reputation for leadership through pragmatic thinking, innovation and sound consulting. None of your project elements are new to us. Most important to you, each team member, including subconsultants, has demonstrated experience that comes only from years of practice in their respective disciplines and roles.

General information and qualifications for each subconsultant are provided on the following pages.

Single-page resumes for key project team members are presented at the end of this section.



1. Whitson Engineers
 2. McMillen Jacobs Associates
 3. Denise Duffy and Associates, Inc.

YOUR KEY PERSONNEL TEAM

ANNE PRUDHEL, PE Principal-in-Charge

Years of experience: 16



Anne brings 16 years of experience in sewer pipeline design and rehabilitation, collection system planning, water pipeline and conveyance design and rehabilitation, and reclaimed water facilities design. She has successfully designed and managed more than 150,000 feet of

sewer rehabilitation and replacement throughout California and has worked with SWRCB to help secure more than \$175 million in CWSRF funding, within the last two years alone.

As principal-in-charge for your Regional Urban Water Augmentation Project (RUWAP), along with project manager, Jon Marshall, you can be sure that you are getting a team who knows how you like things done and who is familiar with your staff and its facilities. Together, they have the ability to provide an unmatched advantage to the District by leveraging their hands-on experiences and lessons learned.

JON MARSHALL, PE Project Manager

Years of experience: 12



Jon has 12 years of experience in the planning, design and construction management of water, wastewater, recycled water, and storm water infrastructure. His expertise includes pipeline and pump station hydraulics, pressurized and open-channel conveyance design and rehabilitation,

and siting and rehabilitating reservoirs. He has extensive experience with evaluating alternative pipeline materials and alignments; optimizing pump station and pipeline sizes for the best value life cycle cost, and preparing plans, specifications, and cost estimates. He will leverage his recent experience as project manager for the District's \$30 million RUWAP, which included

extensive project coordination with MRWPCA, five jurisdictional agencies, and the cities of Seaside and Marina.

As project manager, Jon will be the key contact for all aspects of each project. He will be responsible for meeting budget and schedule requirements, and directing and controlling the overall activities of the project to ensure that it is being completed to your satisfaction.

JILL SHANKEL, PE Project Engineer

Years of experience: 22



Jill has 22 years of experience in water and wastewater infrastructure planning, design, and construction, including recent pipeline design and rehabilitation projects throughout California. She will lead the technical design of the project, and be responsible for maintaining day-to-day office engineering responsibilities.

TIM TAYLOR, PE Technical Advisor

Years of experience: 31



Tim, Carollo's Director of Infrastructure Practice, has served as project manager for numerous water and wastewater infrastructure and treatment projects. With more than 30 years of experience in engineering design, construction, and project management

for water distribution systems, gravity sewer collection systems, pump stations, water and wastewater treatment facilities, geographic information system (GIS) and modeling projects, Tim is proficient in all aspects of management, technical engineering, modeling, GIS, and design software. He has designed pipelines ranging from small collector sewers to major interceptor lines up to 84 inches in diameter, as well as pump stations ranging in size from a few hundred gpm up to 60 mgd.

YOUR SUPPORT TEAM



Mike Dadik, SE
STRUCTURAL

26 years of experience in the structural design of water and wastewater treatment plant construction, expansion, and rehabilitation, including pump station seismic retrofits, and extensive experience in seismic vulnerability assessments.



Chris Carvalho, PE
ELECTRICAL

25 years of experience in the design and construction administration of electrical, instrumentation and control systems for wastewater facilities, including development of P&IDs and control strategies, SCADA, and PLC and DCS applications.



Richard Weber, PE, PLS
SURVEYING

More than 20 years of experience as a project manager, land surveyor, and design engineer for both public and private sector clients throughout California.



Denise Duffy
ENVIRONMENTAL

More than 34 years of experience in CEQA and NEPA processing, public involvement, and project management for major infrastructure studies.



Ryan Orgill, PE
HYDRAULIC MODELING/GIS

13 years of experience in master planning, hydraulic modeling, sewer system management planning, urban water management planning, and geographic information systems (GIS).



Dru Nielson, PG, CEG
GEOTECHNICAL

28 years of experience performing and directing geotechnical investigations for water, wastewater, and recycled water infrastructure projects,

including treatment plants, storage basins, water tanks, pump stations, and pipelines (open cut and tunneling) up to 10 feet in diameter and to tens of miles long.



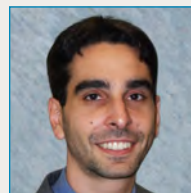
Reace Fisher, PE
RESERVOIRS

13 years of experience in water conveyance and storage design, pump station design, wastewater collection system design, wastewater treatment facilities planning, recycled water master planning, and infrastructure master planning.



Nathan Nutter, PE
WELLS

16 years of experience specializing in well technology, including aquifer storage and recovery (ASR) wells, standard production wells, injection wells, and vadose zone wells. Nathan has led the design and construction of the most advanced aquifer storage and recovery wells in the United States, which recently received the National Groundwater Association's 2013 Award for Groundwater Supply Project of the Year.



Justin Davidson, PE
DEVELOPMENT REVIEW

7 years of experience preparing construction documents/drawings, engineer's cost estimates, technical specifications, hydrology and hydraulic reports, floodplain studies, project design manuals, ADA assessments, 3-D digital terrain modeling, civil site design, pipeline design and review docs, and site stormwater inspections.



Ken Sinclair, PE
CONSTRUCTION

A Senior Construction Manager with 31 years of CM experience, including the supervision of field staff and administration and coordination of CM services with clients and their design engineers.

SUBCONSULTANTS

We have included the following specialty subconsultants to complement our team.

Whitson Engineers SURVEYING

A civil engineering and land surveying firm founded in 1979, Whitson provides land surveying, aerial mapping, property boundary mapping, and plat maps with legal descriptions. Whitson's projects are located primarily in the Central Coast region. Mike Hink, now of Whitson, provided surveying for Carollo on the District's RUWAP Recycled Water Pipeline project.



As a subconsultant to Carollo, Whitson provided surveying for the Santa Cruz County Sanitation District Upper Rodeo Gulch Trunk Line Sewer Replacement project.

McMillen Jacobs Associates GEOTECHNICAL

McMillen Jacobs Associates has remained focused on the underground construction industry for nearly 60 years. They are internationally recognized underground experts for tunnel and trenchless projects, and have provided geotechnical engineering services on many of the nation's most challenging underground wastewater and water projects.

Their Walnut Creek office has completed geotechnical investigations for tens of thousands of linear feet of pipeline and trenchless construction projects in Northern California and works regularly with Carollo.



McMillen Jacobs Associates (then as Jacobs Associates) performed the geotechnical investigation for the Stanly Ranch HDD project, which involved crossing railroad tracks, the Napa River, and wetlands.

Denise Duffy & Associates, Inc. (DD&A) ENVIRONMENTAL SERVICES

DD&A offers professional, environmental consulting products and services to local, regional, state, and federal agencies, as well as private land owners and developers. This experience has included preparing the environmental documentation for the RUWAP Recycled Water Pipeline project, among others for the District.



DD&A was contracted by Monterey County, Department of Public Works, to prepare the environmental documentation for the Arroyo Seco Road Bridge 311 Replacement project.

Bess Testlab, Inc. UTILITY LOCATION/POTHOLING

Bess Testlab provides a complete range of subsurface utility engineering services to private and public companies throughout California using the most advanced technologies available. They have 28 trained locating/potholing technicians on staff, and use state-of-the-art electromagnetic and acoustic pipe locators as well as their ground penetrating radar systems to designate underground utilities. They also use vacuum excavation (potholing) to expose underground utilities to the naked eye and positively determine their actual depth and physical conditions.



Potholing Vacuum Excavation (above)

Utility Location (left)



Anne E. Prudhel, P.E.

Anne Prudhel has 16 years of experience in planning, design, and construction of water and wastewater infrastructure, including wastewater pipeline design and rehabilitation, wastewater collection system planning, reclaimed water facilities, storm-water pipeline design, and water distribution facilities.

Education

BS Civil Engineering,
University of the Pacific,
2002

BS Engineering
Management, University
of the Pacific, 2002

Licenses

Civil Engineer, California

Professional Affiliations

American Society of Civil
Engineers

Bay Area Water Works
Association

→ Principal/QA/QC for design of the \$30 million Marina Coast Water District, California, Regional Urban Water Augmentation Project. The project includes design of 40,000 feet of 16- through 24-inch ductile iron pipe, a 2.5-MG steel reservoir, and multiple customer turnouts. Project highlights include extensive project coordination with the Monterey Regional Water Pollution Control Agency to ensure the system design sufficiently provided irrigation service and groundwater injection well capacity. The pipeline is designed for high pressure service, up to 250 psi and fully restrained. Additional project challenges included determining requirements for five jurisdictional agencies and coordination with ongoing development projects within the City of Marina.

→ Funding support and collection system design oversight as the Owner's Agent for the Hi-Desert Water District, California, Wastewater Reclamation Project. The project includes 77 miles of collection system piping, 3 pump stations, and a new wastewater reclamation facility. Responsible for overseeing the design effort by the design consultant and reviewing and providing comments on four collection system bid packages. Also served as the primary point of contact between the Clean Water State Revolving Fund (CWSRF) project manager and the District in developing the application packages, coordinating and verifying information needed to complete the agreement, and coordinating the incorporation of CWSRF requirements into the bid documents. Efforts resulted in securing a \$142,000,000 CWSRF loan.

→ Pipeline engineer for preliminary and final design of the California Department of Corrections and Rehabilitation California Men's Colony Trunk Sewer Replacement. The project included modeling of the existing interceptor system and design and construction of 5,000 feet of replacement inter-

ceptor sewer and two screening stations. The design was necessary to eliminate significant inflow and infiltration and to prevent ongoing sewer overflows.

→ Design manager for the Los Carneros Water District, California, Recycled Water Pipeline design and project manager for engineering services during construction. The project included design of approximately 46,000 feet of 6- through 20-inch C900/C905 PVC pipe installed by open cut, 100 feet installed by jack and bore, 60 feet of ductile iron pipe for an elevated bridge crossing, and 106 customer connections.

→ Project manager for the Delta Diablo, California, Pittsburg Recycled Water Pipeline Rehabilitation, which included preliminary and final design for sliplining approximately 5,300 feet of existing 20- and 30-inch asbestos cement pipe.

→ Project engineer for pipeline preliminary design for the City of Modesto, California, River Trunk Realignment, Beard Brook Siphon and Cannery Segregation Line (CSL) Improvement Project.

→ Project manager for the Santa Cruz County Sanitation District, California, 07-08 Sewer Improvements – Felt Street and 17th Avenue; Upper Rodeo Gulch; and Noble Gulch projects.

→ Project manager for the Dublin San Ramon Services, California, Dublin Trunk Sewer Rehabilitation. The project included cured-in-place rehabilitation of 8,200 feet of 33, 36, 39, and 42-inch gravity trunk sewer. The project included design of a complicated bypass system and detailed traffic control plans. The project fronted neighborhoods and a congested commercial corridor within the cities of Dublin and Pleasanton and required coordination with multiple agencies including Caltrans, Zone 7, and the cities of Dublin and Pleasanton.



Jonathan P. Marshall, P.E.

Jon Marshall has 12 years of experience in the planning, design and construction management of water, wastewater, recycled water, and storm water infrastructure. His expertise includes pipeline and pump station hydraulics, pressurized and open-channel conveyance design and rehabilitation, and siting and rehabilitating reservoirs. He has extensive experience with evaluating alternative pipeline materials and alignments; optimizing pump station and pipeline sizes for the best value life cycle cost, and preparing plans, specifications, and cost estimates. His experience includes permitting and construction management of pipeline, pump station, reservoir, and water treatment plant infrastructure improvements. His experience includes:

Education

MS Civil Engineering, San Jose State University, 2016

BS Civil Engineering, California Polytechnic State University, San Luis Obispo, 2005

Certificate, Project Management, UC Berkeley Extension

Certificate, Construction Management, UC Berkeley Extension

Licenses

Civil Engineer, California

→ Senior engineer for the North Valley Regional Recycled Water Program for the City of Modesto, California. Highlights of the \$40 million project include design of a new 30-mgd recycled water pump station with 3 - 1,000 horsepower pumps, 6 miles of 42-inch-diameter pipeline that includes more than 2,800 feet of HDD construction beneath the San Joaquin River, micro-tunneling beneath a Caltrans highway and a discharge structure to the Delta-Mendota Canal. The project serves two primary purposes: eliminates discharges to the San Joaquin River and is a regional solution to address water supply shortages by using recycled water for agricultural irrigation.

→ Project manager/project engineer for design of the \$30 million Marina Coast Water District, California, Regional Urban Water Augmentation Project. The project includes design of 40,000 feet of 16- through 24-inch ductile iron pipe, a 2.5-MG steel reservoir, and multiple customer turnouts. Project highlights include extensive project coordination with the Monterey Regional Water Pollution Control Agency to ensure the system design sufficiently provided irrigation service and groundwater injection well capacity. The pipeline is designed for high pressure service, up to 250 psi and fully restrained. Additional project challenges included determining requirements for five jurisdictional agencies and coordination with ongoing development projects within the City of Marina.

→ Project engineer for the City of Belmont Sanitary Sewer Capacity Analysis in Belmont, CA. Project highlights included building a sewer hydraulic model for the entire City, conducting flow monitoring throughout the City to calibrate the model with various ba-

sins throughout the City, simulating the model under current and various future conditions, identifying deficiencies and evaluating alternative improvements such as dual pipelines, re-routing pipelines, or increasing pipeline sizes, and developing a Capital Improvement Program with project sheets for each capital project, cost estimates, and priorities for implementing improvements to match funding availability. Work also included customized training for City staff on how to use the model.

→ Senior engineer for the Shortcut Pipeline Project for CCWD, California. This project involved the assessment and reliability improvements to a 5 mile, 48-inch to 42-inch diameter pipeline including isolation valve and appurtenance rehabilitation in delineated wetland areas, high-security oil refineries, and US Army property. Particularly challenging was coordinating work at 11 different locations to accommodate regulatory restrictions while maintaining water supply operations.

→ Associate engineer for the Bailey II, Diablo Hills, and Murchio Reservoir Improvements Project for CCWD, California. The project included improvements and rehabilitation of six reservoirs and 3 pump station with work such as water quality sampling station and pumps, site improvements, inlet/outlet pipeline replacement, reservoir caulking replacement, surge tank improvements, and cathodic protection system repairs. Particularly challenging was scheduling reservoir shutdowns and returns to service while maintaining water operations.



Jill Shankel, P.E.

Jill Shankel has 22 years of experience in the profession of civil engineering and engineering management. Jill's representative experience includes the following:

Education

BS Civil Engineering,
Columbia University, 1991

BA Physics, Reed College,
1991

Licenses

Civil Engineer, California

- Project engineer for On-Call Services for the City of San Mateo, including an emergency force main repair design for a pipe on a bridge over an inlet to the bay, and an alternatives analysis for the Delaware Trunk Sewer Rehabilitation project.
- Project engineer for the Delta Diablo Sanitation District's Pittsburg Recycled Water Pipeline Rehabilitation project, which included preliminary and final design for sliplining approximately 5,300 of existing 20- and 30-inch asbestos cement pipe. Responsible for completing all required permitting and development of plans, specifications, and cost estimate.
- Project engineer for the Santa Cruz County Sanitation District Upper Rodeo Creek Trunk Sewer Alternatives Analysis.
- Staff engineer responsible for the design and permitting of 1,200 feet of new 8-inch sanitary sewer through bay mud and contaminated soils using pilot tube microtunneling, bore and jack, and open cut construction for the Rodeo Sanitary District, California.
- Staff engineer responsible for the design of the Ralston Court Lift Station and 800 feet of dual 4-inch HDPE sewer force mains and 1000 feet of 8-inch PVC sanitary sewer for the Oro Loma Sanitary District, California.
- Quality control for the Los Carneros Water District, California, Recycled Water Pipeline project. Responsibilities included pre-design and final design of approximately 46,000 feet of 6- through 20-inch PVC pipe installed by open cut, 100 feet installed by jack and bore, 60 feet of ductile iron pipe for an elevated bridge crossing, and 106 customer connections.
- Staff engineer for a series of potable reuse technical memoranda for the Santa Clara Valley Water District, California, regarding infrastructure and cost for direct injection wells, surface water augmentation, and percolation pond systems.
- Project manager for East Bay Municipal Utility District's (EBMUD) East Bayshore Recycled Water Project Facilities Plan in Oakland, California. Work included meeting with more than 25 customers, local planning agencies, and permitting agencies to present future project; managing consultant for the environmental impact report; modeling distribution system; and evaluating retrofit requirements, distribution system pipe sizing, pump station and storage requirements, recycled water demands, and cost estimates for facilities. She also applied for and received a State Water Resources Control Board grant.
- Staff engineer for the design of a 24-inch-diameter reclaimed water pipeline, injection wells, and chemical feed system modifications for City of Livermore, California. Responsible for writing the specifications, performing hydraulic analyses, and providing cost estimates.
- Project engineer for the RP-4 Outfall for the Inland Empire Utilities Agency in Chino Hills, California (formerly Chino Basin Municipal Water District). Assisted in writing the preliminary design report and determining transmission and distribution pipe sizes for the recycled water distribution system. Performed pipeline alignment analysis, hydraulic surge analysis, and cost estimates. Designed 44,000 linear feet (LF) of 42-inch-diameter steel recycled water outfall, including plans, specifications, and cost estimates.
- Project engineer/designer for 13 miles of 54-inch-diameter recycled water pipeline and 30-inch-diameter brine pipeline for the Eastern Municipal Water District in Perris, California. The project was bid in three phases under three contracts. Work included pipeline alignment studies, cost analyses, pipe coating studies, and hydraulic surge analyses, as well as all plans, specifications, and cost estimates. Also served as project engineer for the associated sodium bisulfite dechlorination and discharge facility built under a separate contract.



Ryan F. Orgill, P.E.

Ryan Orgill joined Carollo in 2005 and has experience in master planning, hydraulic modeling, sewer system management planning, urban water management planning, and geographic information systems (GIS).

Education

BS Civil Engineering,
California State
University, Fresno, 2006

Licenses

Civil Engineer, Nevada,
California

Professional Affiliations

American Water Works
Association

California Water
Environment Association,
Central San Joaquin
Section

→ Hydraulic modeling lead on the City of West Sacramento, California, Water System Master Plan Update. Responsibilities included the development and calibration of a water system hydraulic model, system evaluation under existing and year 2035 demand conditions, and development of a staged capital improvement plan for the City.

→ Project engineer for the City of Shasta Lake, California, 2016-2026 Water Master Plan. Responsibilities included hydraulic model development and calibration using InfoWater modeling software, and capacity evaluation of the distribution system.

→ Hydraulic modeling lead for the City of Santa Barbara, California Water Model Update project. Responsibilities included the update and calibration of the City's water system hydraulic model using the InfoWater modeling software application, development of a system specific diurnal pattern for the City, and custom hydraulic model training for City staff.

→ Project engineer for the City of Cotati, California, Sewer and Water System Master Plans. Responsibilities included hydraulic model development and calibration, existing and build out analysis of the water and sewer systems, development of capital improvements to mitigate existing deficiencies and to service future growth, development of a staged capital improvement plan, and development of the final Sewer and Water System Master Plan reports.

→ Project engineer for the City of Tulare, California, Water System Master Plan. Responsibilities included hydraulic model creation and calibration, development of analysis criteria, evaluation of the City's existing water system, development of improvement projects to mitigate existing deficiencies and to serve future growth, and development of a staged capital improvement plan.

→ Project manager for the ongoing Truckee Sanitary District 2017 Hydraulic Modeling

Assistance project. The District hired Carollo provide assistance with the development and calibration of three of their four existing wastewater collection system models. The models are being calibrated to peak dry and peak wet weather flow conditions using flow monitoring data from the 2016 and 2017 storm season.

→ Hydraulic modeling lead for the ongoing City of Modesto Wastewater Collection System Master Plan. The hydraulic model was originally constructed in H2OMap Sewer as part of the previous master plan. In advance of the wastewater collection system master plan update, the City contracted with Carollo to convert the hydraulic model from H2OMap Sewer to the more advanced InfoSWMM platform. Responsibilities as part of the master plan update included updating and recalibrating the InfoSWMM hydraulic model, which involved more sophisticated simulation of storm drainage system cross connections within the InfoSWMM model.

→ Project engineer for the City of Tulare, California, Sewer, Water, and Storm Drainage Master Plans and Sewer System Management Plan. Tasks included creation and calibration of a dynamic hydraulic sewer system model to evaluate flow monitoring data, development of flow routing criteria, and evaluation of the existing sanitary sewer system to mitigate deficiencies to serve future growth.

→ Project engineer for the City of Galt, California, Wastewater Collection, Water Distribution, and Storm Drainage Master Plans. Responsibilities included calibration of the hydraulic computer model to both dry weather and wet weather conditions, assistance in the preparation of the Master Plan report, and development of a staged capital improvement plan for the City.



Reace P. Fisher, P.E.

Reace Fisher has experience in water conveyance design, pump station design, wastewater collection system design, wastewater treatment facilities planning, recycled water master planning, and infrastructure master planning.

Education

BS Civil Engineering,
California State
University, Fresno, 2009

Licenses

Civil Engineer, California

Certification

Certificate, Pipeline
Assessment Certification
Program, NASSCO,
California, 2016

Professional Affiliations

California Water
Environment Association,
Central San Joaquin
Section (Officer)

→ Project engineer for the City of Tulare, California, J Street and Alpine Vista Water Storage Tank Improvements. The project involved planning, preliminary and final design, and engineering services during construction of two 2-MG concrete storage tanks and two wells. The storage tanks are designed to supply the flow needed between the peak day and peak hour demand to mitigate low pressure issues.

→ Project engineer for the Dublin San Ramon Services District, California, Dublin Trunk Rehabilitation Design. Responsible for site investigations; utilities search; coordination of geotechnical and surveying efforts; and development of plans, specifications, and cost estimates. The project was designed to manage strict traffic requirements and rehabilitate the District's main trunk line.

→ Project engineer for the City of Modesto, California, River Trunk Rehabilitation Design. Responsible for site investigations; utilities search; coordination of geotechnical and surveying efforts; coordination with key Gallo facility staff in order to protect the Gallo site and operations; development of plans, specifications, and cost estimates; bidding support; and construction support.

→ Engineer for the City of Modesto, California, River Trunk Realignment and Beard Brook Siphon. Responsible for condition assessment investigations, evaluation of existing pipeline facilities using Pipeline Assessment and Certification Program, and recommendations for rehabilitation or replacement for preliminary design of the pipeline.

→ Project engineer for the South Tahoe Public Utility District, California, Big 5 Pump Station Condition Assessment, which includes in-field condition assessments for five pump stations with capacities up to 5,200 gpm.

→ Engineer for the City of Porterville, California, Influent Pump Station Equipment

Replacement, which included replacement of four pumps and associated VFDs.

→ Engineer for City of Fresno, California, Recycled Water Pump Station Design. Responsible for site investigations, utilities search, coordination of geotechnical and surveying efforts, and development of plans, specifications, and cost estimates. The pump station includes a wide range of flows from 300 gpm to 10,000 gpm to serve the varying demands on the recycled water system.

→ Engineer for the Sacramento Regional County Sanitation District, California, EchoWater Project Flow Equalization Project (FEQ). The \$130 million FEQ will provide an additional 110 MG of storage capacity for the facility. Additional features include roller-compacted concrete lined basins, spillways and interconnections structures, 84-inch-diameter final effluent distribution pipeline, underdrain pump station, and basin wash-down system. The wash-down system consists of manual and automated water cannons for efficient wash-down of the over 60 acres of basin area. The pump station includes four vertical turbine pumps with a capacity of 8,000 gpm. Responsible for reservoir system hydraulic calculations and modeling, pump station design, and plans, specifications, and cost estimates development.

→ Engineer for City of Fresno, California, Kings River Raw Water Transmission Pipeline. Responsible for site investigations; utilities search; coordination of geotechnical, permitting, and surveying efforts; and development of plans, specifications, and cost estimates. The project involved installation of 13 miles of 72-inch-diameter steel raw water transmission. The project is key to convey water to the surface water treatment facility, which will provide water to a portion of the City with low pressure issues.



Nathan E. Nutter, P.E.

Nathan Nutter has more than 15 years of experience in planning, design, and construction administration of water and wastewater supply, collection and treatment systems, specializing in well technology, including aquifer storage and recovery (ASR) wells, standard production wells, injection wells, and vadose zone wells.

Education

BS Mechanical Engineering, Stanford University, 1999

Licenses

Civil Engineer, Arizona, California

Mechanical Engineer, Arizona

Professional Affiliations

Arizona Water Association

American Society of Civil Engineers

California Groundwater Resources Association

→ Peer review engineer for the City of Solvang, California Hans Christian Anderson Well Equipping Design project. Project included civil site plan, grading and paving, piping, easement, well pump, mechanical/piping, and chemical system reviews for a new City well site located in the City park.

→ Project engineer for the Mesa Water District, California, Well 9 Replacement. Developed specifications for the replacement well pump, which is water flush lubricated. The existing well ended up sanding, so the client elected to drill a new well. Responsibilities for the new well included providing guidance for testing procedures after drilling and pump selection.

→ Project manager for the City of Woodland, California, ASR Wells 29 and 30. The project involves design of two ASR facilities to take off-season treated water from the new regional surface water treatment plant and inject into the wells for extraction to meet peak summer demands. Design included two new CMU buildings, demolition of existing wells/facilities, new 2,000 gpm ASR well pumps, multiple monitor wells, chlorine dosing systems, and strategic control methodology for ASR well operation and performance.

→ Technical well expert for the Mesa Water District, California, Wells 1, 3, 5, and 7 Replacement project. Responsible for developing specifications for each of the well pumps and conducting a peer review of each well site to verify the constructability of the design.

→ Project manager for the City of Goodyear, Arizona Vadose Zone Injection Well project. The city permitted five vadose zone wells to obtain recharge credits rather than discharge reclaimed water supplies for no credit. The project involved a well siting study for the wells, overseeing the

consultant who specified and controlled well drilling and installation, overseeing well equipping, and providing construction management services.

→ Project engineer/peer reviewer for the Water Replenishment District of Southern California Robert W. Goldsworthy Desalter Expansion. Oversaw design of two new production wells (line-shaft turbine) and wellhead appurtenances such as valving, instrumentation, and operational strategy. Designed and specified the wellhead mechanical equipment at both sites (piping, valving, etc). The well pumps were water flush lubricated.

→ Project manager for the City of Phoenix, Arizona, Deer Valley Water Treatment Plant ASR Well Design. Responsible for managing design of the City's fourth ASR well, which is located at an existing water treatment facility. Project components include designing a new well pump and discharge piping for ASR operation; tying into the existing 80-mgd water treatment facility; coordinating the integration of programming into the existing water treatment plant's distribution control system related to ASR well operation; and chemical dosing, nitrate analyzer, sodium bisulfite dosing system for dechlorination of potable supplies prior to injection; The well is anticipated to recharge at a rate of 1,200 gpm and recover at a rate of 1,500 gpm.

→ Project engineer for the City of Phoenix, Arizona, Cave Creek Water Reclamation Plant ASR Pilot Program. The project included equipping of a new 1,500-gpm ASR well for reclaimed water. The design incorporated a unique pump application due to the inclusion of a down-hole control valve, glass bead filter pack, and reclaimed water application. Performed hydraulic calculations to size the motor and subsequent pipeline. Permitting included work with all state and local regulatory agencies.



Justin Davidson, P.E.

Justin Davidson brings seven years of work experience as a California Registered Civil Engineer. He has successfully completed projects for government clients at the local, state, and federal levels, water and sanitation districts, private companies, and educational institutions. His duties have included preparation of civil engineering construction documents/drawings, engineering services during construction, engineer's cost estimates, technical specifications, technical reports (hydrology and hydraulic reports, floodplain studies, project design manuals, ADA assessments), 3-D digital terrain modeling, civil site design, pipeline design and review, and construction site stormwater inspections. Justin is proficient in the following software: Microsoft Office, AutoCAD Civil 3D, HEC-RAS, HEC-HMS, EPA SWMM, Bentley StormCAD, and WaterCAD.

Education

MS Civil and Environmental Engineering, University of California, Berkeley, 2016

BS Civil Engineering, California Polytechnic State University, San Luis Obispo, 2009

Licenses

Civil Engineer, California

→ Pipeline engineer for the Santa Clara Valley Water District Penitencia Delivery Main and Force Main Seismic Retrofit project. Project involved replacement of existing large diameter pipelines with new steel and earthquake resistant ductile iron pipe material. Duties included attendance at weekly construction meetings, regular site visits, submittal review, RFI review, issuance of design clarifications, review of potential change orders, oversight of other disciplines and sub-consultants, and preparation of Operations and Maintenance Manual.

→ Site civil engineer for Sacramento Regional County Sanitation District's Tertiary Treatment Facility. Project involved design of a tertiary treatment expansion of the existing 180 MGD wastewater treatment plant. Duties included design of yard piping between process facilities, design of paving and grading, stormwater management including design of a stormwater detention basin, development of specifications, steel pipe calculations, obtaining vendor quotes, site design section of Project Design Manual, and coordination with other disciplines to develop project BIM.

→ Project civil engineer for the City of Redwood City, CA Blu Harbor Residential Community. Project involved construction of a 13.5 acre residential development adjacent to the Bay. Duties included: Preparation of construction documents for public street improvements, site demolition and rough grading, fine grading, utility plans, stormwater management design to meet Bay Area Municipal Regional Permit Requirements (C.3), and fire access plan. Coordinated with the project owner,

architect, contractor, other design disciplines, and public agencies.

→ Project civil engineer for the Stanford National Accelerator Laboratory (SLAC) Science and User Support Building. Design-build project involving construction of new building on 4.6-acre site within SLAC campus. Duties included: preparation of grading and utility construction (potable water, sanitary sewer, and storm drain) documents/drawings, technical reports, and coordination with architect, contractor, land surveyor, and other engineering disciplines. Additionally, performed construction administration tasks including submittal review for compliance with technical specifications and contractor RFI response.

→ Drainage engineer for Naval Facilities Engineering Command (NAVFAC Southwest) Marine Corps Base Camp Pendleton 22 Area Storm Sewer Engineering Study. Duties included field investigation to verify presence and configuration of existing stormwater infrastructure and delineation of tributary drainage areas, determination of appropriate design criteria, hydrologic modeling using CivilD software, hydraulic modeling using StormCAD software, evaluation and preliminary design recommendations for 22 area drainage system upgrades.

→ Drainage engineer for construction site inspections for the Unified Port of San Diego, CA. Port of San Diego jurisdiction to ensure compliance with California Construction General Permit. Inspections involved checks for proper best management practice (BMP).



Christopher A. Carvalho, P.E.

Chris Carvalho, a vice president with Carollo Engineers, has 25 years of experience in design and construction administration of electrical and control systems for water and wastewater facilities. During his career, Mr. Carvalho has gained experience in medium- and low-voltage power distribution, lighting, grounding, and electrical control. His instrumentation experience includes development of process and instrumentation diagrams (P&IDs) and control strategies, supervisory control and data acquisition (SCADA), and programmable logic controller (PLC) and distributed control system (DCS) applications, including networking and communications. As chief electrical engineer at Carollo, Mr. Carvalho is responsible for quality reviews, value engineering reviews, and maintenance of standard specifications and typical details.

Education

MS Electrical Engineering,
Ohio University, 1993

BS Electrical Engineering,
Ohio University, 1991

Licenses

Professional Engineer,
Colorado, Washington,
Utah

Electrical Engineer,
California, Idaho

Professional Affiliations

Institute of Electrical and
Electronics Engineers

→ Senior electrical/instrumentation and control engineer for the City of Tulare, California, J Street and Alpine Vista Water Storage Tank Improvements. The project involved planning, preliminary and final design, and engineering services during construction of two 2-MG concrete storage tanks and two wells. The storage tanks are designed to supply the flow needed between the peak day and peak hour demand to mitigate low pressure issues. Alternative tank materials were evaluated and included welded steel and prestressed concrete. Ancillary facilities at each site include a booster pump station equipped with split-case centrifugal pumps, electrical building, sodium hypochlorite feed facility, and standby generator.

→ Senior electrical engineer for the City of Modesto, California, River Trunk Realignment, which included the Shackelford Pump Station. The project involved final design of a 100-foot-deep, 40-mgd wastewater lift station with five submersible pumps, as well as 30- and 42-inch HDPE force mains and gravity sewer pipes ranging from 48 to 72 inches.

→ Electrical engineer for the Sacramento Area Sewer District, California, 2015 Pump Station Condition and Performance Assessment. The District owns and operates 106 pump stations throughout the Sacramento region. In early 2015, six pump stations were chosen for detailed evaluation due to safety, reliability, maintenance cost, good neighbor, and efficiency concerns. Carollo performed in-field condition assessments and performance tests to identify deficiencies at each pump station.

→ Electrical engineer for the City of Porterville, California, Wastewater Treatment Plant Influent Pump Station Equipment Replacement, which involved replacing four existing line-shaft pumps with immersible dry pit pumps to provide 14 mgd of firm capacity. The existing pumps had exceeded their useful life and had become unreliable, which put the City at risk for sewer system overflows.

→ Senior electrical/instrumentation and control engineer for the Central Contra Costa Sanitary District, California, Comprehensive Wastewater Master Plan. The Plan encompasses a \$1.8 billion capital improvement program for the collection system and wastewater treatment plant. Treatment plant improvements identified by the plan include replacement of the steam-driven aeration system with a new electric blower system and a revamping of the entire solids handling facilities.

→ Lead electrical engineer for the Metro Wastewater Reclamation District, Colorado, PAR 1085 South Secondary Treatment Improvements. The electrical work on this \$134 million rehabilitation and expansion included two new 12-MVA utility feeds, 15-kV switchgear with automatic transfer functionality, medium- and low-voltage power distribution, 4,160-volt power system with switchgear and reduced voltage solid state starters to support five 2,000-horsepower blowers. Process networks included DeviceNet for motor control, Profibus PA and Profibus DP for valve and instrumentation control and monitoring, and fiber optics to support various control and enterprise networks.



Mike E. Dadik, P.E., S.E.

Mike Dadik, an associate vice president with Carollo, has 26 years of experience in structural design of water, wastewater, transportation, and civil engineering projects. Since joining Carollo, he has overseen the structural design of numerous projects ranging from water and wastewater treatment plant construction and expansion to pump station seismic retrofits. Mike has extensive experience in rehabilitation and seismic vulnerability assessments. Mike is Carollo's coating specialist responsible for maintenance of our coatings and finishes specifications. He has extensive experience in coating and corrosion control

Education

BS Civil Engineering,
Arizona State University,
1996

Licenses

Civil Engineer, California
Structural Engineer,
California, Nevada
Civil/Structural Engineer,
Washington, Oregon

Professional Affiliations

American Society of Civil
Engineers
Chi Epsilon (National Civil
Engineering Honor
Society)
Engineers Without
Borders, Technical
Advisory Committee
Structural Engineers
Association of Northern
California
Tau Beta Pi (National
Engineering Honor
Society)
NACE International
Society for Protective
Coatings, Northern
California Chapter
Steering Committee
Governor's Office of
Emergency Services,
ATC-20 Trained
Responder

- Structural engineer for the California Department of Corrections and Rehabilitation California Men's Colony Water Distribution System Replacement. This project included design for replacement of more than 112,000 feet of distribution piping, eight pipe bridges ranging from 65 feet to 214 feet long, two booster pump stations, and reservoir modifications. Responsible for development of structural plans, specifications, and cost estimating.
- Structural engineer for the seismic retrofit of the Contra Costa Water District, California, Treatment Water Facilities Improvement Program. Work included condition assessment and seismic evaluation of a buried concrete reservoir, an above-ground steel reservoir, two pump stations, and associated electric and equipment buildings. Following the seismic evaluation, recommendations were made for retrofit strategies satisfying the client's budget and performance goals.
- Structural engineer for the seismic retrofit of the Penitencia Water Treatment Plant sedimentation basin for the Santa Clara Valley Water District, San José, California. Special considerations at this site included the potential for lateral spreading of the soil beneath the basin resulting from a landslide.
- Project manager for Alameda County Water District, California, Appian Tank Upgrade Project. Project elements include replacement of the steel 0.75-MG steel tank and 3500 feet of transmission pipeline, and access road upgrades traversing upland grass habitat. The tank is the only water storage in the pressure zone requiring temporary backup power and pumping to maintain reliable service.
- Structural engineer for the City of West Sacramento, California, Bridge District Pump Station, Reservoir, and Park. Work included design of a 3-MG water storage tank, 3,000-gpm booster pump station and a municipal park to serve the new Bridge District development. This required coordinating aesthetic treatment of the tank and pump station to compliment the neighboring subdivision.
- Structural engineer for design of the 3-MG prestressed concrete Reservoir 10B for the Dublin San Ramon Services District, California.
- Structural engineer for design of a 2-MG reinforced concrete rectangular wet weather storage basin at the Irvington Pump Station for the Union Sanitary District, California.
- Structural engineer for design of Pump Station 300C for the Dublin San Ramon Services District, California.
- Structural engineer for design and construction of the Fairfield-Suisun Sewer District, California, LedgeWood Creek Outfall. Design included a new outfall from the Fairfield-Suisun Wastewater Treatment Plant to LedgeWood Creek. The project included approximately 8,000 feet of 42-inch pipe.
- Structural engineer for Phase 2A of the A-Line Relief Interceptor for the Central Contra Costa Sanitary District, California. The project involved design and construction of 96-inch or 102-inch concrete pipe to extend the interceptor from the Buchanan Fields Golf Course approximately 3,100 feet, a significant portion of which was tunneled. It also incorporated design and construction of approximately 1,550 feet of 42-inch and 72-inch interceptor to connect influent sewers to the A-Line.



Kenneth E. Sinclair, P.E.

Kenneth Sinclair is a Senior Construction Manager with Carollo Engineers. His duties include the supervision of field staff and administration and coordination of construction management services with clients and their design engineers. Specific responsibilities include assisting clients during the bid period, attending bid openings, and making recommendations concerning the responsiveness of bids and bidders. He assists in securing permits for construction, facilitates a timely review of all project communications including submittals, requests for information and correspondence, reviews and analyses the construction schedule and monthly updates, evaluates and negotiates costs of change orders, assists the client in claims resolution, monitors contractor safety programs, provides monthly progress reports to the client and makes recommendations on final project acceptance once the work is complete. He also monitors all construction activities to confirm compliance with project documents.

Prior to joining Carollo, Ken served in similar roles with Vali Cooper and Associates where he was also the lead of their water and wastewater practice in the San Francisco Bay Area and with The Covello Group where he was also a vice president and assistant secretary of the company. Ken's specific project experience includes:

→ Construction manager for the North Marin Water District, Novato, California, Aqueduct Energy Efficiency. This \$13.5 million dollar project included the installation of approximately 3 miles of 42-inch mortar lined, tape wrapped pipe that serviced as a main source of water for the District. The project was partially funded by Caltrans and required extensive interaction with Caltrans Representatives. Coordination was also required with permitting agencies and local residents and property owners along the alignment. Other project features included to jack and bore crossings of Highway 101 and the jack and bore crossing of San Antonio Creek. Four horizontal directional crossings of Highway 101 were completed to provide water service to local residents.

→ Resident engineer for the Napa Sanitation District/Los Carneros Water District Recycled Water Pipeline project that included approximately nine miles of 8- to 20 inch pipeline consisting of a combination of PVC bell-and-spigot, fusible PVC, and welded steel sections. The pipeline, varying in depth from 4 to 12 feet deep, included excavation of existing pipeline sections and seismic upgrade of joint fittings and components.

→ Construction manager for the Delta Diablo Sanitation District, California, Phase 1 Bay Point Sewer Repairs Project. This \$900,000 project replaced several collections system pipelines in the Bay Point area

of the Delta Diablo system. The project was funded by the State Revolving Fund and appropriate documentation was provided for compliance with the requirements of the loan agreement. Required items included quarterly progress reports and DBE reporting, and coordination of certified payroll reviews.

→ Resident Engineer for the Los Vaqueros Reservoir Project, Contra Costa Water District, California, construction of the conveyance facilities. Work on the \$450 million project involved the construction of a new delta intake facility with a pumping capacity of 250 cfs and a transfer pumping station to lift flows into a new dam with a capacity of 200 cfs. The pipeline included portions of 72, 90, and 96 inch diameter pipe. Work also included finalizing permits with local, state, and federal agencies, coordinating work with over 50 local property owners, managing consultant contracts and representing the District in all issues related to the project.

→ Construction manager for the Delta Diablo Sanitation District, California Pittsburg Force Main Project that includes approximately 12,600 feet of 28-inch HDPE pipeline installed in public and private streets, private property, and the Union Pacific and Burlington Northern Santa Fe Railroads rights-of-way.

Education

BS Civil Engineering,
California State
University, 1986

Licenses

Civil Engineer, California

Professional Affiliations

American Society of Civil
Engineers

Association of California
Water Agencies

SUMMARY

Dru has 28 years of experience performing and directing geotechnical investigations for water, wastewater and recycled water infrastructure projects including treatment plants, storage basins, water tanks, pump stations and pipelines (open cut and tunneling) up to 10-foot in diameter and to tens of miles long. Investigations have included aerial photo and topo map review, field mapping; seismic, magnetic, and electrical resistivity surveys; slope inclinometers; soil borings (solid and hollow-stem auger, mud-rotary, roto-sonic), rock coring, and cone penetration tests; test pits; soil and bedrock laboratory tests; and wells. Dru has extensive investigation experience for trenchless projects including microtunneling, earth pressure balance tunneling, open shield tunneling, pilot-tube-guided boring methods, auger bore and jack, horizontal directional drilling, pipe bursting/reaming, slip-lining and cured-in-place pipe.

EXPERIENCE

Santa Cruz County Sanitation District Projects

Dru has participated in the completion of geotechnical investigations for many District projects, including Aptos Creek, Noble Gulch, and the 14th-16th Avenue Improvements. These projects included horizontal direction drilling, microtunneling, and pilot-tube guided boring crossings of waterways, highways, and in narrow easements. Investigations for the projects included mapping, test borings and test pits, and seismic refraction surveys. Dru reviewed contractor submittals and requests for information for the District during construction of the projects.

City of San Mateo El Cerrito Relief Line Project

Dru designed and supervised the geotechnical investigation and provided geotechnical services during construction. The investigation included alignment alternatives analysis, followed by 22 test borings to depths up to 35 feet along the selected route. The project consisted of the design and construction of 12,500 feet of 10- to 30-inch inside gravity polyvinyl chloride pipeline constructed along city streets and beneath San Mateo Creek through Gateway Park in San Mateo.

Napa Sanitation District MST Recycled Water Pipeline

Dru designed and supervised the geotechnical investigation, and provided geotechnical services during construction. The project consisted of 29,200 feet of 8- to 24-inch pipeline, a pump station, pipe bridges and an auger bore and jack creek undercrossing. The investigation which included 20 test borings up to 50 feet deep, seismic refraction surveys, and specialty coring and testing of rock.

City of Concord Downtown Sewer & Streetscape Improvements, Concord, CA

Project Manager, Project Manager. Mr. Nielson designed and performed the geotechnical investigation and report, which included geologic mapping, library and aerial photographic research, reference logs, and the performance of 18 test borings to depths of 23 feet.

EDUCATION

BS & MS, Geology, Brigham Young University, Provo, UT, 1986 & 1988

PROFESSIONAL REGISTRATIONS

Professional & Certified Engineering Geologist: California, #1854 (1994) & #5651 (1993)

EMPLOYMENT HISTORY

1989 – 2017, McMillen Jacobs Associates (acquired GeoEngineers & DCM/Joyal Engineering in 2011)
1986, U.S. Geological Survey, Menlo Park

**RICHARD P. WEBER, PE, PLS, QSD | Surveyor**

California Registered Civil Engineer #55219
California Licensed Land Surveyor #8002
California Qualified SWPPP Developer #20534

EDUCATION: B.S. - Civil Engineering
Santa Clara University, Santa Clara, California

QUALIFICATIONS:

Over twenty years' experience as a Project Manager, Land Surveyor and Design Engineer for both public and private institutional clients. Areas of expertise include land surveying, Geographic Information Systems (GIS), site planning and design for institutional and campus environments, storm water management, Low Impact Development (LID), and road and highway design.

REPRESENTATIVE PROJECT EXPERIENCE:

- **Santa Cruz County Sanitation District – 2010** – Provided construction staking, right-of-way surveying, legal descriptions and plats, for sanitary sewer improvements.
- **Santa Cruz County Sanitation District – 2007-2014 CIP** – Managed project topographic surveying for approximately 12 miles of sewer main replacement at various locations
- **Monterey Peninsula Water Pollution Control Agency - On-Call Surveying Services-** Managed ongoing surveying services for the Wastewater Treatment Plant site and regional facilities
- **Pebble Beach Community Services District – On-Call Surveying** – Managed surveying services for all PBCSD projects, including sewer & water mains replacement projects, legal descriptions, title research, construction staking and settlement monitoring of reservoir dam embankments.
- **City of Santa Clara – 2009 Sewer Improvements Project** – Managed surveying effort which included project topographic, photogrammetric and boundary surveying for sewer main replacement at various locations
- **City of Los Angeles – Hyperion Wastewater Treatment Plant** – Managed surveying to establish grades on fixed structures to incorporate into plant engineering/hydraulic models.
- **Carmel Area Wastewater District – Highlands Area Annexation** – Prepared annexation map and legal description for annexation to the District and prepared legal descriptions for utility easements and construction easements
- **Carmel Area Wastewater District - Reverse Osmosis Treatment Facility** - Provided construction staking for the reverse osmosis treatment facility at Carmel Area Wastewater Treatment Plant.
- **Marina Coast Water District – Well Lot 33** – Performed aerial mapping and surveying associated with pre-design planning for a 2.6 mile main extension and well site.
- **California American Water Company – Monterey Peninsula Water Supply Project** – Principal in charge of civil engineering and land surveying for development of 14-acre desalination plant site, including grading, paving and stormwater management. Work performed under subcontract to the prime consultant.
- **Sand City – Reverse Osmosis Desalination Facility** – Managed project construction staking for the desalination facility.
- **County of Monterey - San Jerardo Water Treatment System** – Performed aerial mapping, right of way mapping and surveying associated with a 2.6 mile water pipeline and well site design.

PROFESSIONAL ORGANIZATIONS:

California Society of Professional Engineers (Past President-Monterey Bay Chapter)
American Council of Engineering Companies (Past President-Monterey Bay Chapter)
American Public Works Association
California Land Surveyors Association



Denise Duffy

Principal

Education

Bachelor of Arts, Environmental Studies, University of California at Santa Barbara, 1979

Professional Affiliations

American Planning Association

Association of Environmental Professionals (AEP)

National Environmental Policy Act (NEPA) Professionals

Planning & Conservation League

Work Experience

Principal/ President, DD&A, Inc.

Senior Manager/ Environmental Planner, EMC Planning

Assistant Planner, City of Fresno

Intern, California Department of Fish and Game

Additional Affiliations/Volunteer Experience

Guest Lecturer/Speaker for Monterey College of Law, California State University

Vice President, Board of Santa Lucia Conservancy

Past Board Member of:

Big Sur Land Trust Monterey Open Space Trust

Monterey Federal Credit Union

Denise Duffy is founder and president of the company, and has extensive experience in public involvement, environmental analysis, project management, entitlement processing, and interagency coordination. Ms. Duffy is a leader in the field of land use planning and environmental and public policy in the Central Coast area. She brings over 34 years of experience in CEQA and NEPA processing, public involvement, and project management for major infrastructure studies. Ms. Duffy has prepared, managed and participated in hundreds of environmental analyses and reports including EIRs, EAs, EISs and IS/MNDs.

Ms. Duffy's experience over her 34 years as principal of DD&A includes environmental reports and analysis that have been conducted for and/or been accepted by State and Federal Agencies including Caltrans, California Department of Water Resources (DWR), Army Corps of Engineers (USACOE), Federal Highway Administration (FHWA), National Marine Fisheries (NMFS/NOAA), U.S. Department of Housing and Urban Development (HUD), U.S. Fish and Wildlife Service (USFWS), as well as various other federal and state review agencies. Her experience qualifies her as project manager, development expert, and land use consultant for major facility and planning projects in California.

Ms. Duffy has extensive experience managing and authoring environmental assessment documents for private and public developments and in the management of complex water resource planning processes for large transportation planning projects. Ms. Duffy has extensive experience in public involvement, including the development of policy consensus in planning projects; she has worked in a variety of positions that require governmental cooperation and citizen involvement.

Project Experience:

Water Infrastructure Projects:

- *Pure Water Monterey Groundwater Replenishment Project, Monterey County Water Pollution Control Agency*
- *RUWAP EIR and NEPA EA, Marina Coast Water District*
- *Coastal Water Project, Regional Desalination Plant NEPA Compliance, for Marina Coast Water District and United States Bureau of Reclamation*
- *CEQA Implementation Guidelines for SLP CSD*
- *Regional Water and Reclamation Project EIR, former Fort Ord and Marina*
- *Lessalt Water Treatment Plant Initial Study, City of Hollister*
- *Eastern Distribution Water System IS, Marina Coast Water District*
- *Branciforte Water Services Extension IS, City of Santa Cruz Water Dept.*
- *San Lorenzo Water District Monitoring Work*
- *San Clemente Dam EIR, State Department of Water Resources*
- *Regional Water Supply Program, Marina Coast Water District*
- *Three Way Recycled Water Agreement, Marina Coast Water District*
- *Moore's Lake IS & CEQA Preparation, Santa Lucia Community Services District*

Wastewater Infrastructure Projects:

- *Noble Gulch Sewer Improvement Project, Santa Cruz County Sanitation District (Principal-in-Charge)*
- *Aptos Transmission Main Relocation Project, Santa Cruz County Sanitation District (Principal-in-Charge)*
- *Valencia Creek Sewer Relocation Project, Santa Cruz County Sanitation District (Principal-in-Charge)*
- *CAWD Sphere of Influence Amendment, Carmel Area Wastewater District*
- *Carmel Highlands Onsite Wastewater Management Plan, Initial Study, Monterey County Health Division*
- *City of Hollister Wastewater Treatment Plant Negative Declaration*
- *Outfall Brine Disposal Agreement, Marina Coast Water District*
- *Desalination Plant Brine Discharge Initial Study, Monterey Regional Water Pollution Control Agency*
- *CAWD Reclamation Project EIR, Carmel Area Wastewater District*
- *Gilroy Storm Water Management Program IS, City of Gilroy*

FIRM QUALIFICATIONS AND PROJECT EXPERIENCE

COMPANY BACKGROUND

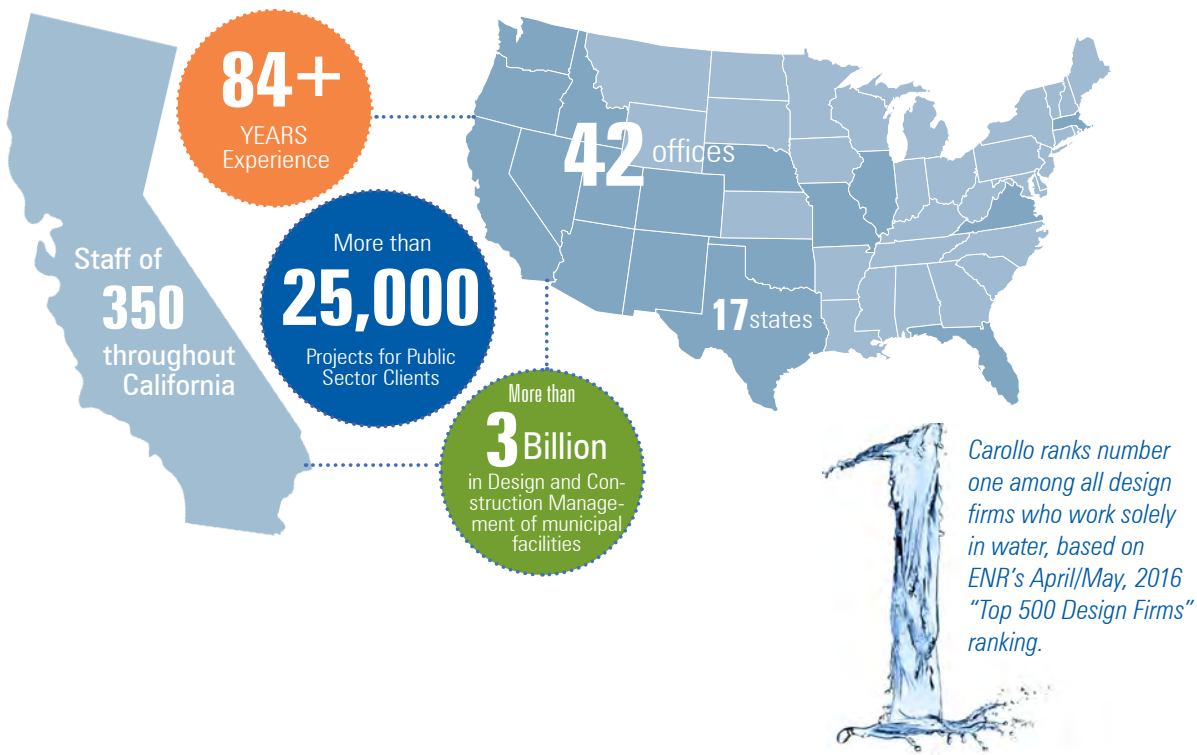
Founded in 1933, Carollo Engineers, Inc. is an multi-disciplined engineering firm specializing in the planning, design, and construction management of wastewater, water, and storm drain facilities. During our 84-year history, we have successfully completed more than 25,000 projects for public sector clients, and are currently ranked within Engineering News Record's (ENR) top 100 design firms. In 2016, Carollo was selected as ENR's "California Design Firm of the Year." Unlike the majority of our competitors, Carollo only provides water-related engineering services. We recruit nationwide and hire technical staff with extensive background and training specific to this field. For that reason, the quality and professional standing of our core group of water and wastewater professionals equals or exceeds that provided by some of the largest design firms in the country.

As the lead consultant for numerous similar as-needed contracts throughout California, we have developed a deep understanding of the many different factors that contribute to the success of an engineering services contract, such as that proposed by MCWD. Through

our unparalleled experience in working directly with agencies, **we understand that listening to our clients, understanding their real needs, and responding effectively to these needs are the most important elements of success.**

Carollo is nationally recognized for our technical capabilities and our ability to offer advanced solutions that are practical, affordable, and reliable. We have completed multiple projects for many of our clients. This has allowed us to respond to the ever-evolving needs of customers and solidifying our commitment to excellence by:

- Conducting more than \$200 million of work annually.
- Maintaining a singular focus to provide the best water-related engineering services to public agencies.
- Offering a staff of more than 1,000 in 42 offices throughout the U.S., including more than 350 in California.
- Providing highly qualified team members who are committed and available to work on this important assignment for the District.



INTRODUCTION

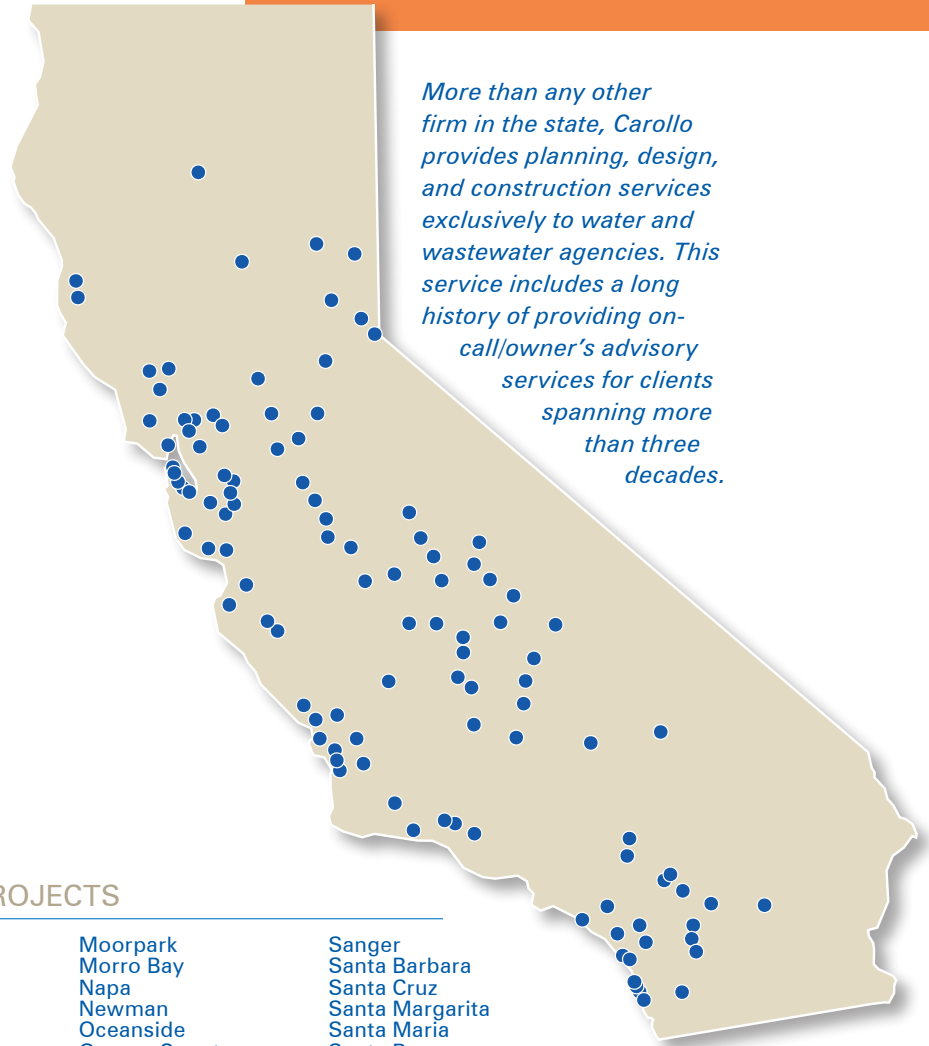
This section presents a summary of the firm's experience with the following types of projects identified in the District's 5-Year CIP, as it relates to potable water, wastewater (sanitary sewer), and recycled water systems.

- Plan Review/Owner's Advisor Services
- Water/Wastewater/Recycled Water Pipelines
- Water Well Design and Rehabilitation
- Pump Stations
- Reservoirs
- Construction Management
- Hydraulic Modeling/Planning

We have provided detailed descriptions of representative California project examples on the following pages that demonstrate our recent experience with the services above. More complete lists of California projects for each area of expertise are presented at the end of this section.

We have built our reputation by focusing on providing two things: highly responsive and personal service and focused technical expertise.

More than any other firm in the state, Carollo provides planning, design, and construction services exclusively to water and wastewater agencies. This service includes a long history of providing on-call/owner's advisory services for clients spanning more than three decades.



California Clients

WATER AND WASTEWATER PROJECTS

Anaheim	El Dorado	Moorpark	Sanger
Arvin	El Toro WD	Morro Bay	Santa Barbara
Atascadero	Encina	Napa	Santa Cruz
Atwater	Escondido	Newman	Santa Margarita
Bakersfield	Exeter	Oceanside	Santa Maria
Benicia	Fort Bragg	Orange County (CSDOC P1)	Santa Rosa
Brea	Fresno	Orange County (CSDOC P2)	Sausalito
Camarillo	Gonzales	Orange Cove	Scotts Valley
Cambria CSD	Grass Valley	Oro Loma	Shafter
Camrosa	Gustine	Paso Robles	Shaver Lake
Carlsbad	Half Moon Bay	Pismo Beach	Sonoma County
Caspar South	Hanford	Porterville	South San Francisco
Central Contra Costa SD	Hemet	Portola	Stockton
Chico	Hillsborough	Quincy	STPUD
Chino Basin	Irvine Ranch WD	Redding	Taft
Coalinga	King City	Redlands	Tehachapi
Corcoran	Las Virgenes	Reedley	Templeton
Corona	Lindsay	Riverside	Tracy
Crestline SD	Lone	Roseville	Tulare County
Cutler-Orosi	Lost Hills	Sacramento	Turlock
Daly City	Madera	San Bernardino	Union SD
Delano	Marin County SD No. 5	San Bruno	Vallecitos WD
Delta Diablo SD	Marina Coast WD	San Clemente	Vallejo District
Dinuba	Mendota	San Diego	Visalia
Dublin/San Ramon	Millbrae	San José	Wasco
East Municipal WD (Perris)	Milpitas	San Luis Obispo	Watsonville
EBMUD	Modesto	CMC	West County
	Monterey		Yucaipa

Plan Review/Owner's Advisor Services

Carollo provides a full range of on-call, program management, and owner's advisory services for municipal water and wastewater agencies across the U.S. In each case, our services are tailored to meet the individual needs of the municipality and are inclusive of planning through post-construction services.

Our team offers extensive experience in delivering CIP projects, both large and small, and we are 100 percent committed to the success of your projects. Examples of two recent, plan review/owner's advisory services provided to municipal clients are presented below. A more complete listing of similar projects are included at the end of this section.

North Valley Regional Recycled Water Program (NVRWP) Owner's Agent

CITY OF MODESTO, CA



PROJECT DESCRIPTION

The North Valley Regional Recycled Water Program (NVRWP) offers a regional water supply solution to the Del Puerto Irrigation District's service area, whose supplies have been severely impacted by the California drought and environmental restrictions on pumping from the Sacramento-San Joaquin River Delta.

Carollo is leading the owner's advisor (OA) services for the NVRWP. The OA team's services include preliminary design and procurement of a design-build team to construct six miles of 42-inch pipeline and the retrofit of a pump station. The OA team implemented a two-stage procurement process (RFQ and RFP) resulting in an executed design-build (DB) contract. Carollo is now providing oversight of the DB team's design and construction. Our OA team is part project manager (providing funding, permitting, and outreach); part project designer; part Construction Manager and Inspector during construction; and part extension of City staff—all characteristics required for a successful project.

POINT OF CONTACT:

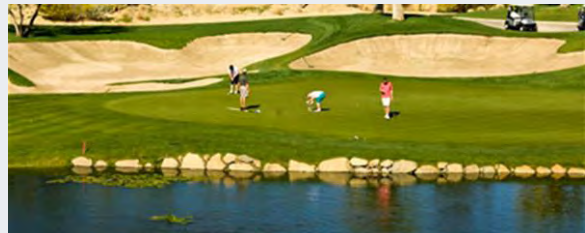
Will Wong, Acting Director of Utilities
1010 Tenth Street, Suite 4600, Modesto, CA 95353
209-571-5801 | wwong@modestogov.com

FEE: \$4M

COMPLETION DATE: 3/2018 (est.)

Wastewater Reclamation Project Owner's Representative

HI-DESERT WATER DISTRICT, CA



PROJECT DESCRIPTION

Carollo is the Hi-Desert Water District owner's representative project manager for a \$150 million septic to sewer conversion. The scope of the project includes 77 miles of pipe, three lift stations, and a reclamation facility that will have an ultimate capacity of 6 mgd. Carollo's responsibilities included serving as an extension of District project management staff, working closely with both District staff and the District's consultant(s) to deliver a quality project. We were the "technical eyes and ears" of the District to ensure: 1) a technically sound design; 2) compliance with the consultant contract requirements; 3) coordination with other related District activities/projects; and 4) communication of project progress.

Project elements included preparing grant and loan applications to assist with project funding, reviewing assessment district reports, assisting with public outreach, developing and maintaining an overall program schedule, and managing design of 77 miles of 6- to 24-inch wastewater collection system piping and three pump stations, including development of design criteria to be used as the District's standards, review of all submittals, and performing a constructability review.

POINT OF CONTACT:

Ed Muzik, General Manager
55439 29 Palms Highway, Yucca Valley, CA 92284
760-228-6269 | edm@hdwd.com

FEE: \$900K | TOTAL PROJECT COST: \$77M

COMPLETION DATE: 5/2016

Water/Wastewater/Recycled Water Pipelines

We have provided the full range of engineering services for more than three million linear feet of water, wastewater, and recycled water pipeline, ranging from four to 120 inches in diameter and with pressures from zero (gravity flow) to 600 psi. We routinely address important considerations such as evaluating alternative alignments, utility research, encroachment permits, roadway/paving replacement, pipe selection, challenging crossings, and coordinating with various impacted parties. Two representative California projects for each pipeline category (water, wastewater, and recycled water) are presented in the following pages.

Water Pipeline Projects

California Men's Colony Water Distribution System Improvements

CALIFORNIA DEPARTMENT OF CORRECTIONS AND REHABILITATION, CA



PROJECT DESCRIPTION

The California Men's Colony (CMC) operates and maintains approximately 40 miles of distribution pipelines, 5 storage reservoirs, 2 booster pump stations, and 3 inactive wells. The water distribution system was hastily constructed by the U.S. Army Corps of Engineers at the beginning of World War II when Camp San Luis Obispo was developed as a regional training facility by the Army.

Carollo prepared a facilities plan, including hydraulic modeling, to identify capacity and pressure deficiencies, evaluate water quality problems, and recommend improvements. Following review of the facilities plan, Carollo completed design for replacement of more than 21 miles (112,000 feet) of 6-inch to 18-inch-diameter pipelines. Construction methods included traditional open-cut, bore/jack crossings of State Highway 1, and pipe bridges for creek crossings. Work also included improvements to two booster pump stations, storage tank modifications, new control valves, pressure-reducing valve stations, blowoff and air/vacuum relief facilities, hydrants, and reactivation of one key well.

POINT OF CONTACT:

Merle McDanel, Project Director
707 Third Street, Suite 3-305, West Sacramento, CA 95605
916-376-1682 | Merle.McDanel@dgs.ca.gov

FEE: \$2.4M | TOTAL PROJECT COST: \$23.8M

COMPLETION DATE: 2010

City-wide Waterline Replacement at Bartlett Avenue

CITY OF SUNNYVALE, CA



PROJECT DESCRIPTION

Carollo completed design and engineering services during construction of over one mile of water main for the City of Sunnyvale, which included approximately 1,200 feet of 8-inch PVC and 3,400 feet of 6-inch PVC. The pipeline was in residential streets, so it included replacement of over 130 service laterals, multiple connections to existing water mains and more than 10 fire hydrants with laterals. Connections to the existing system were completed using hot taps to minimize the downtime of the existing system.

The project was required to replace aging water lines, increase fire flow, and meet the new City requirement of all waterlines having a minimum diameter of 6 inches. Pipe bursting and open cut were evaluated for installation because the piping was being upsized. However, pipe bursting was not used as the existing pipe was asbestos concrete (AC) and pipe bursting would cause the AC pipe to become friable. All piping was installed with open trench as the amount of traffic was low, pipelines were located in public right-of-way, pipeline depth was shallow, disturbance using open trench would be minimized, and the amount of AC pipe removal would be minimized since a new alignment was selected.

POINT OF CONTACT:

Richard Chen, Project Manager
456 West Olive Avenue, Sunnyvale, CA 94086
408-730-7510 | RChen@ci.sunnyvale.ca.us

FEE: \$105K | TOTAL PROJECT COST: \$841K

COMPLETION DATE: 2/2012

Pipelines (cont.)

We have planned, designed, and assisted in the construction of infrastructure rehabilitation/repair projects using various **trenchless technologies**. Our pipeline design projects have incorporated standard cut-and-cover, jack and bore, micro-tunneling, horizontal directional drilling, tunnel boring, pipe bursting, fold and form pipe, cured-in-place pipe and sliplining techniques. We correctly match the available technologies and costs to the site-specific installation conditions to ensure a cost-effective project. For many, trenchless technologies are considered a last resort solution. This is understandable, because these technologies were originally perceived as more expensive or a greater risk than conventional open-cut trench construction. Trenchless technologies are not “new” or “innovative” to Carollo’s infrastructure engineers. These are the tools we use every day to cost-effectively solve the challenges of constructing and rehabilitating critical infrastructure through urbanized areas with the least possible disruption to residents, businesses, traffic, and the environment.

Recycled Water Pipeline Projects

Regional Urban Water Augmentation Program (RUWAP) Recycled Water Pipeline

MARINA COAST WATER DISTRICT, CA



PROJECT DESCRIPTION

The Recycled Water Pipeline Project (RUWAP), a 37,945-foot, 24-inch distribution system and 2-MG welded steel storage tank, was originally envisioned to provide recycled water from the Salinas Valley Reclamation Project to meet a portion of the urban water needs for neighboring communities.

The project also provided the opportunity to increase regional recycled water service, provide infrastructure to accommodate future groundwater recharge, and reduce discharges to Monterey Bay. Carollo provided project management, design services, permit coordination, easement acquisition assistance, bid assistance, and construction administration.

The project was designed to approximately 90 percent before being shelved for various reasons. The project has recently been restarted, and will be part of the Pure Water Monterey Project conveyance system. The pipeline will now convey advanced treated water for groundwater injection as well as irrigation through the Cities of Marina and Seaside including the former the Fort Ord area.

POINT OF CONTACT:

Mike Wegley, District Engineer
2840 4th Avenue, Marina, CA 93933
831-883-5925 | mwegley@mcwd.org

FEE: \$2.8M

COMPLETION DATE: 1/2017

Los Carneros Recycled Water Pipeline

LOS CARNEROS WATER DISTRICT, CA



PROJECT DESCRIPTION

Carollo provided planning, design, CEQA, funding, outreach, assessment engineering support, ESDC, and construction management services for the District’s Recycled Water Pipeline project. The project sought to obtain supplemental water to improve the region’s long-term viability. Carollo conducted a feasibility study and provided final design for approximately 9 miles of 6- to 20-inch recycled water pipeline and associated appurtenances.

Key features included:

- Work was performed adjacent to residential areas.
- The pipeline included both a jack-and-bore section and a constructed abutment bridge crossing over a sensitive waterway.
- 9 miles of 6- to 20-inch diameter pipe (combination of fusible PVC and Bell & Spigot). The pipeline varied in depth from 4- to 12-foot deep and included excavation of existing pipeline sections and seismic upgrade of joint fittings and components.
- The project included more than 100 customer connections.
- Close coordination with utilities, schools, growers, and PG&E to determine construction constraints.
- Close coordination with the County to determine paving and culvert crossing requirements.

POINT OF CONTACT:

John Stewart, Past President, Board of Directors
2111 Las Amigas Avenue, Napa, CA 94559
707-738-4600 | jstewart@rsacivil.com

FEE: \$934K | TOTAL PROJECT COST: \$10.5M

COMPLETION DATE: 2016

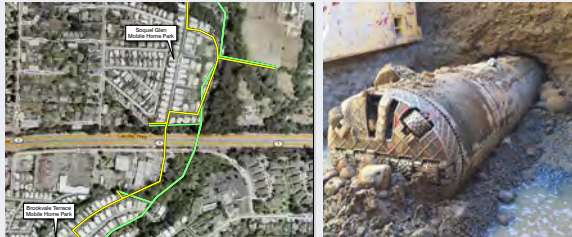
Pipelines (cont.)

Our hands-on experience during design and construction with each of the construction methods used for constructing new pipelines and rehabilitating existing pipelines has enabled us to develop a procedure for determining the most effective construction technique (or combination of techniques) for each project.

Wastewater Pipeline Projects

Noble Gulch Sewer Improvements (PH1-3)

SANTA CRUZ COUNTY SANITATION DISTRICT, CA



As part of SCCSD's FY07-08 and 08-09 contracts, Carollo provided design for the Noble Gulch Area, which included 6,600 feet of 15-inch gravity sewer trunk line (Phase 1).

PROJECT DESCRIPTION

The Santa Cruz County Sanitation District retained Carollo for its On-Call FY 07-08 and FY 08-09 Sewer Improvements. As part of the on-call services contract, Carollo completed design of more than 20,000 feet of sewer improvements involving pipes ranging from 6 to 30 inches in diameter. The contract, which involved seven separate sewer improvement projects, spans four separate areas: Noble Gulch, Harper Street, Felt/Rodeo Streets, and Schwan Lake. Much of the work on these projects was located in sensitive riparian habitats, in residential areas, along state beaches, and in commercial zones.

The Noble Gulch project relocated an existing trunkline following Noble Gulch into nearby roads to reduce environmental impacts and improve accessibility. The existing sewer was upsized from 12 to 15 inches to eliminate capacity constraints. The project included an alternatives analysis, and preliminary and final design of 6,600 feet of 15-inch PVC gravity sewer trunk line. A combination of construction methods was utilized to address geotechnical conditions, pipeline depth and environmental constraints. Ultimately the project incorporated open cut, horizontal directional drilling, microtunneling, and cured-in-place pipe lining. The project involved traversing two privately owned mobile home parks and constructing a new Highway 1 crossing. Our work included development of legal descriptions and plat maps to obtain easements, discussions with property owners and multiple jurisdictions, and preparation and attendance at public outreach meetings.

In addition to preparing plans/specifications, Carollo coordinated the surveying, condition assessment, geotechnical engineering, environmental documentation, utility locating work, bid services, engineering services during construction, and record drawings.

POINT OF CONTACT:

Shaun Deyhim, Civil Engineer
701 Ocean Street, Santa Cruz, CA 95060
831-454-2000 | shaun.deyhim@santacruzcounty.us

➤ **FEE:** \$325K | **TOTAL PROJECT COST:** \$2.6M

➤ **COMPLETION DATE:** 2/2016

Dublin Trunk Rehabilitation

DUBLIN SAN RAMON SERVICES DISTRICT, CA

PROJECT DESCRIPTION



The Dublin Trunk Rehabilitation Project was implemented to rehabilitate approximately 8,000 linear feet of deteriorating 33, 36, 39, and 42-inch reinforced concrete trunk sewer that conveys approximately 30 percent of the District's wastewater flows. The Dublin Trunk was previously inspected using CCTV and sonar inspections and determined to be in critical condition with significant pipe wall

loss and exposed rebar.

The Dublin Trunk sewer is located within highly trafficked roads within busy residential and commercial areas in the cities of Dublin and Pleasanton, California. The trunk sewer also crosses a number of other jurisdictions including CalTrans, Zone 7 (flood control), East Bay Regional Parks District, the District's wastewater treatment plant, and a number of private/commercial properties. To minimize impacts on the public, steam cured, cured-in-place pipe (CIPP) lining was selected as the preferred rehabilitation method. Because of the corridor and the City of Dublin's concerns with traffic impacts, pedestrian safety, and project impacts, detailed bypass pumping and traffic control plans were developed to support the CIPP installation. Because there was a short construction window due to the proximity of the project to schools, the City of Dublin agreed to allow the contractor to install the CIPP 24 hours a day.

Carollo provided preliminary and final design, engineering services during construction, and coordination with and technical input required for permitting and environmental documentation, as well as development of presentation materials and/or participation in meeting with local jurisdictions and the public.

POINT OF CONTACT:

Jaclyn Yee, Assistant Engineer
7051 Dublin Boulevard, Dublin, CA 94568
925-828-0515 | yee@dsrcsd.com

➤ **FEE:** \$278K

➤ **COMPLETION DATE:** 2/2016

Water Well Design and Rehabilitation

Throughout the last five years, Carollo has completed more than 50 new or rehabilitated well projects. Many of these projects included wellhead treatment. The following projects demonstrate our ability to permit, design, drill, test, equip, and construct groundwater well systems. The table at the end of the section presents a summary of our selected California well projects highlighting services provided.

Hans Christian Andersen (HCA) South Well Project

CITY OF SOLVANG, CA



PROJECT DESCRIPTION

In response to the ongoing drought conditions, the City of Solvang sought to increase water production in their system through drilling and equipping of several new wells. The new wells were designed to accommodate future blending and treatment equipment to address a variety of potential concerns including high total dissolved solids, arsenic, and sulfide. Initial well development included hydrogeologic evaluations and well equipping.

This is a new well located in the existing Hans Christian Andersen (HCA) City Park. The project included site grading, design of submersible well pump, pump control valve, valves and piping to connect to the distribution system, pump-to-waste dry well, disinfection facilities, electrical and control panels, variable frequency drive, radio telemetry system, SCADA programming, retaining walls and fencing. The pump-to-waste dry well can be used to receive startup water and helps stabilize the water quality before it goes into the systems. Any high turbidity, high sulfides or lack of chlorine residual would be detected and routed to the drywell until the water reached an acceptable quality to send to the system. The site was master planned to accommodate future pressure vessels for arsenic and sulfide removal if levels increase to unacceptable concentrations where pump to waste could not be an effective operational tool.

POINT OF CONTACT:

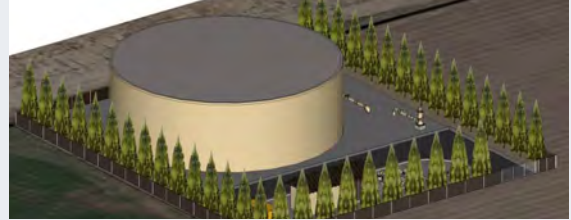
Matt van der Linden, P.E., Public Works Director
411 Second Street, Solvang, CA 93463
805-688-5575 x2 | mattv@cityofsolvang.com

FEE: \$105K

COMPLETION DATE: 8/2016

J Street and Alpine Vista Water Storage Tank Improvements Project

CITY OF TULARE, CA



PROJECT DESCRIPTION

A study focused on the connection of a community located in an unincorporated area of the County to the City highlighted significant deficiencies in the water distribution system and recommended the construction of six new wells and 10 million gallons (MG) of storage. Based on these recommendations, the City began identifying potential storage sites and constructing test wells in 2016. As a result of this effort, the City hired Carollo to provide planning, preliminary and final design, and engineering support during construction services for two storage tanks and wells at the J Street and Alpine Vista sites. The design was completed concurrently with the construction of the test wells at each site. The project will add a 2-MG tank and well-equipping at each site. The well drilling and development is being completed under a separate contract by the City. The well equipping includes installation of a vertical turbine deep well, oil-lubricated pumps with variable frequency drives and a capacity of 1,100 gallons per minute (gpm) and 1,400 gpm for the Alpine Vista and J Street sites, respectively. The project also included site grading, pump control valve, valves and piping to connect to the distribution system, pump-to-waste with connection to a storm drain, disinfection facilities, electrical and control panels, radio telemetry system, SCADA programming, and fencing.

Based on the results of the test wells, the City has decided to move forward with construction of the production well at J Street only. The test well at Alpine Vista showed less than anticipated production and signs of potential contaminants. The storage tank will be constructed at Alpine Vista at this time with provisions to add the production well in the future. Design of the tanks and wells was completed in July 2017 and construction began in October 2017.

POINT OF CONTACT:

Trisha Whitfield, Public Works Director
3981 South 'K' Street, Tulare, CA 93274
559-684-4319 | twhitfield@ci.tulare.ca.us

FEE: \$111K

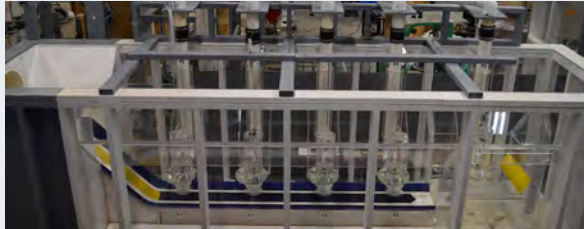
COMPLETION DATE: 6/2017

Pump Stations

Carollo has planned, designed, and/or assisted in the construction of more than 500 major water, wastewater and storm drainage pump stations. Our pump station designs range in size from less than 1 to 650 mgd and with individual horsepower capacities of up to 3,000 hp. These facilities have included various types of pump configurations, including wet pit, dry-pit centrifugal, dry-pit submersible, wet-pit submersible, self cleaning, vertical, horizontal, centrifugal, solids handling, and screw pumps. Two examples of recent, relevant lift station projects for municipal clients are presented below.

River Trunk Realignment Project

CITY OF MODESTO, CA



PROJECT DESCRIPTION

Carollo is currently providing final design services for the River Trunk Realignment project, which includes the design of the River Trunk Pump Station (RTPS) facilities. The RTPS is a 40-mgd raw wastewater pumping facility that conveys more than 40 percent of the City's wastewater flows.

Four pump station sites were considered for the RTPS. The site ultimately selected was owned by the City and provides an economical location for the siting of the facility. The depth of the wet well at the project site is approximately 74 feet deep measured from finished grade to the bottom of the wet well trench. The depth is dictated by the site being next to the Tuolumne River flood plain. This wet well depth leads to many challenges for the construction, operation, and maintenance of the facility. The pump station was designed to Hydraulic Institute standards providing for self-cleaning capabilities. The RTPS includes a self-cleaning trench style wet well, which intermediate floors to improve O&M access, and significantly shorten the required lift to remove the pumps.

Dual force mains were included to address the high fluctuation in flows that the pump station will see from minimum average dry weather flows at 5.5 mgd to peak wet weather flows at 40 mgd. This capability allows for the smaller force main to be used up to 75 percent of the year to minimize operation and maintenance costs.

POINT OF CONTACT:

Jesse Franco, Senior Civil Engineer
1010 Tenth Street, Suite 4600, Modesto, CA 95353
209.571.5175 | jfranco@modestogov.com

POINT OF CONTACT: **FEE:** \$5.5M

POINT OF CONTACT: **COMPLETION DATE:** 12/2018 (est)

Highway Booster Scotties Whiskey Springs Improvements

SAUSALITO-MARIN CITY SANITARY DISTRICT, CA



PROJECT DESCRIPTION

Carollo provided planning and preliminary design services for improving three pump stations in the Sausalito-Marin City Sanitary District service area: the Highway Booster Pump Station, Scotties Wet Weather Pump Station, and the Whiskey Springs Sewer Pump Station.

Highway Booster and Scotties Pump Stations are owned and operated by the District, while Whiskey Springs is owned by the City of Sausalito, but is operated and maintained by the District. Scotties and Whiskey Springs pump stations are located in very close proximity to each other and offer the opportunity to save costs by combining required improvements to each pump station into a single project.

This project specifically looked at long-term alternatives to best deal with aging infrastructure at three pump stations: Highway Booster, Scotties, and Whiskey Springs. Infiltration and inflow and reliability issues for the District's Highway Booster Pump Station, and capacity deficiencies for Scotties Wet Weather Pump Station were previously identified; and associated sewers and force mains were addressed.

In addition, the project also addressed the City's Whiskey Springs Pump Station and influent sewer capacity deficiencies.

POINT OF CONTACT:

Kevin Rahman, District Engineer
1 East Road, Sausalito, CA 94965
415-332-0244 | kevin@smcsd.net

POINT OF CONTACT: **FEE:** \$156K

POINT OF CONTACT: **COMPLETION DATE:** 6/2014

Construction Management

Carollo has provided construction management and inspection services for hundreds of water and wastewater treatment facilities throughout the United States. Carollo uses a comprehensive approach to construction services that is customized to achieve each client's unique project requirements. Most of our construction engineering services are provided on projects where we also performed design services, but we also offer services as a third-party construction engineer. We exclusively limit our services to the water, wastewater, and recycled water engineering fields.

Carollo's Construction Services Group includes construction managers, resident engineers, and resident and specialty inspectors. Carollo has the resources and skills to deliver the full spectrum of construction management services to our clients. Capabilities include full computerized document tracking and scheduling capabilities and specialty testing equipment.

Harding Drain Pump Station, Recycled Water Pipeline and Tunnel

CITY OF TURLOCK, CA



PROJECT DESCRIPTION

Carollo provided construction management services for this \$13 million project. The facilities provide the City with a new outfall for treated wastewater in the San Joaquin River and allows the City to convey recycled water to local farms and potential customers.

Construction involved a new pump station, pressure manholes, 6 miles of 36-inch welded steel pipeline including 300 lf of 48-inch pipeline installed by microtunneling, and a 20-foot-deep junction box requiring bypass pumping during connection of the existing, active outfall piping.

In addition, multiple road and canal undercrossings required shifting traffic control plans and management of varied encroachment permit requirements.

POINT OF CONTACT:

Stephen Fremming, Project Manager
156 South Broadway, Suite 150, Turlock, CA 95380
209-668-5599 | sfremming@turlock.ca.us

CONSTRUCTION COST: \$13.2M

COMPLETION DATE: 4/2014

Concord Recycled Water Distribution Extension Project

CENTRAL CONTRA COSTA SANITARY DISTRICT, CA



PROJECT DESCRIPTION

Carollo provided construction management services for this \$4 million project. The facility provides recycled water service to 42 commercial customers.

Construction involved two miles of 6- to 14-inch pipelines, including 2,000 lf of 14-inch pipeline by HDD methods. Using three-dimensional bore tracking and monitoring system assisted with the trenchless pipe installation that included going under a major thoroughfare and golf course.

The project required coordination between businesses, the airport, and a golf course. Caltrans and the City Roads Department allow limited street closures as long as stringent controls were maintained on the contractor's traffic control plans and encroachment permit conditions.

POINT OF CONTACT:

Michael Penny, Senior Engineer
5019 Imhoff Place, Martinez, CA 94553
925-229-7120 | mpenny@centralsan.org

CONSTRUCTION COST: \$4M

COMPLETION DATE: 12/2013

Hydraulic Modeling/Planning

One of the most practical components of a water system plan is the accurate development of hydraulic models for both potable and recycled water systems. The models developed will be valuable tools in identifying system deficiencies, analyzing system pressures, determining the impact due to future growth, and identifying improvement projects to mitigate existing and future deficiencies. We are experienced in creating workable, user-friendly computer simulation models of potable and recycled water distribution systems with several well-known models, including InfoWater, H₂OMAP®, H₂ONET®, InfoSWMM, WaterCAD®, WATSYS, KYPIPE, and EPANET. The hydraulic modeling elements for the following projects were led by proposed hydraulic model lead, Ryan Orgill.

Water Distribution, Wastewater Collection, and Storm Drainage Master Plans

CITY OF GALT, CA



PROJECT DESCRIPTION

The City of Galt, which is located about 25 miles south of Sacramento, selected Carollo to prepare separate water distribution, wastewater collection, and storm drainage master plans. The purpose of these master plans was to develop capital projects to correct existing deficiencies in the three systems and to plan out the necessary infrastructure to serve future development outlined in the City's 2030 General Plan. In 2009, the City's population was about 25,000; by 2030, the population was forecast to increase to 50,000.

Carollo developed a hydraulic model for the City's water distribution system and modeled every pipeline, well, tank, and booster pump station. Carollo ran fire flow simulations, identified weak points in the system, and recommended capital improvements to increase water pressure necessary to combat fires. Carollo also developed the water supply, distribution, storage, and treatment improvements necessary to serve future users through the year 2030.

For all three master plans, Carollo developed a CIP, prioritization schedule, and cost estimates and completed an assessment of the potential order of magnitude increase to user rates and connection fees necessary to fund the improvements.

POINT OF CONTACT:

William Forrest, P.E., Senior Civil Engineer
495 Industrial Drive, Galt, CA 95632
209-366-7289 | wforrest@ci.galt.ca.us

FEES: \$500K

COMPLETION DATE: 1/2012

Water, Sewer, and Recycled Water Master Plans

CITY OF OCEANSIDE, CA



PROJECT DESCRIPTION

Carollo prepared the City of Oceanside's Water, Sewer, and Recycled Water Master Plans, which account for proposed updates, improvements, and expansions to the water and sewer systems and facilities with a planning horizon of year 2050. The master plan updates also account for land use changes, recent facility upgrades, population projections, regulatory environment changes, and a rehabilitation needs assessment for the City's water and wastewater treatment facilities.

The purpose of this project was to develop a new set of plans to serve as an accurate road map for project implementation and scheduling. Scope included updates and calibration of the water and sewer hydraulic models, construction of a new recycled water model, demand forecasting, sewer flow projections, water and sewer distribution system evaluation, and development of two recycled water system layouts based on different supply locations and customer market assessment. The flow monitoring data was used to calibrate the hydraulic model, which was then used to conduct a complete capacity assessment of the sewer collection system. The model mitigates existing deficiencies and plans for future growth under both dry and wet weather conditions. In addition, the conditions of 60 sewer segments were inspected using closed-circuit television. Field data combined with GIS-based analysis was conducted to develop a rehabilitation and replacement program for the City's entire 460-mile sewer system.

POINT OF CONTACT:

Jason Dafforn, Water Utilities Division Manager
300 North Coast Highway, Oceanside, CA 92054
951-674-3146 | jdafforn@ci.oceanside.ca.us

FEES: \$1.2M

COMPLETION DATE: 3/2016

Representative California On-Call, Plan Review and Owner’s Advisor Project Experience

Client - Project	Engineering Design Services	Engineering Construction Estimate	Surveying	ESDC Services	Contract Management	Reports and Presentations	Teaming with Owners, Engineers, and Contractors	Cooperative Atmosphere with Contractors	Regulatory Compliance	Close-Out
City of Modesto, CA - North Valley Regional Recycled Water Program (NVRWP) Owner’s Agent	•	•	•	•	•	•	•	•	•	•
Hi-Desert Water District, CA - Wastewater Reclamation Project Owner’s Representative	•	•	•	•	•	•	•	•	•	•
San Luis Obispo County, CA - Los Osos Wastewater Treatment Plant Program Management	•	•	•	•	•	•	•	•	•	•
City of Sacramento, CA - Accelerated Water Meter Program	•	•			•	•	•	•		•
City of Sunnyvale, CA - On-Call Services for Wastewater and Technical support	•	•		•		•	•	•	•	•
Santa Barbara, CA - Potable Water System Model Calibration and On-Call Support	•	•		•	•	•	•	•	•	•
Santa Clara Valley Water District, CA - On-Call Recycled Water Technical Advisor		•				•	•	•	•	
Delta Diablo Sanitation District, CA - On-Call Engineering and Technical Services	•	•	•	•	•	•	•	•	•	•
City of San Jose, CA - Capital Improvement Program As-Needed Engineering Services	•	•		•	•	•	•	•	•	•
Union Sanitary District, CA - On-Call Wastewater Engineering Services	•	•	•	•	•	•	•	•	•	•
Dublin San Ramon Services District, CA - On-Call Engineering Services	•	•	•	•	•	•	•	•	•	•
San Francisco Public Utilities Commission, CA - Specialized On-Call Wastewater Services					•	•	•	•	•	•
City of South San Francisco, CA - Water Quality Control Plant and Collection System On-Call Services, Planning, and Design	•	•	•	•	•	•	•	•	•	•
City of Santa Cruz - As- Needed Collection System Improvements	•	•	•	•		•	•	•	•	•

Representative California Pipeline Experience

Client/Project	Diameter (inches)	Length (feet)
City of Modesto, CA - North Valley Regional Recycled Water Program (NVRWP) Owner's Agent	42	37,000
City of Turlock, CA - North Valley Regional Recycled Water Program (NVRWP) Design	42	38,000
City of Turlock, CA - Harding Drain ByPass Pump Station and Pipeline	36-48	32,200
Central Contra Costa Sanitary District, CA - Concord Landscape Project	4-14	12,100
City of Santa Clara, CA - Monroe Street, Chromite Drive, Machado Avenue, and Nobili Avenue Sewer Improvements	12-24	9,300
Napa Sanitation District, CA - LCWD Recycled Water Pipeline Project	6-24	47,520
City of Ukiah, CA - Phase 1 and 2 Recycled Water Pipeline Final Design	12,16	15,800
Santa Cruz County Sanitation District, CA - Noble Gulch Sewer Improvements	8-15	11,000
Delta Diablo Sanitation District, CA - Pittsburg Recycled Water Distribution Rehabilitation	16	5,500
Department of General Services, CA - California Men's Colony Potable Water Distribution System Upgrade	16-18	112,000
Clean Water Services, OR - Dawson Creek Pump Station and Force Mains	Dual 24	15,000
Metropolitan Water District of Southern California, CA - Weymouth Pipelines	8-16	2,000
City of Long Beach Water Department, CA - Cast Iron Main Replacement- Cherry Avenue	12	2,600
City of Simi Valley, CA - Sanitary Sewer Trunk Rehabilitation Capital Improvements	10,785	10-39
City of San Diego, California - Mission Gorge Road Sewer Improvements	12	600
City of Santa Paula, CA - Crosstown Water Pipeline Project	24	8,000
Eastern Municipal Water District, CA - Moreno Valley Regional Water Reclamation Facility Tertiary Effluent Diversion Pipeline	36-48	1,000
Elsinore Valley Municipal Water District, Lake Elsinore, CA - El Toro Road Transmission Main	12	6,580
San Diego County Water Authority, CA - Carlsbad Desalination Conveyance Pipeline and Flow Control Facility	54	52,000
East Bay Municipal Utility District, CA - Walnut Creek-San Ramon Valley Transmission Pipeline Improvements	69	26,400
Contra Costa Water District, CA - Port Chicago Pipeline	48	13,200
San Diego County Water Authority, CA - San Vicente Pipeline	120	28,000
Sweetwater Authority, CA - Pipeline Replacement Program	various	5,000-10,000 ft annually
East Bay Municipal Utility District, CA - Walnut Creek WTP Raw Water Pipeline	72	2,000
County Sanitation Districts of Los Angeles County, CA – Joint Outfall "A" Relief Sewer	54-90	42,000
County Sanitation Districts of Los Angeles County, CA – Trunk Relief Interceptor Project	48-102	36,000
Orange County Sanitation District, CA – On-Shore Portion of Ocean Outfall	120	3,000
Orange County Sanitation District, CA – Interplant Interceptor	120	18,300
Central Contra Costa Sanitary District, CA – A-Line Relief Interceptor Project	60	29,800
East Bay Municipal Utility District, CA – Adeline Street/South Foothill Interceptors	42-84	32,000
East Bay Municipal Utility District, CA – North Interceptor Relocation	60-105	3,400
Sacramento Regional County Sanitation District, CA – Bradshaw Interceptor Section 3	90	5,320
East Bay Municipal Utility District, CA – Point Isabel Pump Station	100	N/A

Representative California Water Well Experience

Client/Project Name	Services Provided						
	Treatment/Chlorination	Well Equipping	Well Rehabilitation	Preliminary Design	Final Design	New Well	Start Up
City of Delano, CA Delano biotita™ Wellhead Nitrate Treatment System	•	•		•	•		•
City of Vista, CA - Buena Vista Pump Station, Raceway Pump Station, and Buena Creek Pump Station VFD and PLC Replacement		•	•	•	•		•
Mesa Water District, CA Mesa Water Reliability Facility	•			•	•		•
Mesa Water District, CA Well Automation and Rehabilitation Project		•	•	•	•		•
Mesa Water District, CA Well 9B Design	•		•	•	•	•	•
Irvine Ranch Water District, CA Wells 21 & 22 Preliminary Design/Rehabilitation	•		•	•			
Water Replacement District of Southern California, CA Goldsworthy Desalter Expansion Project	•	•		•	•	•	
City of Santa Barbara, CA Ortega WTP - Groundwater Treatment	•	•	•	•	•		•
City of Pomona, CA Well 37 Equipping and Ion Exchange	•	•		•	•		•
City of Ontario, CA Dry-Year Yield Wellhead Treatment for Nitrate and Perchlorate	•	•	•	•	•	•	•
San Bernadino Municipal Water Department, CA Newmark Groundwater Contamination Remediation Facility	•			•	•		•
San Bernadino Municipal Water Department, CA 19th Street Wells	•			•	•		•
City of Redlands, CA Water Supply Well Containment		•		•	•		•
San Bernadino Municipal Water Department, CA 17th & Sierra Street Wells - Groundwater Remediation	•			•	•		•
Water Replacement District of Southern California, CA DHS Policy Memo 97-005 Compliance Report for I-105 Freeway Dewatering Wells Beneficial Use of Groundwater				•			
City of Victorville, CA Arsenic Treatment Design	•			•	•		•

Representative Regional Reservoir Experience

Reservoir Project	Client	Capacity (MG)	Type
Sun Lakes Reservoir	City of Banning, CA	1.5	Pre-Stressed
Fulkerth Tank and Pump Station	City of Turlock, CA	1.0	Pre-Stressed
Tulare Water Storage Tank Improvement	City of Tulare, CA	4.0	Pre-Stressed
Wet Weather Storage Facilities	City of Richmond, CA	5.0	Pre-Stressed
Reed Reservoir Replacement	City of Escondido, CA	5.0	Pre-Stressed
Graves Reservoir Replacement	City of South Pasadena, CA	1.2	Cast-in-Place
Chevy Chase 968 Reservoir	City of Glendale, CA	15.0	Cast-in-Place
Wilson Reservoir Replacement	City of South Pasadena, CA	1.2	Cast-in-Place
St. Joseph Reservoir No. 1	City of Arcadia, CA	5.0	Cast-in-Place
Linden Reservoir Rehabilitation	City of Riverside, CA	16.0	Cast-in-Place Rehabilitation
Evans Reservoir Replacement	City of Riverside, CA	16.0	Cast-in-Place
Peck Reservoir Replacement	City of Manhattan Beach, CA	8.0	Cast-in-Place
Industrial Tank 13	City of Modesto, CA	4.0	Pre-Stressed
Highland Reservoir Replacement Zone 428	Yorba Linda Water District, CA	6.0	Cast-in-Place
Hidden Hills Reservoir	Yorba Linda Water District, CA	2.0	Cast-in-Place
Storage Reservoir Project	Central Utah Water Conservancy District, UT	20.0	Pre-Stressed
Southeast Surface Water Treatment Facility	City of Fresno, CA	8.0	Cast-in-Place
Primary Influent Flow Equalization	San Bernardino Municipal Water District, CA	6.4	Cast-in-Place
Southern Delivery System WTP	Colorado Springs Utilities, CO	10.0	Pre-Stressed
Southern Delivery System WTP	Colorado Springs Utilities, CO	7.5	Cast-in-Place
Quail Creek WTP Water Reservoir	Washington County Water Conservancy District, UT	10.0	Cast-in-Place
Clearwell No. 2	City of Everett, WA	12.0	Cast-in-Place
Reservoir at Ray and Recker Roads	Town of Gilbert, AZ	2.0	Cast-in-Place
5233 – TIWRP AWP Ultimate Expansion	Los Angeles Bureau of Engineering, CA	2.1	Cast-in-Place
Johnny G. Martinez WP Reservoir	City of Tempe, AZ	12.0	Cast-in-Place
Apache Junction Surface WTP	Apache Junction Water District, AZ	0.2	Cast-in-Place
Riggs Road Reservoir	Town of Gilbert, AZ	2.0	Cast-in-Place
Airline Reservoir	Litchfield Park Service Company, AZ	4.3	Cast-in-Place
Turner Ranch Reservoir	Town of Gilbert, AZ	3.0	Cast-in-Place
Bridge District Water Storage Facility	City of West Sacramento, CA	3.3	Steel
Upper Mountain View PZ Phase 1A	City of Shelton, WA	0.4	Steel
Upper Mountain View PZ Phase 2	City of Shelton, WA	1.0	Steel

Carollo Representative CM Experience

Client/Project	Constr. \$ Million	Project Elements									
		CM/Contract Administration	Resident Engineering/Inspection	Document/Drawing Control	Constructability Review	SRF Funding	Building Inspector Coordination	O&M Manual and Training	Final Testing and Startup	Project Acceptance/Closeout	Materials Testing
City of Ashland, OR - WWTP Upgrade	26	•	•	•					•	•	
California Department of Corrections and Rehabilitation - Deuel Vocational Institution WWTP	26	•	•	•		•	•	•	•	•	
Carmel Area Wastewater District, CA - Salinity Management	22.5	•		•					•	•	
City of Casa Grande, AZ - WRF Expansion Phases 1 & 2	21.6	•	•	•				•	•	•	
Eastern Municipal Utilities District, CA - Hemet Water Filtration Plant	38	•	•	•			•		•	•	
Eastern Municipal Utilities District, CA - Temecula RWRP Expansion Projects	50.2	•		•					•	•	
City of Galt, CA - WWTP Expansion	22	•	•	•	•	•	•		•	•	•
City of Henderson, NV - Southwest WRF Phase 1	109	•	•	•			•	•	•	•	
City of Las Vegas, NV - WWTF Reverse Loading and Operations Optimization Project	15	•	•	•			•		•	•	
City of Merced, CA - Gove Road WWTP Phase IV Expansion	30.5	•	•	•		•	•	•	•	•	•
City of Merced, CA - Phase V Solids Handling Expansion	26	•	•	•		•	•	•	•	•	•
City of Monroe, WA - Phase III WWTP Upgrades	10	•	•	•	•		•	•	•	•	•
City of Redlands, CA - Recycled Water Facility	20.7	•	•	•			•		•	•	
City of Reedley, CA - Wastewater Treatment Facilities Expansion Project	26	•	•	•		•	•		•	•	
City of Riverside, CA - RWQCP Expansion	192.2	•	•	•	•		•		•	•	
City of Roseville, CA - Dry Creek WWTP Conversion to UV Disinfection	33.7	•	•	•		•		•	•	•	•
City of Roseville, CA - Pleasant Grove WWTP Expansions	119	•	•	•		•		•	•	•	•
City of San Jose, CA - San Jose/Santa Clara WPCP Reliability Improvements	69.5	•	•	•	•			•	•	•	•
City of Stockton, CA - Delta Water Supply Project Intake, Pump Station, and Pipeline	18	•	•	•	•			•	•	•	•
City of Surprise, AZ - Special Area 2 Water Reclamation Facility	27.8	•	•						•	•	
City of Turlock, CA - RWQCF Recycled Water Project	36.4	•	•	•	•	•	•	•	•	•	
Sanitary District No. 5 of Marin County, CA - Main Plant Rehabilitation	10	•	•	•			•		•	•	•
Washoe County, NV - South Truckee Meadows WRF	19.5	•	•	•			•	•	•	•	
West County Wastewater District, CA - Replacement of 480V Breakers and Switchgear CM	2	•	•	•			•	•	•	•	•

REFERENCES

Client Point of Contact Contact Information	Similar Project	Team Member(s)
<p>Marina Coast Water District Mike Wegley, District Engineer 831.883.5925 mwegley@mcwd.org</p>	<p>Regional Urban Water Augmentation Program (RUWAP) Recycled Water Pipeline</p> <ul style="list-style-type: none"> Design of a 37,945-foot, 24-inch diameter distribution system and 2-MG welded steel storage tank. 	<ul style="list-style-type: none"> Anne Prudhel Jon Marshall Mike Dadik Chris Carvalho
<p>City of Modesto Will Wong, Acting Director of Utilities 209.571.5801 wwong@modestogov.com Jesse Franco, Senior Civil Engineer 209.571.5175 jfranco@modestogov.com</p>	<p>NVRRWP Owner's Agent</p> <ul style="list-style-type: none"> Preliminary design, procurement, and CM of a design-build team to construct six miles of 42-inch pipe-line and retrofit of a pump station. <p>River Trunk Realignment</p> <ul style="list-style-type: none"> Replacement of 3,200 feet of vitrified clay pipe with 8-inch PVC pipe at 10 different locations. 	<ul style="list-style-type: none"> Tim Taylor Anne Prudhel Jon Marshall Reace Fisher Ryan Orgill Mike Dadik Chris Carvalho
<p>Dublin San Ramon Services District Jaclyn Yee, Assistant Engineer 925.875.2258 yee@dsrsd.com</p>	<p>Dublin Trunk Rehabilitation</p> <ul style="list-style-type: none"> Rehabilitation of approximately 8,000 linear feet of deteriorating 33, 36, 39, and 42-inch reinforced concrete trunk sewer. 	<ul style="list-style-type: none"> Anne Prudhel Reace Fisher Jill Shankel
<p>Delta Diablo Sanitation District Patricia Chapman, Associate Engineer 925.756.1900 patriciac@deltadiablo.org</p>	<p>Bay Point Sewer Repairs</p> <ul style="list-style-type: none"> Replacement of 3,200 feet of vitrified clay pipe with 8-inch PVC pipe at 10 different locations. 	<ul style="list-style-type: none"> Ken Sinclair

“Tim has demonstrated all of the essential qualities and important services associated with project and contract management. Tim’s emphasis has truly been client centered in providing technical and management solutions. He is very detailed and thorough; ensuring we, the client, are receiving a quality product.”

Jesse Franco, PE, Senior Civil Engineer, Utilities Department, City of Modesto, CA

"I would recommend Ken anytime. Ken works well with a partnering-type approach, is not confrontational in disputes, and works well with all parties."

Sandeep Karkal, Formerly with Delta Diablo Sanitation District, CA

LEVEL OF SERVICES, FAMILIARITY, AND CAPABILITIES

The following presents the general scope of services to be provided by the Carollo team for the on-call engineering support services for various capital improvement projects. It also serves to demonstrate our overall understanding of the needs of the District with regard to making sure that the Capital Improvements Projects (CIPs) are implemented effectively and efficiently. Detailed work plans will be developed for each specific project as they are identified. However, it is expected that each will consist of the basic tasks described herein.

PROJECT MANAGEMENT

District Coordination

Close coordination with the District will be one of the most important tasks to successfully deliver the CIP. This will include working closely with the District to determine the importance, schedule, deadlines, and funding source for each project. Jon Marshall, project manager, will lead this effort and work as an extension of District staff. Once the task is completed, we will provide a scope and fee for each project. Once the scope and fee is agreed upon we will make Board presentations, or attend any necessary meetings, and provide contract administration to kick-off the projects.

Jon will be the main point of contact for the tenure of the contract. He will act as liaison between the design teams and the District, coordinate closely with the District to ensure project objectives are being met, and that the project remains within budget and on schedule.

A benefit to having Jon as Project Manager is that the District will have one point of contact for the entire contract. Should concerns or issues arise, Jon can resolve them in person or by facilitating short meetings during the day instead of waiting weeks to schedule meetings to discuss issues.

We will provide monthly invoices for work completed, along with a monthly status report on what was completed for the month, and the work that is expected for the following month. Each project will be on its own task code, so they can be tracked separately. We will closely manage the scope and budget for each project. Once the baseline schedule of projects is determined,

this schedule will be updated monthly, and any deviations will be reviewed with the District.

Subconsultant Coordination

Carollo can perform all of the services listed in the RFQ in-house, with the exception of surveying and geotechnical. Proposed subconsultants are listed herein. Other subconsultants may be added depending on specific project needs.

Jon will coordinate the use of all subconsultants including contracts, data requests, submittal review, and budget and schedule.

DESIGN

Planning/Conceptual Design

Once the project scope and fee have been agreed upon under the project management task, we will provide planning, pre-design or conceptual design as needed. Some of the projects may not require this step and can move directly into the final design task after a kick-off meeting in order to reduce cost to the District.

However, other projects may require some preliminary work to determine hydraulics, using the hydraulic model routing or technology that will be utilized, requiring close coordination between the District and Carollo. Jon will work with your staff to determine the needs and requirements of each project.

Usually one to three meetings with the District and Carollo is sufficient at this stage with a decision log being provided to document decisions along the way. A pre-design memo can be provided if required, however the normal deliverable would be the decision log and meeting minutes. Once conceptual design is complete the project would be moved into final design.



Final Design

We have two options for design, depending on the project. If another consultant is leading the design, Carollo will act as an extension of District staff. This would include reviewing design submittals, and providing information requested by the designer. The District could provide as much input or as little as they would like during this process. We would recommend all projects be reviewed by the District prior to finalizing design, but Carollo will always review the work and provide comments prior to finalizing the design.

Where Carollo will complete the design in-house, Jon will act as the Project Manager and will have a Project Engineer in the office that will coordinate the design effort. The type of project (e.g., reservoirs, pipelines, well design/ treatment, pump stations, etc) will determine who the Project Engineer will be.

Design will consist of two to four design submittals at approximately 30%, 60%, 95%, and final completion stage depending on the project. We will provide contract documents (specifications and drawings) and cost estimates for each design submittal, as requested by the District. A meeting will be held between the District, Carollo, and any key subconsultants after each submittal to address any comments. The deliverables for final design will be the final contract documents and cost estimate. Jon will coordinate final review and signature by the District Engineer. Once final documents are provided, the project can be prepared for bidding. Carollo will use the District's front end specifications and typical details, where applicable.

BIDDING SERVICES

Bidding Assistance

Similar to RUWAP, we will assist in project advertisement in accordance with the District's bidding requirements. Carollo will be the point of contact for all contractors that have questions regarding the contract documents. We will review any questions or concerns and send them to the appropriate person for response.

We will attend and coordinate the pre-bid meeting as well as the bid opening, if required. Carollo will review all bids and provide the District a bid review showing bidder cost, and if the bid was complete or responsive. Carollo will also make a recommendation to the District as to the lowest responsive bidder.

The deliverable on this task would be the final recommendation to the District for the lowest responsive bidder.

Conformed Documents

Carollo will provide conformed documents, as needed, to incorporate all of the bid period addenda into the construction documents. Deliverables will be printed and electronic copies of the conformed documents will be distributed.

ENGINEERING SERVICES DURING CONSTRUCTION

Progress Meetings

The design engineer will attend construction progress meetings as needed.



Design Clarifications, Submittal and RFI Review

The design engineer will provide design clarifications, submittal and request for information (RFI) review and provide timely responses. These will be coordinated through the construction management task. Depending on who the design engineer is, this would either be done in-house, or coordinated with subconsultants.

Startup and Training

This task will be required for any project that involves the installation of equipment or controls. We will assist or perform the startup and training of the completed project for District staff. This can range from assisting with startup plans to providing full training to the District on how the process works with other existing processes.

Operations and Maintenance Manual Update

Carollo will update the plant operations and maintenance manual. The plant manual is a requirement for the Regional Water Quality Control Board (RWQCB), and must be updated as new processes are brought online. The designer with assistance from Carollo operations staff would perform this task.

CONSTRUCTION MANAGEMENT

Construction Management

We will provide construction management services for all projects, no matter if it was designed in-house or through subconsultants. The size of the projects vary, so depending on the need, we will have someone onsite part time or full time. Field staff will be responsible for coordinating and running construction progress meetings, approving pay applications and schedules, coordinating all communication between Contractor, Designer, and District (including submittals and RFIs), review and provide recommendation on change orders, work with inspection staff, and provide monthly update reports to the District. Carollo can also provide electronic construction software for each project. We will maintain a “teaming attitude” with the Contractors, Designer, and District to keep projects moving forward and on schedule. The number and size of projects on-going simultaneously, will determine staffing. It is currently anticipated that Jon will



assist the CM on the smaller projects, but if there are too many running at one time, additional resources will be brought in for assistance.

Construction Inspection

Our staff includes some of the most experienced resident and specialty inspectors in the region.

FAMILIARITY WITH THE LOCALITY AND REGIONAL CHALLENGES

Carollo has been assisting MCWD with the Recycled Water Pipeline (RUWAP) project for more than 10 years. During that time period, Carollo has sat side-by-side with MCWD in conversations with many of the region's stakeholders including the County, MRWPCA,

the U.S. Army, Fort Ord Reuse Authority (FORA), CSU Monterey Bay, the cities of Marina and Seaside, as well as private properties. We have worked over the years to facilitate easement acquisition, negotiate permit conditions, and discuss recycled water connection locations and anticipated flows. As project manager, Jon will leverage her involvement in the RUWAP stakeholder outreach efforts to benefit this project.

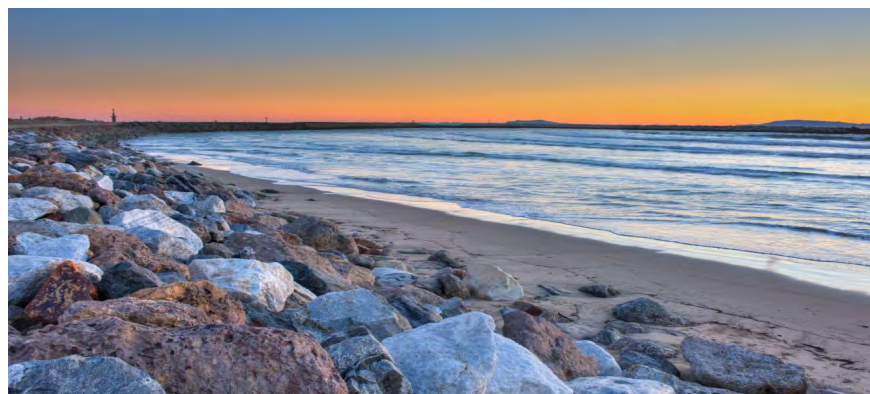
ABILITY TO PROVIDE REQUESTED SERVICES

As a firm with more than 1,000 employees nationwide and over 350 in California alone, we have a deep bench of experienced engineers to draw from for your projects. We have a group of engineers in Northern California solely dedicated to water and wastewater planning and design. The table below provides the approximate availability of the team members we have proposed.

Our Team is Committed

Anne Prudhel	15%
Jon Marshall	40%
Jill Shankel	50%
Ryan Orgill	30%
Reace Fisher	40%
Nathan Nutter	40%
Justin Davidson	50%
Ken Sinclair	40%
Chris Carvalho	30%
Mike Dadik	30%

Percent available to MCWD



COMMENTS/EXCEPTIONS

In accordance with the requirements of the District's Request for Proposals (RFP), Carollo Engineers has reviewed the included Professional Services Agreement and asks the District to take the attached comments/additions into consideration, should our proposal be accepted.

AGREEMENT FOR PROFESSIONAL SERVICES
BETWEEN MARINA COAST WATER DISTRICT
AND CAROLLO ENGINEERS, INC
FOR ON-CALL GENERAL, CIP, AND DEVELOPMENT
ENGINEERING SUPPORT SERVICES

THIS AGREEMENT, made and entered into this _____, by and between Marina Coast Water District, 11 Reservation Road, Marina, CA, 93933, hereinafter called "DISTRICT", and Carollo Engineers, Inc., with its principal offices at 2700 Ygnacio Valley Road, Suite 300, Walnut Creek, CA 94598 hereinafter called the "CONSULTANT":

WHEREAS, the DISTRICT, desires to receive the professional services related to OnCall General, CIP, and Development Engineering Support Services with a scope generally defined by DISTRICT's Request for Proposal scope section as presented in Appendix A; and

WHEREAS, DISTRICT is desirous of engaging the services of said CONSULTANT to perform or furnish said services.

WHEREAS, CONSULTANT has the ability to, and hereby offers to, provide personnel and facilities necessary to accomplish said services in a timely manner.

NOW, THEREFORE, said DISTRICT and said CONSULTANT, for the considerations hereinafter set forth, mutually agree as follows:

ARTICLE I - PROFESSIONAL ENGAGEMENT

DISTRICT hereby engages Carollo Engineers, Inc. as an independent contractor, to perform or furnish the services hereinafter more fully but generally described in Appendix A, commencing on the date of this Agreement.

CONSULTANT hereby agrees to perform or furnish as an independent contractor professional engineering and related services as set forth herein. CONSULTANT may retain qualified subconsultants to assist in the performance of professional services. DISTRICT shall be notified prior to CONSULTANT sub-contracting such services and sufficient time shall be provided to allow DISTRICT to review the subconsultant's qualification. Should DISTRICT, based upon reasonable cause, not accept any such subcontractor or subconsultant for use on the Project, DISTRICT shall so notify CONSULTANT within five (5) days following DISTRICT's receipt of such notice from CONSULTANT, and CONSULTANT shall not subcontract with any such subcontractor or subconsultant for the Project. DISTRICT shall have the right at any time to revoke its acceptance (whether given affirmatively or by its failure to object within said five (5) day period) of any subcontractor or subconsultant on the basis of reasonable cause, in which case CONSULTANT shall submit an acceptable substitute and a Task Order equitably adjusting CONSULTANT's compensation will be issued. No acceptance of any subcontractor or subconsultant shall waive: (1) DISTRICT's right not to accept negligently performed ~~defective~~ services performed or furnished for CONSULTANT by said subcontractor or subconsultant; or (2) any other right or remedy DISTRICT has under this Agreement, including but not limited to its rights to suspend or terminate services under this Agreement.

CONSULTANT is an independent contractor and is not and shall not be deemed to be an employee, agent, servant, partner or joint venturer of DISTRICT. CONSULTANT shall have the exclusive supervision, direction and control of all employees, subconsultants, subcontractors, suppliers, materials, equipment and facilities employed, contracted with or used by, CONSULTANT in performing or furnishing services under this Agreement.

The Term of this Agreement shall be three-years (3-years). This Agreement may be Amended to extend the Consultant's provision of services for one-year (1-year) upon completion of the initial 3-year term; the Agreement may be amended only twice to provide a 1-Year extension with each Amendment.

ARTICLE II - SCOPE OF SERVICES

The scope of services performed or furnished by CONSULTANT under the terms of this Agreement is generally defined in Appendix A. However, the specific services to be performed by CONSULTANT shall be first authorized by DISTRICT as set forth in a Task Order and Request for Services (a copy of which is attached hereto as Exhibit "C") with regards to any particular project CONSULTANT is authorized to provide services. Unless modified in writing by both parties through an Amendment to this base Agreement or by the specific Task Order or Request for Services, duties of CONSULTANT shall not be construed to exceed those services generally established in Appendix A.

ARTICLE III – GENERAL PROVISIONS

- A. The CONSULTANT hereby represents that all work described herein shall be performed only by persons under the supervision of a person who is currently licensed to perform such work and that ~~to the best of its professional ability,~~ all work shall be performed in accordance with the prevailing engineering standard of care by exercising the skill and ability ordinarily required of engineers performing the same or similar services under the same or similar circumstances in the State of California and with applicable Federal, State, and local laws and regulations.
- B. The CONSULTANT shall not discriminate in employment practices, in the performance of the terms of this Agreement, either directly or indirectly, on the grounds of race, color, religion, sex, age, or national origin, and shall take affirmative steps to ensure that applicants are employed and employees are treated during employment without regard to race, color, religion, sex, age or national origin.
- C. The General Manager of the DISTRICT shall forward an executed copy of this Agreement to the CONSULTANT within ten (10) days of execution of this Agreement by the DISTRICT.
- D. CONSULTANT has no control over the cost of labor, materials, equipment or services furnished by others, over sewer, water and/or recycled water quality and/or quantity, or over the way DISTRICT's plant(s) and/or associated processes are operated and/or maintained. Data projections and estimates are CONSULTANT's professional opinion based on CONSULTANT's experience and judgment. CONSULTANT does not guarantee that actual sewer, water and/or recycled water distribution system operational characteristics will not vary from the data projections and estimates prepared by CONSULTANT. CONSULTANT is not liable to, and does not indemnify DISTRICT or any third party relative to inconsistencies between CONSULTANT's data projections and estimates and actual sewer, water and/or recycled water distribution system

operational characteristics realized by DISTRICT or any third party in the future.

ARTICLE IV: COOPERATION BY DISTRICT

DISTRICT shall, to the extent reasonable and practicable, cooperate with CONSULTANT in the performance of CONSULTANT's services hereunder. Such cooperation shall include, but not necessarily be limited to: providing right of access to work sites as required for CONSULTANT to perform or furnish services under this Agreement; providing relevant material available from DISTRICT 's files such as maps, drawings as available, records, As-Builts and Record Drawings, and operation and maintenance information, which CONSULTANT shall be entitled to use and rely upon; serving all notices; attending all hearings; payment of all permit and other required fees associated with the Project; and rendering assistance in determining the location of existing facilities and improvements which may be affected by the Project.

DISTRICT shall be responsible for providing legal services which it deems necessary for the Project including review of contract documents, public advertising and contract letting. DISTRICT shall pay fees for utility services to the Project.

DISTRICT shall appoint the District Engineer and his/her designees as DISTRICT's REPRESENTATIVE with respect to the services to be performed under this Agreement. DISTRICT'S REPRESENTATIVE shall have complete authority to transmit instructions, receive information, and interpret and define DISTRICT's policies. CONSULTANT shall be entitled to rely on representations made by DISTRICT's REPRESENTATIVE unless otherwise specified in writing by DISTRICT.

Article V – SCHEDULE

Time is of the essence in all Task Orders and Request for Services that are executed under this base Agreement.

A schedule for carrying out services performed by CONSULTANT under the terms of this Agreement will be set forth by each Task Order or Request for Services executed under the terms of this Agreement. CONSULTANT will exert all reasonable efforts to perform or furnish all services under this Agreement in accordance with said schedules.

DISTRICT will be kept informed as to the progress of each Task order and Request for Service executed under this base Agreement. Neither party shall hold the other responsible for damages caused by, arising out of or resulting from delays in performance caused by acts of God, strikes, lockouts, or events beyond the control of the other party.

Article VI – LITIGATION

The Agreement does not require CONSULTANT to prepare for or appear as a witness in any litigation or alternative dispute resolution proceeding on behalf of DISTRICT, other than as specified in Appendix A, except in consideration of additional reasonable compensation negotiated as part of an Amendment specifically issued for such purpose. Notwithstanding the preceding, CONSULTANT shall participate without additional compensation in any litigation or alternative dispute resolution proceeding in which CONSULTANT is a party or in which a claim is made against DISTRICT based in whole or in part on CONSULTANT's negligence, professional errors or omissions, breach of contract or deficiencies in CONSULTANT's design or performance hereunder.

ARTICLE VII: COMPENSATION

Payment for the engineering services set forth in each executed Task Order, Request for Service, and, upon authorization by the District Board, specific executed Amendment shall be made by DISTRICT to CONSULTANT and shall be considered as full compensation for such services and all personnel, materials, supplies, and equipment used and costs incurred in carrying out such services. In no event shall the amount of compensation exceed the total fee specified in said Task Order, Request for Service, or Amendment without written approval from the DISTRICT. In the event the parties are unable to agree on the price for a given task, then CONSULTANT shall not be eligible to perform services on that task and MCWD shall be free to offer the task to any other entity or perform the task themselves.

A. If payment for services performed or furnished under terms of a duly executed Task Order, Request for Service, or Amendment is to be on a lump sum basis, compensation shall be as described below:

1. The Task Order, Request for Service, or Amendment must specify that the work is to be performed on a lump sum basis.
2. Compensation to CONSULTANT shall be a lump sum amount specified in Task Order, Request for Service, or Amendment.
3. Payments shall be monthly, based on percent completion as invoiced by the CONSULTANT, and in accordance with the following: As each payment is due, a statement describing the services which have been performed or furnished and listing the percent of completion and the total amount of prior payments paid by DISTRICT shall be submitted to DISTRICT. Payment shall be made for the balance due under such statement, without retention unless DISTRICT contests all or part of said billing in which event only that portion so contested will be retained by

DISTRICT pending resolution of the dispute and any uncontested portion will be paid.

B. If payment for services performed or furnished under terms of a Task Order, Request for Service, or Amendment is to be on a time and expense reimbursable basis, with a total cost not-to-exceed, compensation shall be as described below:

1. A Task Order, Request for Service, or Amendment must specify that the work is to be performed on a time and expenses basis with a total cost not-to-exceed.
2. A cost estimate budget for compensation for services provided by CONSULTANT on a time and expense basis will be established in the Task Order, Request for Service, or Amendment via the Accepted Consultant Proposal that will be made part of said Task Order, Request for Service, or Amendment. The budget established shall not be exceeded without DISTRICT's written authorization.
3. Compensation to CONSULTANT shall be on a time and expense reimbursement basis in accordance with CONSULTANT's Schedule of Charges. A current copy of the Schedule of Charges will be included with each Task Order, Request for Service, or Amendment or be incorporated within the cost estimate of the Accepted Consultant Proposal for the Task Order, Request for Service, or Amendment.
4. Payments for services provided by CONSULTANT on a time and expense basis shall be made monthly by the DISTRICT based on an itemized invoice from CONSULTANT which lists actual costs and expenses or units of work performed on the Project in the immediate preceding month. Such payments shall be for the invoice amount, without retention unless DISTRICT contests all or part of said billing in which event only that portion so contested will be retained by DISTRICT pending resolution of the dispute and any uncontested portion will be paid.
5. The budget may be increased by Amendment if necessary to complete the scope of work. If appropriate, CONSULTANT will advise DISTRICT of the anticipated expenditure over the budgeted amount at the fifty (50) percent completion point of the Amendment work and request additional budget authorization, which must be approved in writing by DISTRICT.
6. Amendments using a time and expense reimbursement should be limited in scope. The product of these Amendment(s) should adequately define the specific scope and effort necessary to achieve the necessary

addition/modification and develop a lump sum proposal for the required engineering services.

CD. The CONSULTANT shall submit itemized statement or invoice of costs to the DISTRICT for each month that work is performed. The DISTRICT shall pay the CONSULTANT by the 25th of the month for invoices and itemized statements submitted by the first day of the same month. Payments are due once approved by the DISTRICT after receipt of a statement or invoice prepared in a manner acceptable to DISTRICT.

ARTICLE VIII: RECORDS

The CONSULTANT shall keep and maintain accurate records of costs incurred, and the time expended relating to all services to be compensated hereunder. All records shall be available to the DISTRICT for review thereof upon request by the DISTRICT or its authorized representative. All fiscal and accounting records and other supporting papers of the CONSULTANT shall be maintained for a minimum of three (3) years following the close of the DISTRICT fiscal year of expenditures.

ARTICLE IX: TITLE TO DOCUMENTS

All reports, drawings, specifications, submittals and other materials, provided as a hardcopy or in an electronic format, collected or produced by the CONSULTANT hereunder shall, after completion and acceptance, become the property of the DISTRICT.

The CONSULTANT may utilize existing materials developed by the CONSULTANT prior to the commencement of this engagement including, but not limited to, customized computer routines developed using proprietary or commercial software packages, reports, documents, maps, graphs, charts, photographs and photographic negatives. These materials shall remain the property of the CONSULTANT.

CONSULTANT shall be entitled to a reproducible copy of all material furnished to DISTRICT, the costs of which is included on the compensation amounts specified in Appendix A and/or the Amendment(s). Any uncompleted work of CONSULTANT delivered to DISTRICT due to cancellation of all or portions of the work or contract termination, which utilized by DISTRICT in any way, and/or in instances where DISTRICT or others reuse CONSULTANT's work, DISTRICT shall have CONSULTANT's name removed, and DISTRICT agrees to defend, Indemnify, and hold harmless CONSULTANT from all claims, damages, and expenses including attorney's fees arising from any use by DISTRICT of such uncompleted work Product or reuse of work Product.

ARTICLE X: KEY PERSONNEL

The CONSULTANT shall specifically assign a project manager and necessary staff to complete the Scope of Work.

The CONSULTANT hereby agrees that the assigned personnel directly responsible for conducting the Scope of Work in Appendix A shall not be changed during the course of the work without prior written consent of the DISTRICT, which consent shall not be unreasonably withheld.

ARTICLE XI: ASSIGNMENT AND SUBCONTRACTING

The CONSULTANT shall not assign, sell, mortgage, hypothecate, or otherwise transfer its interest or obligations in this agreement without written consent of the DISTRICT, in DISTRICT's sole and absolute discretion. Further, none of the services covered by this agreement shall be subcontracted beyond that which is specifically noted in the CONSULTANT'S proposal unless approved by the DISTRICT in writing.

ARTICLE XII: INSURANCE AND LIABILITY

The CONSULTANT agrees to indemnify, defend, and save harmless the DISTRICT, its officers, agents, and employees as provided in Appendix B, attached hereto and hereby incorporated by reference. To the fullest extent permitted by law. CONSULTANT shall indemnify, hold harmless and defend DISTRICT, its officers, directors, employees and agents from and against all claims, damages, costs, losses and expenses (including but not limited to attorneys' fees) caused by, arising out of or related to the negligence (including but not limited to professional negligent tee acts, errors, or omissions) of CONSULTANT, its partners, officers, employees, agents, subconsultants and subcontractors in the performance or furnishing of services under this agreement, provided however, that CONSULTANT's liability to DISTRICT shall not exceed the percentage share of such claim, damages, cost, loss and expense that the negligence (including professional negligence, errors or omissions) of CONSULTANT, its partners, officers, employees, agents subconsultants and subcontractors bears to the total negligence of all negligent entities and individuals determined on the basis of comparative negligence principles. Notwithstanding the foregoing, in the event the subject action alleges negligence on the part of CONSULTANT and/or DISTRICT, or any third party not under contract with CONSULTANT, CONSULTANT's obligations regarding DISTRICT's defense under this paragraph include only the reimbursement of DISTRICT's reasonable defense costs incurred to the extent of CONSULTANT's negligence as expressly determined by a final judgment, arbitration, award, order, settlement, or other final resolution. CONSULTANT shall not be responsible for warranties, guarantees, fitness for a particular purpose, breach of fiduciary duty, loss of anticipated profits or for economic, incidental or consequential damages to DISTRICT or any third party arising out of breach of contract, termination, or for any other reason whatsoever. Additionally, CONSULTANT shall not be responsible

for acts and decisions of third parties, including governmental agencies, other than CONSULTANT's subconsultants, that impact project completion and/or success.

Insurance policies shall provide that such insurance is primary insurance.

Coverages described in Appendix B shall be maintained through the term of this Agreement, and the CONSULTANT shall file with the DISTRICT prior to the execution of this Agreement, and as policy renewals occur, a Certificate of Insurance evidencing that the insurance coverages required herein have been obtained and are currently in effect.

A. CONSULTANT and its subcontractors shall maintain worker's compensation and employers' liability insurance in accordance with the amount(s) and coverage(s) in the attached Appendix B.

B. CONSULTANT and its subcontractors shall maintain commercial general liability and automobile liability insurance protecting it against claims arising from bodily or personal injury or damage to property, including loss of use thereof, resulting from operations of CONSULTANT pursuant to this AGREEMENT or from the use of automobiles and equipment of or by CONSULTANT. The amount(s) and coverage(s) shall be in accordance with Appendix B.

C. CONSULTANT shall maintain a policy of professional liability insurance, protecting it against claims arising out of the negligent acts, errors, or omissions for which it is legally liable in the performance or furnishing of professional services pursuant to this AGREEMENT. (Such insurance shall be maintained for one (1) year after final completion of construction. The amount(s) and coverage(s) shall be in accordance with Appendix B.

D. CONSULTANT shall submit to the DISTRICT a Certificate of Insurance evidencing that the insurance coverages required herein have been obtained and are currently in effect. Upon written request from DISTRICT, CONSULTANT is Required to provide DISTRICT with complete copies of such policies or certified evidence of coverage. Approval or acceptance of said insurance by DISTRICT shall not relieve or decrease the liability of CONSULTANT hereunder.

E. DISTRICT agrees to endeavor to include a provision in the DISTRICT 'S contract with the Construction Contractor engaged on the Project which requires that CONSULTANT be listed as an additional insured on such Construction Contractor(s) liability insurance policy and property insurance (Builder's Risk) policy, if any.

Article XIII – SUSPENSION OF WORK

DISTRICT may, at DISTRICT'S sole and absolute discretion, suspend, in writing, all or a portion of the services under this Agreement. CONSULTANT may suspend the services under this Agreement in the event DISTRICT does not make payment in accordance with the payment terms in Article VII. The services under this AGREEMENT will only be suspended for non-payment after written notice is received by DISTRICT from CONSULTANT of its intention intending to suspend performance and a cure period of seven (7) days after receipt of this notification by DISTRICT. The time for completion of the services under this AGREEMENT shall be extended by the number of days the services under this AGREEMENT is suspended. If the period of suspension exceeds ninety (90) days, the terms of this AGREEMENT are subject to renegotiations, and both parties shall have the option to terminate the services under this AGREEMENT on the suspended portion of Project in accordance with Article XII.

ARTICLE XIV: TERMINATION

Either party may terminate this Agreement upon substantial breach of the terms thereof by the other party. The DISTRICT may terminate this agreement at any time upon giving thirty (30) days written notice to CONSULTANT. Such notice shall set forth the effective date of such termination.

DISTRICT, by notifying CONSULTANT in writing, may terminate any or all of the services covered by this AGREEMENT, in DISTRICT'S sole and absolute discretion. In the event of such termination, CONSULTANT shall have the right to expend a reasonable amount of additional time to assemble work in progress for the purpose of proper filing and closing of the job. Such additional time shall not exceed five percent (5%) of the total time expended to the date of notice of termination or a designated total time agreed upon in a Amendment. All charges thus incurred, together with associated expenses reasonably incurred by CONSULTANT and reasonable charges for any other commitments outstanding at the time of termination (such as for termination of subconsultants, rental agreements, orders for printing, etc.), shall be payable by DISTRICT within forty-five (45) days following submission of a final statement by CONSULTANT. However, in the event that termination of said AGREEMENT with CONSULTANT occurs at the completion of a specific phase of the design, the aforesaid provision for the proper filing and closing will not apply unless agreed to by DISTRICT under a specific Amendment. The payment provided for under this Article XII shall constitute full satisfaction of any obligation DISTRICT has, may have or could be found to have to pay for services performed or furnished and expenses or charges incurred by CONSULTANT pursuant to this AGREEMENT and any and all liabilities or damages arising out of or resulting from the termination of this AGREEMENT.

ARTICLE XV: NOTICE

Any notice to be given hereunder shall be delivered to the party to be noticed by either personal delivery or by first class mail, postage prepaid, and addressed as follows:

TO: Marina Coast Water District
2840 4th Avenue
Marina, CA 93933
Attention:

TO: Carollo Engineers, Inc.
2700 Ygnacio Valley Road, Suite 300
Walnut Creek, CA 94598
Attention:

ARTICLE XVI: BINDING EFFECT; AMENDMENTS; COUNTERPART EXECUTION; CONSTRUCTION

This Agreement supercedes and integrates all prior writings and understandings between the parties concerning, is binding on the parties and their successors, and may be amended only by written agreement signed by the DISTRICT and the CONSULTANT. This Agreement may be signed in counterparts, each of which when fully executed shall be considered a duplicate original document. Both parties have participated fully in the review and revision of this Agreement, and neither party is to be deemed the party which prepared this Agreement within the meaning of Civil Code section 1654.

ARTICLE XVII: DISPUTES

The parties must submit any disputes arising under this Agreement to non-binding mediation before filing suit to enforce or interpret this Agreement. Upon request by either party, the parties will within ten (10) days select a single mediator, or if the parties cannot agree, they shall ask the then presiding Judge of the Monterey County Superior Court to select a mediator to mediate the dispute within fifteen (15) days of such selection.

In the event of legal proceedings to interpret or enforce this agreement, the prevailing party shall be awarded reasonable attorney fees and costs, including reasonable costs of experts reasonably engaged by the attorney.

ARTICLE XVII: SERVICES DURING CONSTRUCTION

The parties agree that in DISTRICT's contract with the construction contractor, CONSULTANT shall be indemnified to the fullest extent permitted by law for all claims, damages, losses and expense including attorney's fees arising out of or resulting from the construction contractor's performance of work including injury to any worker on the job site. Additionally, such contract shall require that CONSULTANT be named as additional primary insured(s) by the construction contractor's general liability and builders all risk insurance policies without offset and be included in any waivers of subrogation, and all

construction documents and insurance certificates shall include wording acceptable to the parties herein with reference to such provisions.

CONSULTANT shall not be responsible for the means, methods, techniques, sequences, or procedures of construction selected by construction contractors or the safety precautions and programs incident to the work of construction contractors and will not be responsible for construction contractors' failure to carry out work in accordance with the construction documents.

ARTICLE XVIII: THIRD PARTIES

The services to be performed by CONSULTANT are intended solely for the benefit of DISTRICT. No person or entity not a signatory to this Agreement shall be entitled to rely on CONSULTANT's performance of its services hereunder, and no right to assert a claim against CONSULTANT by assignment of indemnity rights or otherwise shall accrue to a third party as a result of this Agreement or the performance of CONSULTANT's services hereunder.

IN WITNESS WHEREOF, the parties hereto have accepted, made and executed this Agreement upon the terms, conditions and provisions above stated the day and the year first above written.

Marina Coast Water District

Carollo Engineers, Inc.

Keith Van Der Maaten
General Manager

[Type name and title]

[Type name and title]

Appendix A
Scope of Work

SCOPE OF WORK (from RFP)

A. General

The types of services related to the General engineering work contemplated under this RFP will include civil engineering planning, design, review, surveying, modeling, and analysis, on a task order basis. The Engineering Firm (Consultant) shall provide skilled technical and professional personnel to provide these types of service either as an entire project team or as augmentation to MCWD staff for general engineering work related to MCWD's potable water, sanitary sewer and recycled water systems. Specific tasks associated with the services above shall include, but not be limited to:

1. Maintain a working knowledge and application of MCWD's Water Code and Engineering Procedures, Guidelines, and Design Requirements documents, other jurisdictional codes within the District boundaries, and other appropriate local, state and federal laws and regulations, as necessary.
2. Review project and coordinate with various Project Teams including but not limited to District staff, design engineers, and environmental mitigation specialists.
3. Provide hydraulic modeling support for MCWD's potable water, recycled water and sanitary sewer networks and assist in maintaining as current the hydraulic models.
4. Update and maintain as current, or provide assistance in doing so, MCWD's Autocad and GIS based System Maps, Procedures, Guidelines and Design Requirements document, Standard Details, and Specifications.
5. Coordinate, meet with and obtain permits/approvals with appropriate agencies and businesses including but not limited to the District, City of Marina, City of Seaside, County of Monterey, U.S. Army, CSU Monterey Bay, Fort Ord Reuse Authority (FORA), Monterey Regional Water Pollution Control Agency, Caltrans, State Parks, and public utilities (i.e. electric, gas, telephone and cable tv) as needed for assigned projects and task orders.

B. Capital Improvement Projects

The types of services related to the Capital Improvement Projects (CIP) work contemplated under this RFP will include civil engineering planning, design, review, analysis, inspection, and construction support on a task order basis. Related skills that may need to be brought to bear include geotechnical engineering, structural engineering, and electrical engineering design. The Engineering Firm (Consultant) shall provide skilled technical and professional personnel to provide these types of service either as an entire project team or as augmentation to MCWD staff for CIP work related to MCWD's potable water, sanitary sewer and recycled water systems. Specific tasks associated with the services above shall include, but not be limited to:

1. Review projects and coordinate with Project Team including but not limited to District staff, design engineers, and environmental mitigation specialists.
2. Preliminary engineering base maps, layouts, estimates of probable costs, alternatives, memoranda and basis of design.
3. Present alternatives, recommendations and analyses of advantages/disadvantages.
4. Perform record reviews, field investigations, surveys, geotechnical investigations and potholing.
5. Prepare and review survey documents, legal descriptions for easements and rights-of-entry.
6. Prepare and review engineering calculations, basis of design reports, engineering reports, cost estimates, plans and specifications, and materials submittals. Prepare memoranda as dictated by the Project.
7. Assist in preparing environmental documents.
8. Design projects and prepare integrated Bid Documents (bid, contract, specifications).
9. Prepare sixty percent, ninety percent and final construction documents – including specifications, cost estimate, and contract bidding documents. Final documents shall be provided to the District in printed hard copy, electronic pdf and editable digital formats.
10. Assist the District in obtaining permitting and approvals from applicable agencies at the discretion of District staff.
11. Assist the District in answering bidder's questions, attend pre-bid conferences, job walks, and perform constructability review of own plans and specifications at the discretion of District staff.
12. Assist MCWD staff with interpretation of own plans and specifications, analysis of changed conditions, development of corrective action, review of shop drawings and requests for information, and provide "peer review" of other submittals at the discretion of MCWD staff.
13. Attend project meetings and provide project status reports with budget and schedule.
14. Present plans and reports at public meetings, such as the District Board meetings, when necessary.
15. Provide third party review consultation related to documents prepared by the District's Engineering Division or other consultants retained by the City.
16. Provide project bid support and when assigned, project management for the overall project. Attend pre-construction and construction progress meetings.
17. Provide engineering and construction support services during construction and when assigned, oversight as the Resident Engineer/Inspector of Record during construction.
18. Assist MCWD staff with final inspection and punch list.

C. Developments

The types of services related to the Development work contemplated under this RFP will include civil engineering planning, design, review, analysis, inspection, and construction support on a task order basis. The Engineering Firm (Consultant) shall provide skilled technical and professional personnel to provide these types of service either as an entire project team or as augmentation to MCWD staff for development work related to MCWD's potable water, sanitary sewer and recycled water systems. Specific tasks associated with the services above shall include, but not be limited to:

1. Provide plan, calculation and design reviews for development approvals by the District
2. Perform select plan review tasks for small development projects or portions of larger developments that are scoped within a task order.
3. Perform Water Supply Assessments and Written Verification of Water Supply documents.
4. Review material submittals & RFIs.
5. Conduct QA/QC and Feasibility reviews of MCWD-accepted Development plan sets.
6. Perform Civil and Landscape Inspection, including: Daily reports, progress photos documenting the contractor's progress, verification of materials, and installation testing results (e.g. potable water pressure testing, sanitary sewer pipeline testing, potable water disinfection procedures).
7. Assist MCWD staff with final inspection and punch list.
8. Generate and provide redline edits of Plan Set for Record Drawing set.
9. Review planned and/or revised easements for water and sewer facilities.
10. Produce a final report (required for large subdivision developments), to include recommendation of acceptance.
11. Inspect/verify the contractor's post-construction landscape/conservation process compliance.
12. Review meter applications, maintain tracking tools, and conduct walk-through inspections of individual homes.
13. Attend meetings and coordinate with Land-Use-Jurisdictions within MCWD's service areas.
14. Attend meetings with MCWD staff

APPENDIX B

Insurance Requirements

INDEMNIFICATION AGREEMENTS
INSURANCE REQUIREMENTS

AGREEMENTS

Workers' Compensation Insurance - By his/her signature hereunder, Consultant certifies that he/she is aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and he/she will comply with such provisions before commencing the performance of the work of this contract.

Indemnification - To the fullest extent permitted by law, Consultant, at Consultant's own cost, shall defend and indemnify and hold harmless the Marina Coast Water District (District), its directors, officers, employees and each of them from and against:

- a. When the law establishes a professional standard of care for Consultant's services, all claims and demands of all persons that arise out of, pertain to, or relate to the Consultant's negligence, recklessness, or willful misconduct in the performance (or actual or alleged non-performance) of the work under this agreement. Consultant shall defend itself against any and all liabilities, claims, losses, damages, and costs arising out of or alleged to arise out of Consultant's negligent performance or non-performance of the work hereunder, and shall not tender such claims to the District nor to its directors, officers, employees, or authorized volunteers, for defense or indemnity.
- b. Other than in the performance of professional services, all claims and demands of all persons arising out of the performance of the work or the furnishing of materials; including but not limited to, claims by the Consultant or Consultant's employees for damages to persons or property except for the sole negligence or willful misconduct or, with respect to construction, the active negligence of the District, its directors, officers, employees, or authorized volunteers.
- c. Any and all actions, proceedings, damages, costs, expenses, penalties or liabilities, in law or equity, of every kind or nature whatsoever, arising out of, resulting from, or on account of the negligent violation of any governmental law or regulation, compliance with which is the responsibility of Consultant.
- d. Any and all losses, expenses, damages (including damages to the work itself), attorneys' fees, and other costs, including all costs of defense, which any of them may incur with respect to the failure, neglect, or refusal of Consultant to faithfully perform the work and all of the Consultant's obligations under the agreement.

Such costs, expenses, and damages shall include all costs, including attorneys' fees, incurred by the indemnified parties in any lawsuit to which they are a party.

~~e. Consultant acknowledges and understands that the area in and around which the work will be performed has been identified as a possible location of munitions and explosives of concern ("MEC"). All indemnification obligations of Consultant under this Agreement shall specifically include claims and demands involving, arising out of or related to MEC. [Include this paragraph only for work on the former Fort Ord outside the cantonment area.]~~

Consultant shall defend, at Consultant's own cost, expense and risk, any and all such aforesaid suits, actions or other legal proceedings of every kind that may be brought or instituted against the District or any of its directors, officers, employees, or authorized volunteers to the extent the claims and/or allegations are caused or alleged to be caused by the Consultant's negligent performance of services hereunder. Notwithstanding the foregoing, in the event the subject action alleges negligence on the part of Consultant and/or the District, or any third party not under contract with Consultant, Consultant's obligations regarding the District's defense under this paragraph include only the reimbursement of the District's reasonable defense costs incurred to the extent of Consultant's negligence as expressly determined by a final judgment, arbitration, award, order, settlement, or other final resolution.

Consultant shall pay and satisfy any judgment, award or decree that may be rendered against the District or any of its directors, officers, employees, or authorized volunteers, in any and all such aforesaid suits, actions, or other legal proceedings to the extent the claims and/or allegations are caused or alleged to be caused by the Consultant's negligent performance of services hereunder.

Consultant shall reimburse District and its directors, officers, employees or authorized volunteers, for any reasonable legal expenses and costs incurred by each of them in connection with, in any way, all such aforesaid suits, actions or other legal proceedings or in enforcing the indemnity herein provided, to the extent that they are covered by the above obligations to indemnify.

Consultant shall not be responsible for warranties, guarantees, fitness for a particular purpose, breach of fiduciary duty, loss of anticipated profits or for economic, incidental or consequential damages to the District or any third party arising out of breach of contract, termination, or for any other reason whatsoever. Additionally, Consultant shall not be responsible for acts and decisions of third parties, including governmental agencies, other than Consultant's subconsultants, that impact project completion and/or success.

Consultant's obligation to indemnify shall not be restricted to insurance proceeds, if any, received by the District, or its directors, officers, employees or authorized volunteers.

GENERAL CONDITIONS

Laws, Regulations and Permits - The Consultant shall give all notices required by law and comply with all laws, ordinances, rules and regulations pertaining to the conduct of the work. The Consultant shall be liable for all violations of the law in connection with work furnished by the Consultant. If the Consultant performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, the Consultant shall bear all costs arising there from.

Safety - The Consultant shall execute and maintain his/her work so as to avoid injury or damage to any person or property.

In carrying out his/her work, the Consultant shall at all times exercise all necessary precautions for the safety of employees appropriate to the nature of the work and the conditions under which the work is to be performed, and be in compliance with all applicable federal, state and local statutory and regulatory requirements including State of California, Department of Industrial Relations (Cal/OSHA) regulations, and the U.S. Department of Transportation Omnibus Transportation Employee Testing Act. Safety precautions, as applicable, shall include but shall not be limited to: adequate life protection and life saving equipment; adequate illumination; instructions in accident prevention for all employees, such as the use of machinery guards, safe walkways, scaffolds, ladders, bridges, gang planks, confined space procedures, trenching and shoring, fall protection, and other safety devices; equipment and wearing apparel as are necessary or lawfully required to prevent accidents, injuries, or illnesses; and adequate facilities for the proper inspection and maintenance of all safety measures.

Liability Insurance - The Consultant shall provide and maintain at all times during the performance of the work under this agreement, the following commercial general liability, professional liability and automobile liability insurance:

Coverage - Coverage shall be at least as broad as the following:

1. Coverage for **Professional Liability** appropriate to the Consultant's profession covering Consultant's ~~negligent wrongful~~ acts, ~~negligent actions~~, errors or omissions. The retroactive date (if any) is to be no later than the effective date of this agreement. Consultant shall maintain such coverage continuously for a period of at least three years after the completion of the contract work. Consultant shall purchase a one-year extended reporting period i) if the retroactive date is advanced past the effective date of this Agreement; ii) if the policy is canceled or not renewed; or iii) if the policy is replaced by another claims-made policy with a retroactive date subsequent to the effective date of this Agreement.
2. Insurance Services Office Commercial **General Liability** Coverage
(Occurrence Form CG 0001)

3. Insurance Services Office *Automobile Liability* Coverage (Form CA 0001), covering Symbol 1 (any auto) (owned, non-owned and hired automobiles)

Limits - The Consultant shall maintain limits no less than the following:

1. **Professional Liability** – One million dollars (\$1,000,000) per claim and annual aggregate. [NOTE: THIS VALUE SHOULD BE ADJUSTED BASED ON VALUE OF PROJECT. UPPER RANGE IS ESTIMATED AT \$5,000,000 WHICH WOULD BE FOR LARGER CONSTRUCTION PROJECTS, E.G., STORAGE TANKS, TREATMENT FACILITIES, LARGE PUMP/LIFT STATIONS.]
2. **General Liability** - Two million dollars (\$2,000,000) per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit or products-completed operations aggregate limit is used, either the general aggregate limit shall apply separately to the project/location (with the ISO CG 2503, or ISO CG 2504, or insurer's equivalent endorsement provided to the District) or the general aggregate limit and products-completed operations aggregate limit shall be twice the required occurrence limit.
3. **Automobile Liability** - Two million dollars (\$2,000,000) for bodily injury and property damage each accident limit.

Required Provisions - The general liability policy is to contain, or be endorsed to contain the following provisions:

1. The District, its directors, officers, employees, or authorized volunteers are to be given additional insured status (via ISO endorsement CG 2010, CG 2033, or insurer's equivalent for general liability coverage) as respects: liability arising out of activities performed by or on behalf of the Consultant; and premises owned, occupied or used by the Consultant. The coverage shall contain no special limitations on the scope of protection afforded to the District, its directors, officers, employees, or authorized volunteers.
2. For any claims related to this project, the Consultant's insurance shall be primary insurance as respects the District, its directors, officers, employees, or authorized volunteers. Any insurance, selfinsurance, or other coverage maintained by the District, its directors, officers, employees, or authorized volunteers shall not contribute to it.

3. Any failure to comply with the reporting or other provisions of the policies including breaches and warranties shall not affect coverage provided to Member Water District, its directors, officers, employees, or authorized volunteers.
4. The Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

Such liability insurance shall indemnify the Consultant and his/her sub-consultants against loss from liability imposed by law upon, or assumed under contract by, the Consultant or his/her sub-consultants for damages on account of such bodily injury (including death), property damage, personal injury, completed operations, and products liability.

The general liability policy shall cover bodily injury and property damage liability, owned and non-owned equipment, blanket contractual liability, completed operations liability, explosion, collapse, underground excavation and removal of lateral support.

The automobile liability policy shall cover all owned, non-owned, and hired automobiles.

The policies specified above shall state, or be endorsed to state, that coverage shall not be canceled by the insurance carrier or the Consultant, except after thirty (30) days (10 days for non-payment of premium) prior written notice by U.S. mail has been given to the District.

All of the insurance shall be provided on a policy forms and through companies satisfactory to the District.

In the event any change is made in the insurance carrier, scope of coverage or retroactive date of professional liability coverage required under this agreement, Consultant shall notify the District prior to any changes.

Workers' Compensation and Employer's Liability Insurance - The Consultant and all sub-consultants shall cover or insure under the applicable laws relating to workers' compensation insurance, all of their employees employed directly by them or through subconsultants in carrying out the work contemplated under this contract, all in accordance with the "Workers' Compensation and Insurance Act," Division IV of the Labor Code of the State of California and any Acts amendatory thereof. The Consultant shall provide employer's liability insurance with limits no less than \$1,000,000 each accident, \$1,000,000 disease policy limit, and \$1,000,000 disease each employee.

Deductibles and Self-Insured Retentions - Any deductible or self-insured retention exceeding \$50,000 must be declared to and approved by the District. At the option of the

District, the insurer shall either reduce or eliminate such deductibles or self-insured retention.

Acceptability of Insurers - Insurance is to be placed with insurers having a current A.M. Best rating of no less than A-:VII or equivalent or as otherwise approved by the District.

MEC Coverage – For work involving portions of the former Fort Ord outside the cantonment area, all insurance maintained by Consultant shall include coverage for services, work in or around MEC, or claims, damage or injury related in any way to this Agreement which arise from MEC. The Marina Coast Water District, its officers, directors and employees and any of its authorized representatives and volunteers shall be named as additional insureds under all insurance maintained by Consultant related in any way to work performed by it on behalf of the Marina Coast Water District.

Evidences of Insurance - Prior to execution of the Agreement, the Consultant shall file with the District a certificate of insurance (Acord Form 25-S or equivalent) signed by the insurer's representative evidencing the coverage required by this Agreement. Such evidence shall include an original copy of the additional insured endorsement signed by the insurer's representative. Such evidence shall also include confirmation that coverage includes or has been modified to include Required Provisions 1-4.

The Consultant shall, upon demand of the District, deliver to the District such policy or policies of insurance and the receipts for payment of premiums thereon.

All insurance correspondence, certificates, binders, etc., shall be mailed to:

Marina Coast Water District
11 Reservation Road
Marina, CA 93933
Attn: Stephenie Verduzco

Continuation of Coverage – If any of the required coverages expire during the term of this Agreement, the Consultant shall deliver the renewal certificate(s) including the general liability additional insured endorsement to the District at least ten (10) days prior to the expiration date.

Sub-Consultants - In the event that the Consultant employs other consultants (subconsultants) as part of the services covered by this Agreement, it shall be the Consultant's responsibility to require and confirm that each sub-consultant meets the minimum insurance requirements specified above.

APPENDIX C

Form for Task Orders, Requests for Service, and Amendments

AGREEMENT FOR PROFESSIONAL SERVICES
BETWEEN MARINA COAST WATER DISTRICT
AND CAROLLO ENGINEERS, INC.
FOR ON-CALL GENERAL, CIP, AND DEVELOPMENT
ENGINEERING SUPPORT SERVICES

TASK ORDER NO. []
OR
REQUEST FOR SERVICE NO. []
OR
AMENDMENT NO. []

Article II - Scope of Services shall be [DESCRIPTION OF ADDITIONAL OR MODIFIED SCOPE OF SERVICES; REFER TO ACCEPTED CONSULTANT PROPOSAL].

Article IV – The Work under this Task Order [OR REQUEST FOR SERVICE / AMENDMENT] is scheduled for Completion by [DATE].

Article IX - Payment shall be amended by a not-to-exceed contract amount [IF TIME AND EXPENSE – OTHERWISE, A LUMP SUM AMOUNT; REFER TO THE ACCEPTED CONSULTANT PROPOSAL’S COST ESTIMATE] OF [\$].

All other articles of the [DATE] AGREEMENT FOR ON-CALL GENERAL, CIP AND DEVELOPMENT ENGINEERING SUPPORT SERVICES remain the same.

~~DISTRICTOWNER~~ and ~~CONSULTANTENGINEER~~ have caused this Agreement to be amended by representatives duly authorized to act, all as of the effective date of [DATE].

Prepared by: _____ Date _____
(DISTRICT REPRESENTATIVE)

~~CONSULTANTENGINEER~~
Carollo Engineers, Inc.

~~DISTRICTOWNER~~
Marina Coast Water District

By _____

By _____

Title _____

Title: General Manager

Date _____

Date _____

AGREEMENT FOR PROFESSIONAL SERVICES
BETWEEN MARINA COAST WATER DISTRICT
AND CAROLLO ENGINEERS, INC.
FOR ON-CALL GENERAL, CIP, AND DEVELOPMENT
ENGINEERING SUPPORT SERVICES

TASK ORDER NO. []
OR
REQUEST FOR SERVICE NO. []
OR
AMENDMENT NO. []

[TITLE OF ACCEPTED CONSULTANT PROPOSAL]

